YAZAKI

TECHNICAL DATA

• 5th Edition •

MASCI

ISO 9000 QMS03196/800
TIS 18001 OHS07012/210
OHSAS 18001 OHSAS07009/130

ISO 14001
BUREAU VERITAS
Certification

ISO 14001 TH009912
ISO 14001 TH013591

TIS 11-2553
TIS 85-2548
TIS 293-2541
TIS 2202-2547

TIS 64-2517
TIS 118-2522
TIS 2143-2546
TIS 386-2531
TIS 2341-2564

THAI-YAZAKI ELECTRIC WIRE COMPANY LIMITED

THAI-YAZAKI ELECTRIC WIRE CO., LTD.

Technical Data

For
Electric Wires
and Cables

Publication : 5th Edition JAN 2023

This catalog provides a comprehensive descriptions of the main products of Thai-Yazaki Electric Wire Co., Ltd.

These products are manufactured in conformity to the Thai Industrial Standard (TIS), Thai-Yazaki Standard, and IEC 60502 Standard.

Technical Data and General information — A

Copper Conductor Cables — B

Aluminium Conductor Cables — C

Electrical Insulation Tape — D

Head Office/Sale Office:
21st Floor, O-NES Tower, 6 Sukhumvit Soi 6, Klongtoey Sub-District, Klongtoey District, Bangkok, 10110 Thailand
Tel : 0-26532550 Fax : 0-26532613, 0-26532614
Tax Identification No.0105505001539

FACTORY :
283 Moo1 Suksawad Rd., Tambol Pak- Klong Bangplakot, Amphur Phrasamutchedi, Samutprakan 10290, Thailand
Tel . 0-2463-0058, 0-2463-4135-7
Fax : 0-2463-2477

Index

A Technical Data and General Information

WIRE GAUGES	A 1
CONVERSION TABLE AWG/MCM (kcmil) TO THE METRIC CROSS-SECTION AREA	A 5
SI PREFIXES	A 5
PROPERTIES OF INSULATION AND JACKET MATERIALS	A 6
CONDITION OF INSTALLATION	A 11
SYMBOLS OF ELECTRICAL UNITS	A 12
TABLE OF THE DIMENSIONS FOR THE MOTOR STARTERS	A 13
STANDARD COEFFICIENT OF CONVERSION	A 14
CONDUCTIVITY AND DENSITY OF METALS	A 15
CONDUCTOR MATERIALS	A 15
TEMPERATURE CORRECTION FACTORS FOR CONDUCTOR RESISTANCE	A 16
ELECTRICAL FORMULAS	A 17
ELECTRICAL DATA FROM EIT STANDARD 2001-56	A 23

B Copper Conductor Cables

Building Wires and Cables	
TIS 11 Part 3 - 2553 : Non-Sheathed Cables for Fixed Wiring	INDEX B(1)
- 60227 IEC 01 THW or YK60227 IEC 01 THW	B1
- 60227 IEC 02 THW (f)	B3
- 60227 IEC 05 IV	B4
- 60227 IEC 06 IV (f)	B5
- 60227 IEC 07 HIV	B6
- 60227 IEC 08 HIV (f)	B7
TIS 11 Part 4 - 2553 : Sheathed Cables for Fixed Wiring	INDEX B(1)
- 60227 IEC 10	B8
TIS 11 Part 5-2553 : Flexible Cables (Cords)	INDEX B(2)
- 60227 IEC 52 VKF	B12
- 60227 IEC 52	B13
- 60227 IEC 53 VKF	B14
- 60227 IEC 53	B15
- 60227 IEC 56 HVKF	B16
- 60227 IEC 56	B17

- 60227 IEC 57 HVKF	B18
- 60227 IEC 57	B19
TIS 11 Part 101-2559 : Sheathed Cables for General Purposes	INDEX B(2)
- VAF	B20
- VAF-G	B21
- NYY or YK NYY	B22
- NYY-G	B30
- VCT	B36
- VCT-G	B39
Low Voltage Power Cables	INDEX B(3)
- NYY-SWA	B42
- NYCY	B48
- FD-0.6/1KV-CV or YK FD-0.6/1KV-CV	B50
- FD-0.6/1KV-CV-AWA	B58
- FD-0.6/1KV-CV-SWA	B60
- FD-0.6/1KV-CV-STA	B63
Medium Voltage Power Cables	INDEX B(4)
- 1.8/3KV-CV	B66
- 3.6/6KV-CV	B68
- 6/10KV-CV	B71
- 8.7/15KV-CV	B73
- 12/20KV-CV	B75
- 18/30KV-CV	B77
High Voltage Power Cables	INDEX B(4)
- 69KV-CE	B79
- 115KV-CE	B80
Control Cables	INDEX B(4)
- CVV	B81
- CVV-S	B81

Automobile Wire and Cables	INDEX B(5)
- T-AV	B89
Bare Conductor	INDEX B(5)
- FHC	B90
- FAC	B91

C Aluminium Conductor Cables

Building Wires and Cables	INDEX C(1)
- THWA	C1
- THWA-C	C2
Low Voltage Power Cables	INDEX C(1)
- FD-0.6/1KV-AL-CV	C3
- FD-0.6/1KV-AL-CV-AWA	C8
- FD-0.6/1KV-AL-CV-SWA	C9
- FD-0.6/1KV-AL-CV-STA	C12
High Voltage Power Cables	INDEX C(2)
- 24KV-OC	C15
- 33KV-OC	C16
- 15KV-CC	C17
- 25KV-CC	C18
- 35KV-CC	C19
Bare Conductor	INDEX C(2)
- AAC	C20
- ACSR	C21

D Electrical Insulation Tape

- VTA	D1

Technical Data and General Information

WIRE GAUGES	A 1
CONVERSION TABLE AWG/MCM (kcmil) TO THE METRIC CROSS-SECTION AREA	A 5
SI PREFIXES	A 5
PROPERTIES OF INSULATION AND JACKET MATERIALS	A 6
- Resistance to Industrial Chemical	A 6
- General Comparision Data	A 7
- Thermal Properties	A 9
- Operating Temperature	A 9
- Electrical Properties	A 9
- Long-Time Heat Aging Curves	A 10
CONDITION OF INSTALLATION	A 11
- Minimum Bending Radius	A 11
- Permissible Maximum Pulling Tension	A 11
- Side Wall Pressure to Cable	A 11
SYMBOLS OF ELECTRICAL UNITS	A 12
TABLE OF THE DIMENSIONS FOR THE MOTOR STARTERS	A 13
STANDARD COEFFICIENT OF CONVERSION	A 14
CONDUCTIVITY AND DENSITY OF METALS	A 15
CONDUCTOR MATERIALS	A 15
TEMPERATURE CORRECTION FACTORS FOR CONDUCTOR RESISTANCE	A 16
ELECTRICAL FORMULAS	A 17
- D.C. Resistance	A 17
- Inductance	A 18
- Reactance	A 18
- Impedance	A 18
- Dielectric Loss	A 18
- Capacitance	A 18
- A.C. Resistance at Temperature	A 19
- Charging Current	A 20
- Insulation Resistance	A 20
- Short-Circuit Current Rating	A 20
- Short-Circuit Performance of Metallic Shields and Sheath of Insulated Cable	A 21
- Voltage Drop Calculation	A 22
- Calculating Maximum Cable Length Due to Voltage Drop	A 22

A

ELECTRICAL DATA FROM EIT STANDARD 2001-56 A 23

- Table 5-8 : Correction factor for groups of more than one circuit A 23
- Table 5-20: Current-carrying capacities in amperes for copper conductor, PVC insulated, with or without sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C in conduit A 24
- Table 5-21: Current-carrying capacities in amperes for copper insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 70°C or 90°C / ambient temperature 40 °C on wall A 25
- Table 5-22 : Current-carrying capacities in amperes accordance TIS 11-2553 for copper conductor, PVC insulated for rated voltage 450/750 V, conductor temperature 70°C, ambient temperature 40°C on insulator A 26
- Table 5-23: Current-carrying capacities in amperes for copper conductor, PVC insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 70°C / ambient temperature 30 °C in duct in ground or direct burial. A 27
- Table 5-24 : Current-carrying capacities in amperes accordance TIS 11-2553 for copper conductor, PVC insulated for rated voltage 300/500 V, conductor temperature 70°C or 90°C / ambient temperature 40°C in free air A 28
- Table 5-25 : Current-carrying capacities in amperes accordance TIS 11-2553 for flexible copper conductor, PVC insulated for rated voltage 300/500 V, conductor temperature 70°C or 90°C / ambient temperature 40°C in free air A 29
- Table 5-26 : Current-carring capacities in amperes accordance TIS 11-2553 for flexible copper conductor, PVC insulated for rated voltage 450/750 V, conductor temperature 70°C / ambient temperature 40°C in free air A 30
- Table 5-27: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C in conduit A 31
- Table 5-28: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C on insulator A 32
- Table 5-29: Current-carrying capacities in amperes for copper conductor, XLPE insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 90°C / ambient temperature 30 °C in duct in ground or direct burial. A 33
- Table 5-30: Current-carrying capacities in amperes for copper conductor, PVC insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C install in perforated trays or ladder cleats A 34
- Table 5-31: Current-carrying capacities in amperes for copper conductor, PVC insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C install in ventilated or unventilated cable channel A 35
- Table 5-32: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C install in perforated trays or ladder cleats A 36
- Table 5-33: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C install in ventilated or unventilated cable channel A 37
- Table 5-40: The correction factor for grounps more than one circuit for Single core cable install on tray A 38

- Table 5-41: The correction factor for groups more than one circuit for multi cores cable install on perforated or unperforated tray or ladder cleats A 40

- Table 5-42 : Current-carrying capacities in amperes accordance TIS 293-2541 for aluminium conductor, PVC insulated for rated voltage 450/750 V, conductor temperature 70°C / ambient temperature 40°C on insulator A 41

- Table 5-43: Correction factor for ambient air temperatures other than 40°C to be applied to current-carrying capacities for cables in free air A 42

- Table 5-44: Correction factor for ambient air temperatures other than 30°C to be applied to current-carrying capacities for cables in the ground A 42

- Table 5-45: Correction factor for Single core or multi cores, rated voltaed 0.6/1 kV install in direct burial when group of circuit more than 1 circuit, flat horizontal A 43

- Table 5-46: Correction factor for Single core or multi cores, rated voltaed 0.6/1 kV install in conduit in direct burial when group of circuit more than 1 circuit, flat horizontal. A 43

- Table 5-47: Schedule of reference method of installation which form the basis of the tabulated current-carrying capacities A 44

- Table 5-48: Requirements for Installation copper conductor, PVC insulated cable according to TIS 11-2553 A 46

- Table ฐ1 Single-core 70°C PVC insulated copper conductor cables A 47

- Table ฐ3 Single-core 90°C XLPE insulated copper conductor cables A 47

- Table ฐ2 Multi-cores 70°C PVC insulated copper conductor cable A 48

- Table ฐ4 Multi-cores 90°C XLPE insulated copper conductor cable A 48

A

Wire Gauges

YAZAKI

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
5/0	-	7/0	-	500	12.700	250,000	0.1964	126.7	756.9	1,126
-	-	-	12	472.4	12.000	223,162	0.1753	113.1	675.6	1,005
-	-	6/0	-	464	11.786	215,296	0.1691	109.1	651.7	969.9
-	4/0	-	-	460	11.684	211,600	0.1662	107.2	640.5	953.0
4/0	-	-	-	454	11.532	206,100	0.1619	104.4	624.0	928.1
-	-	5/0	-	432	10.973	186,624	0.1466	94.56	565.0	840.6
3/0	-	-	-	425	10.795	180,600	0.1419	91.52	546.9	813.6
-	3/0	-	-	409.6	10.404	167,772	0.1318	85.03	508.0	755.9
-	-	4/0	-	400	10.160	160,000	0.1257	81.07	484.5	720.7
-	-	-	10	393.7	10.000	155,000	0.1217	78.54	468.0	698.2
2/0	-	-	-	380	9.652	144,400	0.1134	73.17	437.1	650.5
-	-	3/0	-	372	9.440	138,384	0.1087	70.12	418.9	623.4
-	2/0	-	-	364.8	9.266	133,079	0.1045	67.42	402.7	599.4
-	-	-	9	354.3	9.000	125,528	0.09859	63.62	380.0	565.6
-	-	2/0	-	348	8.839	121,104	0.09512	61.36	366.6	545.5
0	-	-	-	340	8.636	115,600	0.09079	58.58	349.9	520.8
-	0	-	-	324.9	8.250	105,560	0.08291	53.49	319.5	475.5
-	-	0	-	324	8.230	104,976	0.08245	53.19	317.8	472.8
-	-	-	8	315	8.000	99,225	0.07793	50.27	300.3	446.9
1	-	1	-	300	7.629	90,000	0.07069	45.60	272.4	405.4
-	1	-	-	289.3	7.348	83,694	0.06573	42.41	253.3	377.0
2	-	-	-	284	7.214	80,660	0.06335	40.87	244.2	363.3
-	-	2	-	276	7.010	76,176	0.05983	39.60	230.6	343.2
-	-	-	7.0	275.6	7.000	75,955	0.05966	38.48	229.9	342.1
3	-	-	-	259	6.579	67,080	0.05269	33.99	203.1	302.2
-	2	-	-	257.6	6.544	66,358	0.05212	33.63	200.9	299.0
-	-	-	6.5	255.9	6.500	65,485	0.05143	22.18	189.2	295.0
-	-	3	-	252	6.401	63,504	0.04988	32.18	192.2	286.1
4	-	-	-	238	6.045	56,640	0.04449	28.70	171.5	255.1
-	-	-	6.0	236.2	6.000	55,790	0.04382	28.27	168.9	251.1
-	-	4	-	232	5.893	53,824	0.04227	27.27	162.9	242.4
-	3	-	-	229.4	5.827	52,624	0.04133	26.66	159.3	237.0
5	-	-	-	220	5.588	48,400	0.03801	24.52	146.5	218.0
-	-	-	5.5	216.5	5.500	46,872	0.03681	23.72	141.9	210.9
-	-	5	-	212	5.385	44,944	0.03530	22.77	136.0	202.4
-	4	-	-	204.3	5.189	41,738	0.03278	21.15	126.3	188.0
6	-	-	-	203	5.156	41,210	0.03237	20.88	124.8	185.6
-	-	-	5.0	196.9	5.000	38,770	0.03045	19.63	117.4	174.5
-	-	6	-	192	4.877	36,864	0.02895	18.68	111.6	166.3
-	5	-	-	181.9	4.621	33,088	0.02599	16.77	100.2	149.1
7	-	-	-	180	4.572	32,400	0.02545	16.42	98.08	146.0
-	-	-	4.5	177.2	4.500	31,400	0.02466	15.90	95.04	141.4
-	-	7	-	176	4.470	30,976	0.02433	15.70	93.77	139.6
8	-	-	-	165	4.191	27,220	0.02138	13.80	82.40	122.7
-	6	-	-	162	4.115	26,244	0.02061	13.30	79.43	118.2

A

Wire Gauges

YAZAKI

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	-	8	-	160	4.064	25,600	0.02011	12.97	77.50	115.30
-	-	-	4.0	157.5	4.000	24,806	0.01948	12.57	75.08	111.80
9	-	-	-	148	3.759	21,900	0.01720	11.10	66.29	98.68
-	7	-	-	144.3	3.665	20,822	0.01635	10.55	63.01	93.79
-	-	9	-	144	3.658	20,736	0.01629	10.52	62.78	93.52
-	-	-	3.5	137.8	3.500	18,989	0.01491	9.621	57.46	85.53
10	-	-	-	134	3.404	17,960	0.01410	9.098	54.34	80.88
-	8	-	-	128.5	3.264	16,512	0.01297	8.368	49.99	74.39
-	-	10	-	128	3.251	16,384	0.01287	8.302	49.60	73.81
-	-	-	3.2	126	3.200	15,876	0.01247	8.042	48.06	71.49
11	-	-	-	120	3.048	14,400	0.01131	7.297	43.59	64.87
-	-	11	-	116	2.946	13,456	0.01057	6.818	40.74	60.61
-	9	-	-	114.4	2.906	13,087	0.01028	6.632	39.62	58.96
-	-	-	2.9	114.2	2.900	13,042	0.01024	6.605	39.47	58.72
12	-	-	-	109	2.769	11,880	0.009331	6.020	35.96	53.52
-	-	12	-	104	2.642	10,816	0.008495	5.481	32.74	48.73
-	-	-	2.6	102.4	2.600	10,486	0.008246	5.309	31.78	47.29
-	10	-	-	101.9	2.588	10,384	0.008156	5.262	31.43	46.78
13	-	-	-	95	2.413	9,025	0.007088	4.573	27.32	40.65
-	-	13	-	92	2.337	8,464	0.006648	4.289	25.62	38.13
-	11	-	-	90.74	2.305	8,234	0.006467	4.172	24.92	37.09
-	-	-	2.3	90.55	2.300	8,199	0.006439	4.155	24.82	36.94
14	-	-	-	83	2.108	6,889	0.005411	3.491	20.85	31.04
-	12	-	-	80.81	2.053	6,530	0.005129	3.309	19.77	29.42
-	-	14	-	80	2.032	6,400	0.005027	3.243	19.37	28.83
-	-	-	2.0	78.74	2.000	6,200	0.004869	3.142	18.77	27.93
15	-	15	-	72	1.829	5,184	0.004072	2.627	18.46	27.36
-	13	-	-	71.96	1.828	5,178	0.004067	2.624	15.67	23.33
-	-	-	1.8	70.87	1.800	5,023	0.003945	2.545	15.20	22.63
16	-	-	-	65	1.651	4,225	0.003318	2.141	12.79	19.03
-	14	-	-	64.08	1.628	4,106	0.003225	2.081	12.43	18.50
-	-	16	-	64	1.626	4,096	0.003217	2.075	12.40	18.45
-	-	-	1.6	62.99	1.600	3,968	0.003116	2.011	12.01	17.88
17	-	-	-	58	1.473	3,364	0.002642	1.705	10.18	15.16
-	15	-	-	57.07	1.450	3,257	0.002558	1.650	9.859	14.67
-	-	17	-	56	1.422	3,136	0.002463	1.589	9.493	14.13
-	-	-	1.4	55.12	1.400	3,038	0.002386	1.539	9.196	13.68
-	16	-	-	50.82	1.291	2,583	0.002029	1.309	7.820	11.64
18	-	-	-	49	1.245	2,401	0.001886	1.217	7.269	10.82
-	-	18	-	48	1.219	2,304	0.001810	1.167	6.976	10.38
-	-	-	1.2	47.24	1.200	2,232	0.001753	1.131	6.756	10.06
-	17	-	-	45.26	1.150	2,048	0.001608	1.037	6.197	9.219
19	-	-	-	42	1.067	1,764	0.001385	0.8938	5.388	7.946
-	18	-	-	40.3	1.024	1,624	0.001275	0.8226	4.914	7.313
-	-	19	-	40	1.016	1,600	0.001257	0.8107	4.845	7.207
-	-	-	1.0	39.37	1.000	1,550	0.001217	0.7854	4.690	6.982
-	-	20	-	36	0.914	1,296	0.001018	0.6576	3.923	5.838

A

Wire Gauges

YAZAKI

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	19	-	-	35.89	0.9116	1,288	0.001012	0.6529	3.900	5.804
-	-	-	0.90	35.43	0.9000	1,255	0.0009857	0.6362	3.799	5.656
20	-	-	-	35	0.8890	1,225	0.0009621	0.6207	3.708	5.518
21	-	21	-	32	0.8128	1,024	0.0008042	0.5189	3.099	4.613
-	20	-	-	31.96	0.8118	1,021	0.0008019	0.5174	3.091	4.600
-	-	-	0.80	31.50	0.8000	992.3	0.0007794	0.5027	3.004	4.469
-	21	-	-	28.46	0.7229	810	0.0006362	0.4105	2.452	3.649
22	-	22	-	28	0.7112	784	0.0006158	0.3973	2.373	3.532
-	-	-	0.70	27.56	0.7000	759.6	0.0005966	0.3848	2.299	3.421
-	-	-	0.65	25.59	0.6500	654.8	0.0005143	0.3318	1.982	2.950
-	22	-	-	25.35	0.6438	642.6	0.0005047	0.3256	1.945	2.895
23	-	-	-	25	0.6350	625	0.0004909	0.3167	1.892	2.816
-	-	23	-	24	0.6096	576	0.0004524	0.2919	1.744	2.595
-	-	-	0.60	23.62	0.6000	557.9	0.0004382	0.2827	1.689	2.513
-	23	-	-	22.57	0.5733	509.4	0.0004001	0.2581	1.542	2.295
24	-	24	-	22	0.5583	484	0.0003801	0.2452	1.465	2.180
-	-	-	0.55	21.65	0.5500	468.7	0.0003681	0.2376	1.419	2.112
-	24	-	-	20.10	0.5106	404	0.0003173	0.2047	1.223	1.820
25	-	25	-	20	0.5080	400	0.0003142	0.2027	1.211	1.802
-	-	-	0.50	19.69	0.5000	387.7	0.0003045	0.1963	1.174	1.745
26	-	26	-	18	0.4572	324	0.0002545	0.1642	0.9809	1.460
-	25	-	-	17.90	0.4547	320.4	0.0002516	0.1623	0.9697	1.443
-	-	-	0.45	17.72	0.4500	314	0.0002466	0.1590	0.9504	1.414
-	-	27	-	16.4	0.4166	269	0.0002113	0.1363	0.7844	1.212
27	-	-	-	16	0.4064	256	0.0002011	0.1297	0.7750	1.153
-	26	-	-	15.94	0.4049	254.1	0.0001996	0.1288	0.7693	1.145
-	-	-	0.40	15.75	0.400	248.1	0.0001949	0.1257	0.7512	1.118
-	-	28	-	14.8	0.3759	219	0.0001720	0.1110	0.6629	0.9868
-	27	-	-	14.20	0.361	201.6	0.0001583	0.1021	0.6101	0.9077
28	-	-	-	14	0.3556	196	0.0001539	0.09932	0.5931	0.8330
-	-	-	0.35	13.78	0.3500	189.9	0.0001491	0.09621	0.5746	0.8553
-	-	29	-	13.6	0.3454	185	0.0001453	0.09372	0.5600	0.8332
29	-	-	-	13	0.3302	169	0.0001327	0.08563	0.5114	0.7613
-	28	-	-	12.64	0.3211	159.8	0.0001255	0.08097	0.4837	0.7198
-	-	-	0.30	12.60	0.3200	158.8	0.0001246	0.08042	0.7806	0.7149
-	-	30	-	12.4	0.3150	153.8	0.0001208	0.07791	0.4656	0.6926
30	-	-	-	12	0.3048	144	0.0001131	0.07297	0.4359	0.6487
-	-	31	-	11.6	0.2946	134.6	0.0001057	0.06818	0.4074	0.6061
-	-	-	0.29	11.42	0.2900	130.4	0.0001024	0.06605	0.3947	0.5872
-	29	-	-	11.26	0.2859	126.8	0.00009959	0.06425	0.3838	0.5712
-	-	32	-	10.8	0.2743	116.6	0.00009158	0.05913	0.3530	0.5257
-	-	-	0.26	10.24	0.2600	104.9	0.00008239	0.05309	0.3175	0.4720
-	30	-	-	10.03	0.2546	100.6	0.00007901	0.05097	0.305	0.4531
31	-	33	-	10	0.2540	100	0.00007954	0.05067	0.3027	0.4505
-	-	34	-	9.2	0.2337	84.64	0.00006648	0.04289	0.2562	0.3813
-	-	-	0.23	9.055	0.2300	81.99	0.00006440	0.04155	0.2482	0.3694

A

Wire Gauges

YAZAKI

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
32	-	-	-	9	0.2286	81.102	0.00006362	0.04104	0.2452	0.3649
-	31	-	-	8.928	0.2238	79.71	0.00006260	0.04039	0.2413	0.3591
-	-	35	-	8.4	0.2134	70.56	0.00005542	0.03575	0.2136	0.3178
33	-	-	-	8	0.2032	64	0.00005027	0.03243	0.1937	0.2883
-	32	-	-	7.950	0.2019	65.20	0.00004964	0.03203	0.1913	0.2847
-	-	-	0.20	7.874	0.2000	62	0.00004869	0.03142	0.1877	0.2793
-	-	36	-	7.6	0.1930	57.76	0.00004536	0.02927	0.1748	0.2602
-	-	-	0.18	7.087	0.1800	50.23	0.00003945	0.02545	0.1520	0.2263
-	33	-	-	7.080	0.1798	50.13	0.00003937	0.02540	0.1517	0.2258
34	-	-	-	7.	0.1778	49	0.00003848	0.02483	0.1483	0.2207
-	-	37	-	6.8	0.1727	46.24	0.00003632	0.02343	0.1400	0.2083
-	34	-	-	6.305	0.1601	39.75	0.00003122	0.02014	0.1203	0.1790
-	-	-	0.16	6.299	0.1600	39.68	0.00003116	0.02011	0.1201	0.1788
-	-	38	-	6	0.1524	36	0.00002827	0.01824	0.1090	0.1622
-	35	-	-	5.615	0.1426	31.53	0.00002476	0.01597	0.09543	0.1420
-	-	-	0.14	5.512	0.1400	30.38	0.00002386	0.01539	0.09196	0.1368
-	-	39	-	5.2	0.1321	27.04	0.00002124	0.01370	0.08186	0.1218
35	36	-	-	5.000	0.1270	25	0.00001963	0.01267	0.07565	0.1126
-	-	40	-	4.8	0.1219	23.04	0.00001810	0.01167	0.06976	0.1037
-	-	-	0.12	4.724	0.1200	22.32	0.00001753	0.01131	0.06756	0.1006
-	37	-	-	4.453	0.1131	19.83	0.00001557	0.01005	0.06001	0.08934
-	-	41	-	4.4	0.1118	19.36	0.00001521	0.009810	0.05812	0.08721
36	-	42	-	4	0.1016	16.00	0.00001257	0.008107	0.04845	0.07207
-	38	-	-	3.965	0.1007	15.72	0.00001235	0.007968	0.04760	0.07084
-	-	-	0.10	3.937	0.1000	15.50	0.00001217	0.007854	0.04690	0.06982
-	-	43	-	3.6	0.09114	12.96	0.00001018	0.006567	0.03923	0.05838
-	39	-	-	3.531	0.08969	12.47	0.000009794	0.006319	0.03775	0.05618
-	-	44	-	3.2	0.08138	10.24	0.000008042	0.005819	0.03099	0.04613
-	40	-	-	3.145	0.07987	9.891	0.000007768	0.005012	0.02994	0.04456
-	41	45	-	3.800	0.07113	7.842	0.000006159	0.003973	0.02374	0.03532
-	42	-	-	2.494	0.06334	6.219	0.000004884	0.003151	0.01882	0.02801
-	-	46	-	2.4	0.06096	5.760	0.000004528	0.002929	0.01744	0.02595
-	43	-	-	2.221	0.05641	4.932	0.000003873	0.002495	0.01498	0.02222
-	-	47	-	2	0.05080	4.000	0.000003142	0.002027	0.01211	0.01802
-	44	-	-	1.987	0.05023	3.911	0.000003072	0.001982	0.01184	0.01762
-	-	-	0.05	1.969	0.05000	3.877	0.000003045	0.001963	0.01174	0.01745
-	45	-	-	1.761	0.04473	3.102	0.000002436	0.001572	0.009383	0.01398
-	-	48	-	1.6	0.04064	2.560	0.000002011	0.001297	0.007750	0.01153
-	46	-	-	1.568	0.03984	2.460	0.000001931	0.001246	0.007446	0.01108
-	47	-	-	1.397	0.03547	1.951	0.000001532	0.0009884	0.005904	0.008787
-	48	-	-	1.224	0.03159	1.547	0.000001215	0.0007838	0.004683	0.006968
-	-	49	-	1.2	0.03048	1.440	0.000001131	0.0007297	0.004359	0.006487
-	49	-	-	1.108	0.02813	1.227	0.000009635	0.0006216	0.003713	0.005526
-	-	50	-	1	0.02540	1.000	0.000007854	0.0005067	0.003027	0.004505
-	50	-	-	0.986	0.02505	0.9728	0.000007641	0.0004929	0.002945	0.004382

NOTE
B.W.G. - Birmingham Iron Wire Gauge
A.W.G. - American Wire Gauge
S.W.G. - British Standard Wire Gauge
mm.G. - Millimeter Gauge

A

Conversion table AWG/MCM (kcmil) to the metric cross-section area

Conductor Cross-swection area AWG/MCM (kcmil)		Theoretical Cross-Section area mm²	Advised Cross-Section area mm²
AWG	20	0.51	0.5
	18	0.82	1
	16	1.31	1.5
	14	2.08	2.5
	12	3.31	4
	10	5.27	6
	8	8.40	10
	6	13.30	16
	4	21.20	25
	3	26.70	25
	2	33.60	35
	1	42.40	50
	1/0	53.40	50
	2/0	67.50	70
	3/0	85.00	95
	4/0	107.02	120
MCM (kcmil)	250	126.70	120
	300	152.00	150
	350	177.40	185
	400	202.70	240
	500	253.40	240
	600	304.00	300
	700	354.00	400
	750	380.00	400
	800	405.40	400
	900	456.00	500
	1000	506.70	500
	1250	633.40	630
	1500	760.10	800

SI Prefixes

Multiply factor							Prefix	Symbol
1	000	000	000	000	=	10^{12}	tera	T
	1	000	000	000	=	10^{9}	giga	G
		1	000	000	=	10^{6}	mega	M
			1	000	=	10^{3}	kilo	k
				100	=	10^{2}	hecto	h
				10	=	10^{1}	deca	da
				0.1	=	10^{-1}	deci	d
				0.01	=	10^{-2}	centi	c
				0.001	=	10^{-3}	milli	m
			0.000	001	=	10^{-6}	micro	μ
		0.000	000	001	=	10^{-9}	nano	n
	0.000	000	000	001	=	10^{-12}	pico	p
0.000	000	000	000	001	=	10^{-15}	femto	f
0.000	000	000	000	000	001	= 10^{-18}	atto	a

YAZAKI

Properties of Insulation and Jacket Materials

Resistance to Industrial Chemicals

Reagent	Relative Rating							Reagent	Relative Rating						
	BR	CR	ERC	PVC	PE	XLPE	NYLON		BR	CR	ERC	PVC	PE	XLPE	NYLON
Acetone	◎	○	◎	×	◎	◎	○	Chlorine Gas	△	△	×	×	×	×	◎
Aniline	○	×	○	○	○	○		Ozone	○		○	○	◎	◎	×
Ethanol	◎	◎	◎	△	○	○	○	Bromine	×	×	×	×	×	×	
Ethyleneglycol	○	◎	○	△	◎	◎	○	Nirtic Acid, conc.	×	×	×	×	△	△	×
Xylene	×	×	×	×	○	○	○	Nitric Acid, 10%	×	×	△	○	○	○	△
Glycerin	◎	◎	◎	○	◎	◎	○	Fuming Nitric Acid	×	×		×	×	×	
Cresol	○	△	○	△	○	○	×	Tap Water	◎	◎	◎	◎	◎	◎	◎
Chloroform	×	×	×	×	△	△	×	Sea Water	○	◎	◎	◎	◎	◎	
Acetic Acid, conc.	○	△	○	×	○	○	△	Sulfuric Acid, conc.	×	×	×	△	△	△	×
Acetic Acid, 10%	○	×	○	△	◎	◎	○	Sulfuric Acid, 10%	○	○	○	◎	○	○	○
Ethyl Acetate	○	×	△	×	○	○	○	Phosphoric Acid	○	△	○	×	◎	◎	○
Carbon Tetrachloride	×	×	×	×	×	×	△	Sodium Hydroxide, 10%	○	○	○	○	○	○	◎
Cyclohexane	△	×	×		△	△		Freon	×	×		○	○	○	
Dioctyl Phthalate	◎	×		×				Formic Acid	△	×		○	○	○	◎
Trichloroethylene	×	×	×	△	△	△	△	JIC No.1 Oil (OF Oil)	×	△	×	△	○	○	
Trichlorobenzene	×	×	×		△	△		ASTM No.1 Oil	○	○	△	△	○	○	
Toluene	×	×	×	×	△	△	○	ASTM No.2 Oil	△	○	△	△	○	○	
Carbon Disulfide	×	×	×	△	○	○		ASTM No.3 Oil	×	△	×	△	△	△	
Phenol	○	△	○	×	○	○	×	Gasoline	×	△	×	×	○	○	○
Furfural	◎	○	◎	△	◎	◎		Creosote Oil	△	×	×	×	△	△	
Hexane	×	△	×	△	○	○		JIS No.2 Oil	×	×	×	△	○	○	
Benzene	×	×	×	×	△	△	○	Heavy Oil	×	×	×	△	△	△	
Methanol	◎	◎	◎	×	○	○	△	Lube Oil	×	△	△	△	△	△	○
Methyl Ethyl Ketone	△	×	△	×	○	○		Silicone Oil	◎	◎	◎	○	◎	◎	
Dioxane				×	○	○		Vegetable Oil	◎	◎	○		◎	◎	
Nitrobenzene	○	×	○	×	○	○		Petroleum Ether	△	△		×	◎	◎	
Formaline	○	○		○	○	○	△	Trans Oil	×	△	×	○	○	○	
Ammonia, conc.	○	△	○	△	○	○	○	Naphtha	×	×	×	○	○	○	○
Ammonia,10%	○	△	○	○	○	○	◎	Coal Tar					○	○	
Sodium Chloride	○	○	○	○	◎	◎	◎								
Hydrochloric Acid, conc.	○	○	○	△	○	○	×								
Hydrochloric Acid, 10%	◎	○	○	○	◎	◎	○								

Where :

◎ : High Resistance

○ : Fair Resistance

× : Not Applicable

△ : Poor Resistance, care on use

A

Properties Of Insulation And Jacket Materials

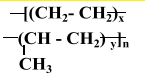
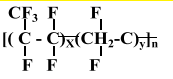
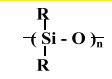
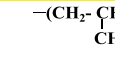
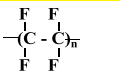
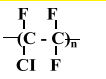
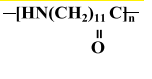
General Comparison Data

Material		Polyvinyl Chloride	Low Density Polyethylene	Cross-liked Polyethylene	Polyisoprene	Styrene Butadiene Copolymer	Polyisprene	Chlorosulphonated Polyethylene
Designation		**PVC**	**PE**	**XLPE**	**NR**	**SBR**	**CR**	**CSM**
Chemical structure		$-(CH_2\text{-}\underset{Cl}{CH})_n-$	$-(CH_2\text{-}CH_2)_n-$	$\sim CH_2\text{-}\underset{\sim CH_2\text{-}CH\text{-}CH_2\sim}{CH}\text{-}CH_2\sim$	$-(CH_2\text{-}\underset{CH_3}{C}{=}CH\text{-}CH_2)_n-$	$-(CH_2\text{-}CH{=}CH\text{-}CH_2)_x-(CH_2\text{-}\underset{\bigcirc}{CH})_y-_n$	$-(CH_2\text{-}\underset{Cl}{C}{=}CH\text{-}CH_2)_n-$	$-(CH_2)_x\text{-}CH\text{-}(CH_2)_y\ \underset{SO_2Cl}{CH}-_n$
Density		1.3 - 1.5	0.91-0.93	0.91 - 0.93	0.93 - 0.94	0.93 - 0.94	1.15 - 1.23	1.10
Hardness (Shore)		D30 - 90	D45 - 60		30 - 90	10 - 95	20 - 90	50 - 90
Max. Operating Temp.	°C	70	75	90	60	75	80	90
Emergency Temp. Rating	°C	85	90	130	85			
Short Circuit Temp. Rating	°C	120	150	250	150			
Brittleness Temp.	°C	~ - 40	< - 70	< - 70	-55 ~ -58	-30 ~ -65	-30 ~ -50	-20 ~ -50
Softening Temp.	°C	120 - 140	100 - 115					
Thermal Expansion	/°C	$0.7 - 2.5 \times 10^{-4}$	$1.6 - 1.8 \times 10^{-4}$	$1.6 - 1.8 \times 10^{-4}$	1.8×10^{-4}	1.8×10^{-4}	$1.9X10^{-4}$	$1.8X10^{-4}$
Thermal Conductivity Cal / cm•sec•	°C	$3.0 - 4.0 \times 10^{-4}$	8.0×10^{-4}	8.0×10^{-4}	5.1×10^{-4}	5.8×10^{-4}	$5.6X10^{-4}$	$6.3X10^{-4}$
Specific Heat	Cal /°C•g	0.3 - 0.5	0.55	0.55	0.52	-	0.52	
Tensile Strength	kg / mm^2	1.5 - 2.5	1.5 - 2.0	1.8 - 3.0	0.8 - 3.0	0.4 - 3.0	0.7 - 3.0	0.5 - 2.0
Elongation	%	200 - 400	300 - 700	300 - 700	300 - 700	100 - 700	400 -900	100 - 500
Abrasion Resistance		Excellent	Good	Excellent	Good	Good	Good	Good
Voltage Breakdown	kv / mm	20 - 30	30 - 50	30 - 50	16 - 32	16 - 30	15 - 25	16 - 32
Volume Resistivity	Ω• cm	$10^{12} - 10^{15}$	$>10^{16}$	$>10^{16}$	10^{15}	$10^{14} - 10^{15}$	$10^{10} - 10^{12}$	$10^{13} - 10^{14}$
Dielectric Constant		5.7	2.2 - 2.4	2.2 - 2.4	3 - 5	3 - 5	7 - 10	
Dissipation Factor (tan δ)		0.1 - 0.03	<0.0005	<0.0005	0.3 - 0.5	2 - 5	1.7 - 4	-
Weathering		Good	Inferior*	Inferior*	Poor	Poor	Excellent	Good
Ozone Resistance		Excellent	Excellent	Excellent	Poor	Inferior	Good	Good
Flame Resistance		Self - Extinguish	Burns	Burns	Burn	Burn	Self - Extinguish	Self - Extinguish
Track Resistance		Inferior	Excellent	Excellent	Fair	Fair	Inferior	Good
Water Resistance		Fair	Excellent	Excellent	Fair	Fair	Fair	Fair
Acid Resistance		Excellent	Good	Good	Good	Fair	Excellent	Good
Alcari Resistance		Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent
Oil Resistance		Good	Excellent	Excellent	Poor	Inferior	Good	Fair
Solvent Resistance		Fair	Excellent	Excellent	Inferior	Inferior	Fair	Fair

* Improved to "good" with mixture of carbon black.

Properties Of Insulation And Jacket Materials

General Comparison Data (Continued)

Material		Ethylene Propylene Copolymer	Hexafluoropropylene Vinylidenefluoride Copolymer	Polyorganosiloxane	Polypropylene	Polytetra Fluoroethylene	Polychloro Trifluoroethylene	Polyamide
Designation		**EPM, EPDM**	**FPM**	**Q**	**PP**	**PTFE**	**PCTFE**	**Nylon(12)**
Chemical structure								
Density		0.86 - 0.87	1.82 - 1.85	0.97 - 1.40	0.9 - 0.915	2.13 - 2.2	2.1	1.01 - 1.02
Hardness (Shore)		40 - 85	60 - 90	50 - 85	R85 - 110	D50 - 65	R110 - 115	R100 - 110
Max. Operating Temp.	°C	90	200	180	80	260	180	90
Emergency Temp. Rating	°C							
Short Circuit Temp. Rating	°C				150	310		120
Brittleness Temp.	°C	-40 ~ -60	-44 ~ -60	-70 ~ -100		< - 70	< - 70	- 70
Softening Temp.	°C						210	170 - 180
Thermal Expansion	/°C		1.6×10^{-4}	2.6×10^{-4}	$6.0 - 8.5 \times 10^{-4}$	1.0×10^{-5}	$4.5 - 7.0 \times 10^{-5}$	12×10^{-5}
Thermal Conductivity Cal / cm•sec•	°C		5.5×10^{-4}	5.7×10^{-4}	2.8×10^{-4}	6×10^{-4}	6×10^{-4}	$5.9 - 8.3 \times 10^{-4}$
Specific Heat	Cal /°C•g				0.46	0.25	0.22	0.62
Tensile Strength	kg / mm^2	0.5 - 1.5	1.5 - 2.5	0.3 - 1.0	2.0 - 4.0	1.4 - 2.1	2.8 - 3.5	5.0 - 6.0
Elongation	%	300 - 700	200 - 600	50 - 300	200 - 700	200	10 - 100	180 - 285
Abrasion Resistance		Good	Good	Fair	Excellent	Excellent	Excellent	Excellent
Voltage Breakdown	kv / mm	20 - 35	24	20 - 40	20 - 32	15 - 30	10 - 20	20 - 30
Volume Resistivity	Ω• cm	$10^{14} - 10^{15}$	$10^{12} - 10^{14}$	$10^{14} - 10^{15}$	$>10^{16}$	$>10^{18}$	$1.2 - 10^{18}$	$10^{14} - 10^{15}$
Dielectric Constant		3 - 5	6 - 7	3 - 4	2.0 - 2.2	2.0	2.24 - 2.8	3.5 - 4.5
Dissipation Factor (tan δ)		0.2 - 0.8		0.1 - 1.0	0.0002 - 0.0006	<0.0002	0.0012 - 0.0036	0.03 - 0.06
Weathering		Excellent	Good	Good	Inferior*	Excellent	Excellent	Inferior*
Ozone Resistance		Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good
Flame Resistance		Burn	Self - Extinguish	Burn	Burn	No Burn	No Burn	Burn
Track Resistance		Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Good
Water Resistance		Good	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Acid Resistance		Excellent	Excellent	Poor	Excellent	Excellent	Excellentt	Good
Alcari Resistance		Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Oil Resistance		Inferior*	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Solvent Resistance		Poor	Excellent	Fair	Excellent	Excellent	Excellentt	Good

* Improved to “good” with mixture of carbon black.

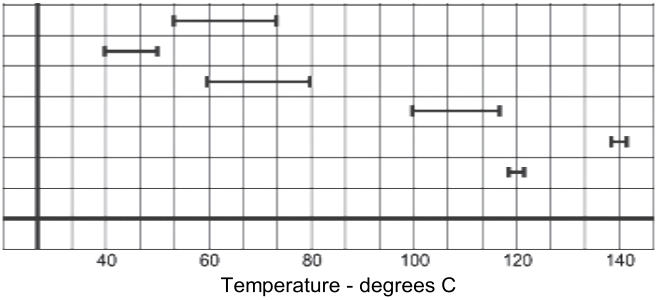
YAZAKI

Properties of Insulation and Jacket Materials

Thermal Properties

Deflection temperature of plastics under load [ASTM D648]

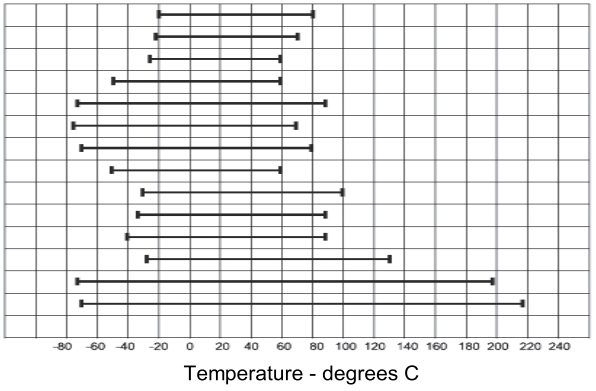
Polyvinyle Choloride (Hard Type)
Low Density Polyethylene
High Density Polyethylene
Polypropylene
Polyamide
Polytetrafluoroethylene



A

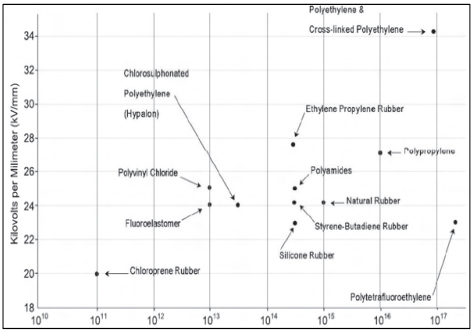
Operating Temperature

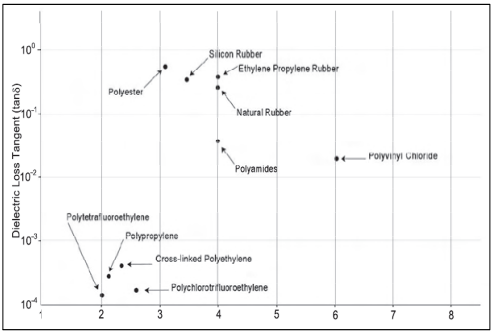
[Max. point : Max Continuous Operating Temperature
Min.point : Brittleness Temperature]



Polyvinyle Chloride, 80°C Grade
Polyvinyle Chloride, 75°C Grade
Polyvinyle Chloride, 60°C Grade
Cold Resisting Polyvinyle Chloride
Cross-Linked Polyethylene
Polyethylene
Nylon
Synthetic Natural Rubber
Chloroprene
Styrene-Butadiene Rubber
Ethylene-Propylene Rubber
Chlorosulphonated Polyethylene (Hypalon)
Silicone
Teflon

Electrical Properties

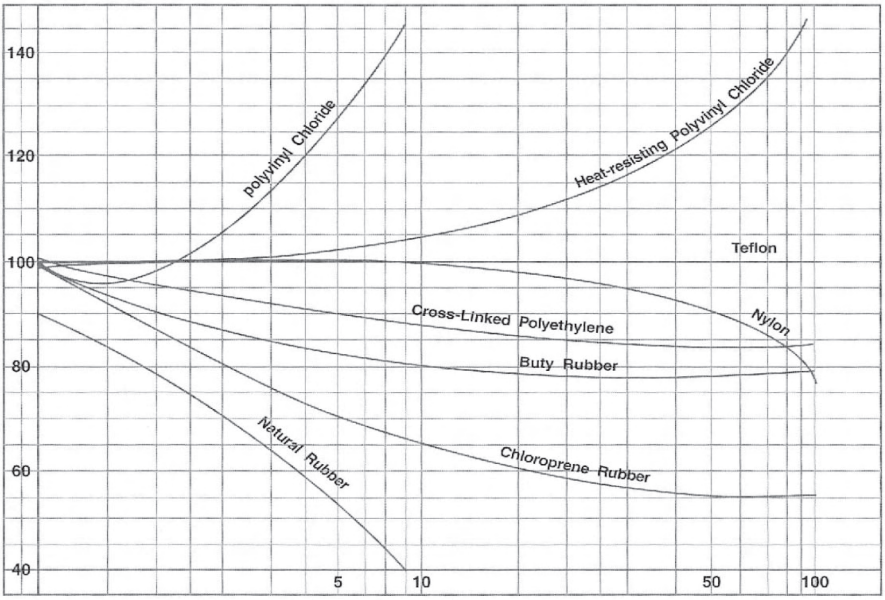




Properties of Insulation and Jacket Materials

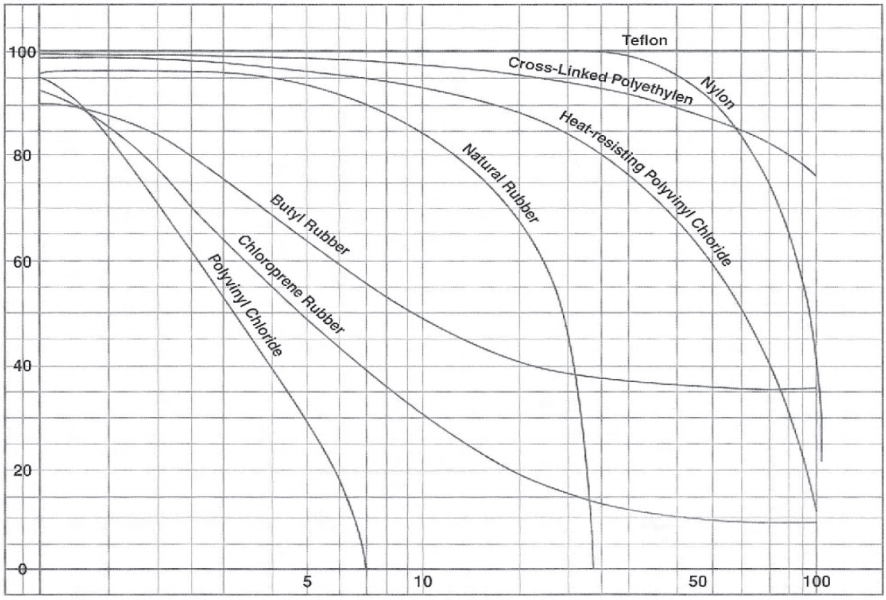
Long - Time Heat Aging Curves

%Retention Critical Tensile Strength



Days in Air Oven 120 °C

%Retention Critical Elongation



Days in Air Oven 120 °C

Condition of Installation

Minimum Bending Radius

Type of cable \ Number of core		Single core		multi core
		Round conductor	Sector shape conductor	
PVC & PE Sheath	Unshield Cable	8D	12D	6D
	Shield Cable	10D	12D	8D
Wire armoured cable		10D	12D	10D
Lead sheathed		10D	12D	10D
Corrugated metal armouredcable		-	-	8D
Flattape armoured cable		-	-	8D
Al. flat sheathed cable		20D	20D	20D
Al. corrugated sheathed cable		15D	15D	15D
Al. solidconductor		-	-	10D
Cabtyre cable		6D	-	4D

D : Overall diameter of cable

Permissible Maximum Pulling Tension

Pulling tool	Material of conductor	Permissible maximum pulling tension (kgf)
Pulling eye	Copper	7 x (Number or core) x (Cross-sectional area of conductor)
	Aluminium	4 x (Number of core) x (Cross-sectional area of conductor)
Cable grip	Copper & Aluminium	The same as using the pulling eye, but the maximum tension should be less than 1.5 tons.

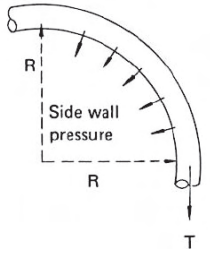
Note : When cable grip is used is should cover more than 500 mm. in length of the cable end and be bound to the cable sheath

Side Wall Pressure to Cable

Permissible maximum side wall pressure to the cable at bending point during installation is
500 kg/m for CV cable (Single core and multi core)
300 kg/m for PVC insulated PVC sheathed cable
250 kg/m for CV triplex type

$$\text{Side wall pressure to cable} = \frac{\text{Pulling tension (kgf)}}{\text{bending radius (m)}}$$

$$= \frac{T}{R}$$



Symbols of Electrical Units

Electrical Unit		Symbol
CURRENT	(AMPERE)	A
VOLTAGE	(VOLT)	V (kV)
RESISTANCE	(OHM)	Ω (kΩ, MΩ)
ELECTRIC POWER	(WATT)	W (kW, MW.)
ELECTRIC ENERGY	(WATT HOUR)	Wh (kWh.)
HORSE POWER		HP
POWER FACTOR	(COS Ø)	P.F.
FREQUENCY	(HERTZ)	H_Z
CAPACITANCE	(FARAD)	F (μF, pF.)
APPARENT POWER	(VOLTAMPERE)	VA (kVA)
DIRECT CURRENT		DC
ALTERNATING CURRENT		AC
EFFICENCY		Eff.
MAXIMUM VALUES	(VOLTAMPERE)	Em, Im
AVERAGE VALUES	(VOLTAMPERE)	Eav, Iav
EFFECTIVE VALUES	(VOLTAMPERE)	E. I
INSTANTANEOUS VALUES	(VOLTAMPERE)	e, I

Electrical Formulas

Direct Current	Alternating Current	
	Single Phase	Three Phase
$A = \frac{kW \times 1000}{V}$	$A = \frac{kW \times 1000}{V \times P.F.}$	$A = \frac{kW \times 1000}{1.73 \times V \times P.F.}$
$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{1.73 \times V}$
$A = \frac{HP \times 746}{V \times (\%Eff.)}$	$A = \frac{HP \times 746}{V \times (\%Eff.) \times P.F.}$	$A = \frac{HP \times 746}{1.73 \times V \times (\%Eff.) \times P.F.}$
$kW = \frac{A \times V}{1000}$	$kW = \frac{A \times V \times P.F.}{1000}$	$kW = \frac{A \times V \times 1.73 \times P.F.}{1000}$
$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V \times 1.73}{1000}$
$HP = \frac{A \times V \times (\%Eff.)}{746}$	$HP = \frac{A \times V \times (\%Eff.) \times P.F.}{746}$	$HP = \frac{A \times V \times 1.73(\%Eff.) \times P.F.}{746}$

Approximate Motor Amperes per Terminal

1 phase	220 V ac = 4	amps/HP
3 phase	200 V ac = 2.5	amps/HP
3 phase	380 V ac = 1.41	amps/HP
3 phase	440 V ac = 1	amps/HP
3 phase	550 V ac = 1	amps/HP

Table of The Dimensions for The Motor Starters

The figures are based on normal 3 - phase motors for a.c. at 50 c.p.s. 1400 - 1450 r.p.m.

Motor ratings in HP at service voltage						Rating of motor starter (A)	Relay setting (A)	Max. quick-blow back-up fuse (A)	Min cross section of cables (mm^2)
220 V		380 V		440 V					
HP	Full load current (A)	HP	Full load current (A)	HP	Full load current (A)				
		0.05		0.05		15	0.15 - 0.25	1	1.5
0.05		0.1		0.1		15	0.25 - 0.4	2	1.5
		0.15		0.20		15	0.4 - 0.65	4	1.5
0.1		0.2		0.25	0.5	15	0.4 - 0.65	4	1.5
0.15		0.25	0.6	0.50	0.9	15	0.6 - 1	6	1.5
0.25	1.1	0.5	1.0			15	1.0 - 1.6	6	1.5
		0.75	1.5	0.75	1.2	15	1.0 - 1.6	6	1.5
0.5	1.8	1.0	1.9	1.0	1.6	15	1.5 - 2.5	15 (10)	1.5
0.75	2.5	1.5	2.6	2	3.2	15	2.5 - 4	25 (15)	1.5
1.0	3.2	2	3.4	2.5	3.9	15	2.5 - 4	25 (15)	1.5
1.5	4.4	2.5	4.2	3	4.5	15	4 - 6.5	25 (20)	1.5
2.0	5.8	3	4.9	4	6.0	15	4 - 6.5	25 (20)	1.5
2.5	7.3	4	6.3	5	7.5	15	6 - 10	35 (25)	1.5
3	8.4	5	7.8	6	8.5	15	6 - 10	35 (25)	1.5
4	11	6	9.3	7.5	11.0	15	9 - 14	35	1.5
5	13.5	7.5	11.5			15	9 - 14	35	1.5
		10	15	10	14	25	13 - 20	60	2.5
7.5	19.5	15	22	15	21	25	16 - 25	60	4
10	26	20	29	20	27	60	20 - 31	100	6
15	39	25	36	30	39	60	28 - 43	125	10
20	51	30	42			60	40 - 60	160	16
		35	50	35	46	60	40 - 60	160	16
		40	56	40	52	60	40 - 60	160	16
25	63	50	69	50	65	100	50 - 75	200	16
35	91	60	83	60	76	100	70 - 100	200	25
40	100	75	104	75	96	200	84 - 120	400	35
50	125	100	136	100	125	200	105 - 150	500	50
75	184	125	167	125	155	200	140 - 200	500	95
		150	200	150	180	350	175 - 250	600	120
100	245	175	235	175	215	350	175 - 250	600	120
120	295	200	268	200	240	350	210 - 300	850	150
150	370	250	335	250	300	600	280 - 400	850	240
175	425	300	400	300	360	600	350 - 500	1000	400
200	475	350	470	350	410	600	350 - 500	1000	400
225	540	400	535	400	450	600	420 - 600	1000	

Figures in brackets apply to hand operated motor starters.

Standard Coefficient of Conversion

Items		Description			
1. LENGTH	1 micron	= 0.001 mm	= 3.94 x 10^{-5} in.		
	1 mil	= 0.0254 mm	= 0.001 in		
	1 mm	= 39.37 mils	= 0.03937 in.		
	1 cm	= 0.3937 in	= 0.0328 ft.		
	1 inch	= 25.4 mm	= 0.083 ft.	= 0.0278 yd.	= 2.54 cm.
	1 feet	= 0.305 m	= 0.33 yd.		
	1 yard	= 0.914 m	= 91.44 cm.		
	1 meter	= 39.37 in	= 3.28 ft.	= 1.094 yd.	
	1 kilometer	= 3,281 ft.	= 1,094 yd.	= 0.6213 mile	
	1 mile	= 5,280 ft.	= 1,760 yd.	= 1,609 m	= 1.609 km
2. AREA	1 MCM	= 1000 CM	(Circular Mil)	= 0.5067 mm^2	= 1/1000in^2
	1 CM	= 0.0005067 mm^2	= 0.0000007854 in^2		= 0.7854 sq. mil.
	1 mm^2	= 1973 CM	= 0.00155 in^2	= 1,550 sq. mil.	
	1 in^2	= 1273240 CM	= 645.1 mm^2	= 0.0069 $ft.^2$	
	1 yd^2	= 1,296 in^2	= 0.83613 m^2		
	1 m^2	= 1,550 in^2	=10.7 $ft.^2$	= 1.195 $yd.^2$	
	1 km^2	= 0.001562 $mile^2$			
	1 $mile^2$	= 27,880,000 $ft.^2$	= 3,098,000 $yd.^2$	= 2,590,000 m^2	= 2.59 km^2
3. VOLUME	1 cm^3	= 0.061 in^3			
	1 in^3	= 16.39 cm^3	= 0.0036 gal.	= 0.0005787 $ft.^3$	
	1 I	= 1,000 cm^3	= 61.023 in^3	= 0.2642 gal	= 0.03531 $ft.^3$
	1 gal.	= 3,785 cm^3	= 231 in^3	= 0.1337 $ft.^3$	= 0.004951 $yd.^3$
	1 $ft.^3$	= 28,317 cm^3	= 1,728 in^3	= 28.32 l.	= 7.48 gal
	1 yd^3	= 46,656 in^3	=0.7646 m^3		
	1 m^3	= 61,023 in^3	= 35.31 $ft.^3$	= 1.308 yd^3	
4. WEIGHT	1 g.	= 15.43 gr.	= 0.03527 oz.	= 0.002205 Ib.	
	1 oz.	= 437.5 gr.	= 28.35 g.	= 0.0625 Ib.	
	1 Ib.	= 7,000 gr.	= 453.6 g.	= 16 oz.	= 0.4536 kg.
	1 kg.	= 15,432 gr.	= 35.27 oz.	= 2.205 Ib.	
	1 ton (short)	= 2,000 Ib.	= 907.2 kg.	= 0.8928 ton (long)	
	1 ton (long)	= 2,240 Ib.	= 1.12 ton (short)	= 1.016 ton (metric)	
	1 ton (metric)	= 2,204.62 Ib.			
5. ENERGY	1 Btu.	= 1,055 joules	= 778.1 ft.-lb	= 252 g-cal.	= 107.6 kg.-m.
		= 0.2930 watt-hr.			
	1 watt-hr.	= 3,600 joules	= 2,655.4 ft. -lb.	= 860 g-cal.	= 367.1 kg.-m.
		= 3.413 B.t.u.	= 0.001341 hp.-hr.		
	1 hp.-hr.	= 2,684,000 joules	= 1,980,000 ft.-lb.	= 273,700 kg.-cm.	
		= 745.6 watt-hr.			
	1 kw-hr.	= 2,655,000 ft.-lb.	= 367,100 kg.-m.	= 1.34 hp.-hr.	
6. POWER	1 watt	= 44.26 ft.-lb./min	= 6.199 kg-m/min	= 0.001341 hp.	
	1 hp	= 33,000 ft.-lb./min		= 745.6 watts	= 550 ft.-lb./sec.
		= 76.04 kg-m/sec			
	1 kw.	= 44,256.7 ft-lb./min		= 101.979 kg-m/sec	= 1.341 hp.
		= 1,000 watts.			
7. TEMPERATURE	Temp °C	= 5/9 (temp °F-32)			
	Temp °F	= (9/5 x temp °C) +32			

A

Conductivity and Density of Metals

Kind	Symbol	Conductivty (% IACS)	Density (g/cm³)
Silver	Ag	108.6	10.50
Stranded Copper (Annealed)	Cu	100.0	8.89
Gold	Au	72.5	19.30
Aluminium	Al	61.0	2.70
Iron	Fe	13.0	7.78
Tin	Sn	12.2	7.29
Steel	-	11.6	7.78

Conductor Materials

Material	Specific resistance 20 °C			Temperature coefficient, 20 °C	Density (g/cm³)
	μΩ-cm	μΩ-in	Ω-cmil/ft		
Annealed copper	1.724	0.6788	10.37	0.00393	8.89
Hard-drawn copper	1.79	0.695	10.77	0.00378	8.89
Annealed aluminium	2.82	1.113	17.0	0.0039	2.70
Hard-drawn aluminium	2.92	1.15	17.5	0.0038	2.70
Pure iron	10.0	3.93	60.0	0.006	7.86
Steel wire	10.7-17.5	4.2-6.9	64-106	0.006-0.00036	7.78
Cast iron	75-100	29.5-39.4	450-600	0.001-0.00074	7.32

Temperature Correction Factors for Conductor Resistance

Factors for correcting resistances at various temperatures of conductor to the standard reference temperature of 20 °C and reciprocals of the factors for calculating resistances at other temperatures from the value at 20 °C

Temperature °C	Correction Factor		Reciprocal of Factor	
	Copper	Aluminum	Copper	Aluminum
0	1.085	1.088	0.921	0.919
5	1.063	1.064	0.941	0.940
10	1.041	1.042	0.961	0.960
15	1.020	1.021	0.980	0.980
20	1.000	1.000	1.000	1.000
25	0.981	0.980	1.020	1.020
30	0.962	0.961	1.039	1.040
35	0.944	0.943	1.059	1.060
40	0.927	0.925	1.079	1.081
45	0.911	0.908	1.098	1.101
50	0.895	0.892	1.118	1.121
55	0.879	0.876	1.138	1.141
60	0.864	0.861	1.157	1.161
65	0.850	0.846	1.177	1.181
70	0.836	0.832	1.197	1.202
75	0.822	0.819	1.216	1.222
80	0.809	0.805	1.236	1.242
85	0.797	0.792	1.255	1.262
90	0.784	0.780	1.275	1.282

A

The correction factor is given by:

$$k = \frac{1}{k_1} = \frac{1}{1 + \alpha(\theta - 20)}$$

Where :

k = temperature correction factor of conductor

k_1 = reciprocal of k

α = constant mass temperature coefficient at 20 ^{o}C per ^{o}C

= 0.00393 for copper (based on 100% conductivity)

= 0.00403 for aluminum (based on 61% conductivity)

θ = referred temperature, ^{o}C

Electrical Formulas

D.C. resistance

Medthod of calculation of conductor maximum d.c. resistance

$$R_{dc} = \frac{4A}{n\pi d^2} \times K_1 \times K_2 \times K_3$$

Where:

R_{dc} = the d.c. resistance at 20°C, Ω/km

A = the standard resistivity of the conductor metal at 20°C
- 17.241 for annealed copper
- 28.264 for aluminium alloy 1350
- 17.654 for tinned copper

K_1 = a factor dependent on the diameter of the wire in the conductor, on the kind of metal and on whether or not the copper wires are tinned or nickel-coated.

K_2 = A factor dependent on the conductor construction.
- 1.00 for Solid conductors
- 1.02 for stranded or uniaxial conductors in fixed cables, where the diameter of wires exceeds 0.6 mm
- 1.03 for stranded or bunched conductors in all cables where the diameter of wires<= 0.6 mm
- 1.04 for stranded or bunched conductors in all cables where the diameter of wires>= 0.6 mm

K_3 = A factor dependent on whether or not the conductor is, typically, used also in multicore cables.
- 1.00 for conductors in fixed cables of < 500 mm2 (typically single core cables)
- 1.02 for conductors in fixed cables of < 500 mm2 (typically multi core cables)
- 1.05 for conductors in all flexible cords and cables

n = the number of wires in the conductor

d = the diameter of wires in the conductor

Diameter of wire in conductor mm		K_1			
		Soild Conductor		Stranded Conductor	
		Plain or silver plated copper	Tinned copper or plain aluminium	Plain or silver plated copper	Tinned copper or plain aluminium
	≤0.10	-	-	1.07	1.12
>0.10	≤0.31	-	-	1.04	1.07
>0.31	≤0.91	1.03	1.05	1.02	1.04
>0.91	≤3.60	1.03	1.04	1.02	1.03
>3.60	≤4.50	1.03	1.04	-	-
>4.50		1.03	1.03	-	-

Inductance

The inductance, L , per core of a 3-core cable or of three single-core cables comprises two parts namely the self-inductance of the conductor and the mutual inductance with other cores.

The formula for calculating the Inductance of a cable is given by:

$$L = K + 0.2\log_{10}\left(\frac{2S}{d}\right) \text{ (mH/km)}$$

Where:

L = Inductance of cable in (mH/ km)
K = Constant relating to the conductor formation (see table below)
S = Axial spacing between conductors within the cable (mm) or axial spacing between Conductors of a trefoil group of single core cables (mm) or
= 1.26 x phase spacing for a flat formation of three single-core cables (mm)
d = conductor diameter or for shaped designs the diameter of an equivalent circular conductor (mm)

Typical Values for K for Different Stranded Conductors (at 50Hz)

Number of Wires in Conductor	K
9	0.0642
7	0.0554
37	0.0528
61 and Over	0.0514
1 (Solid)	0.05
Hollow core conductor, 12 mm duct	0.0383

Reactance (Inductive Reactance)

$$X = 2 \times \pi \times f \times L \ (\Omega/\text{km})$$

Where:

f = Frequency (Hz)
L = Inductance (mH/km)

Impedance

$$Z = \sqrt{R^2 + X^2} \ (\Omega/\text{km})$$

Where:

R = Conductor Resistance (Ω/km)
X = Cable Inductive Reactance (Ω/km)

Dielectric loss (A.C. cables only)

The dielectric loss per unit length in each phase is giving by :

$$W_d = \omega \, C \, U_0^{\,2} \tan\delta \ \text{(W/m)}$$

Where:

ω = 2πf
C = Capacitance per unit length (F/m)
U_0 = voltage to earth (V)

Type of cable	Permittivity (ε)	tanδ	U_0
PVC	8	0.1	6
PE (HD and LD)	2.3	0.001	127
XLPE			
- up to and including 18/30 (36)kV cable (unfilled)	2.5	0.004	127
- greater 18/30 (36)kV cable (unfilled)	2.5	0.001	127
- greater 18/30 (36)kV cable (filled)	3	0.005	63.5

Capacitance

The capacitance of circular conductor is giving by :

$$C = \frac{\varepsilon}{18\ln\left(\frac{D_i}{d_c}\right)} 10^{-9} \ \text{(F/m)}$$

Where:

ε = relative permittivity of the insulation
D_i = external diameter of the insulation (excluding screen) (mm)
d_c = diameter of conductor, including screen, if any (mm)

The same formula can be used for oval conductors if the geometric mean of the appropriate major and minor diameters is substituted for D_i and d_c

A

AC resistance at temperature :

$$R_{ac} = R_{dc_t}(1 + y_s + y_p)$$

Where:

R_{dc_t} = DC resistance at operating temperature

y_s = Skin effect factor

y_p = Proximity effect factor

A

Skin effect factor y_s

$$y_s = X_s^4/(192+X_s^4)$$

Where:

$$X_s^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_s}{R_{dc_t}}$$

k_s = Factor determined by conductor construction

Type of conductor	Wheather dried and impregnated or not	k_s	k_p
Copper			
Round, stranded	Yes	1	0.8
Round, stranded	No	1	1
Aluminium	Either		see note
Round, stranded	Either	1	

f = Frequency (Hz)

R_{dc_t} = DC resistance at operating temperature

Proximity effect factor y_p

1. For 2 core and 2 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times 2.9$$

2. For 3 core and 3 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times \left[0.312 \times \left(\frac{d_c}{S}\right)^2 + \frac{1.18}{[X_p^4/(192+0.8X_p^4)0.27]}\right]$$

Where:

$$X_p^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_p}{R_{dc_t}}$$

R_{dc_t} = DC resistance at operating temperature

k_p = Factor determined by conductor construction

d_c = Diameter of conductor (mm)

S = Spacing between conductor centres (mm)

Charging Current

$$I_c = \omega CV \times 10^{-6} \ (A)$$

Where:

I_c = charging current (A/km)
ω = 2π time the frequency of the applied voltage
C = capacitance between the electrodes between which the voltage is applied (μF/km)
V = applied voltage (V)

Insulation Resistance

$$IR \text{ at } 20°C = 3.67 \times 10^{-12} \times \rho \times \log_{10}\left(\frac{D_2}{D_1}\right) \ (M\Omega-km)$$

Where:

R_i = insulation resistance of one kilometer of cable in Meggaohms (MΩ-km)
D_1 = inner diameters of the insulation (mm)
D_2 = outer diameters of the insulations (mm)
ρ = resistivity (Ω-cm)

XLPE : 2.5×10^{15}

PVC : $1 \times 10^{13} - 1 \times 10^{14}$

Short-Circuit Current Rating

Copper Conductor

$$I = A \times \sqrt{\left(\frac{0.0297}{t}\right)\log\left(\frac{234 + T_2}{234 + T_1}\right)} \times 1.973$$

Aluminium Conductor

$$I = A \times \sqrt{\left(\frac{0.0125}{t}\right)\log\left(\frac{228 + T_2}{228 + T_1}\right)} \times 1.973$$

Where:

I = Short circuit current (kA)
A = Cross-section area (mm²)
t = Short circuit duration (sec)
T_1 = Max. permissible continuous operating temp (°C) ; PVC=70, XLPE=90
T_2 = Max. permissible temperature at short circuit (°C) ; PVC=160, XLPE=250

Short-Circuit Current 1 sec at conductor (kA)

Size (mm²)	Copper		Aluminium	
	XLPE	PVC	XLPE	PVC
1.5	0.21	0.17	-	-
2.5	0.35	0.29	-	-
4	0.57	0.46	-	-
6	0.85	0.68	-	-
10	1.42	1.14	0.93	0.75
16	2.27	1.83	1.48	1.19
25	3.55	2.85	2.32	1.87
35	4.97	3.99	3.25	2.61
50	7.10	5.71	4.64	3.73
70	9.94	7.99	6.50	5.23
95	13.5	10.8	8.82	7.09
120	17.0	13.7	11.1	8.96
150	21.3	17.1	13.9	11.2
185	26.3	21.1	17.2	13.8
240	34.1	27.4	22.3	17.9
300	42.6	34.2	27.8	22.4
400	56.8	45.6	37.1	29.9
500	71.0	57.1	46.4	37.3
630	89.4	71.9	58.5	47.0
800	113.6	91.3	74.2	59.7
1000	142.0	114.1	92.8	74.7

Short Circuit Performance of Metallic Shields and Sheath of Insulated Cable

$$I = \frac{A}{\sqrt{t}}\sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$M = \sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$I = \frac{MA}{\sqrt{t}}$$

A

I = Short-circuit current of copper shield (A)
A = Effective cross-sectional area of shield or sheath (circular mils) see table below
t = Time of short circuit (second)

Type of shield or sheath	Formula for calculating A
1. Wires applied either helically. as a braid or serving or longitudinally with corrugations.	nd_s^2
2. Helically applied tape. not overiapped.	$1.27nwb$
3. Helically applied flat tape. overlapped. See note 3.	$4bd_m \times \sqrt{\frac{100}{2(100 - L)}}$
4. Corrugated tape. longitudinaily applied.	$1.27[\pi(d_{is} + 50) + B]b$
5. Tubular sheath.	$4bd_m$

Where :

A = Effective cross-sectional area. shield or sheath, cmil.
B = Tape overlap. mils (usually 375)
b = Thickness of tape. mils
d_{is} = Diameter over extruded insulation screen, mils.
d_m = Mean diameter of shield or sheath. mils.
d_s = Diameter of wires. mils
w = Width of tape. mils.
n = Number of serving or braid wires. or tapes.
L = Overlap of tape. percent

Voltage Drop Calculation

For single phase:

$$V_{1\emptyset} = \frac{2I(R\cos\theta + X\sin\theta)L}{1000}$$

Where :

I is the nominal full load or starting current as applicable (A)

R is the ac resistance of the cable (Ω/km)

X is the ac reactance of the cable (Ω/km)

$cos\,\theta$ is the load power factor (pu)

L is the length of the cable (m)

For three phase:

$$V_{3\emptyset} = \frac{\sqrt{3}I(R\cos\theta + X\sin\theta)L}{1000}$$

Where :

I is the nominal full load or starting current as applicable (A)

R is the ac resistance of the cable (Ω/km)

X is the ac reactance of the cable (Ω/km)

$cos\,\theta$ is the load power factor (pu)

L is the length of the cable (m)

Calculating Maximum Cable Length Due to Voltage Drop

It may be more convenient to calculate the maximum length of a cable for a particular conductor size given a maximum permissible voltage drop (5% of the at full load Ref. NEC Standard) rather than the voltage drop itself. The maximum cable length that will achieve this can be calculated by re-arranging the voltage maximum permissible voltage drop:

For single phase:

$$L_{max} = \frac{1000V_{1\emptyset}}{2I(R\cos\theta + X\sin\theta)}$$

Where :

I is the nominal full load or starting current as applicable (A)

R is the ac resistance of the cable (Ω/km)

X is the ac reactance of the cable (Ω/km)

$cos\,\theta$ is the load power factor (pu)

$V_{1\emptyset}$ is the maximum permissible single phase voltage drop (V)

For three phase:

$$L_{max} = \frac{1000V_{3\emptyset}}{\sqrt{3}I(R\cos\theta + X\sin\theta)}$$

Where :

I is the nominal full load or starting current as applicable (A)

R is the ac resistance of the cable (Ω/km)

X is the ac reactance of the cable (Ω/km)

$cos\,\theta$ is the load power factor (pu)

$V_{3\emptyset}$ is the maximum permissible three phase voltage drop (V)

Electrical Data from EIT Standard 2001-56

Table 5-8 : Correction factor for groups of more than one circuit

Group of circuit	Correction factor
2	0.80
3	0.70
4	0.65
5	0.60
6	0.57
7	0.54
8	0.52
9	0.50
10-12	0.45
13-16	0.41
17-20	0.38

Note (Table 5-8)
1) These factors are applicable to uniform groups of cables, equally loaded.
2) The correction factor are applied to:
- Groups of two or three or four Single core cables
- Multi cores cables.

3) If a system consists of both two or three or four cables, the total number of cables is taken as the number of circuits, and the correction factor is applied to the table for two or three or four loaded conductors for the two or three or four core cables respectively.
4) If a group consists of n Single core cables it may either be considered as n/2 circuits of two loaded conductor or n/3 circuits of three loaded conductor

Remark : This page refer EIT Standard 2001-56

Table 5-20: Current-carrying capacities in amperes for copper conductor, PVC insulated, with or without sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C in conduit

	Group for installation medthod : Group 1				Group for installation medthod : Group 2			
No. of Conductor	2		3		2		3	
Single/ muticores	Single core	Multi core	Single core	Multi core	Single core	Multi core	Single core	Multi core
Installation Medthod								
Type of Cable	60227 IEC 01, 60227 IEC 02, 60227 IEC 05, 60227 IEC 06, 60227 IEC 10, NYY, NYY-G-, VCT, VCT-G, IEC 60502-1 and special cable such as flame retardant (FR), low smoke and halogen free (LSHF) etc.							
Size (sq.mm.)	Current-carrying capacities (amperes)							
1	10	10	9	9	12	11	10	10
1.5	13	12	12	11	15	14	13	13
2.5	17	16	16	15	21	20	18	17
4	23	22	21	20	28	26	24	23
6	30	28	27	25	36	33	31	30
10	40	37	37	34	50	45	44	40
16	53	50	49	45	66	60	59	54
25	70	65	64	59	88	78	77	70
35	86	80	77	72	109	97	96	86
50	104	96	94	86	131	116	117	103
70	131	121	118	109	167	146	149	130
95	158	145	143	131	202	175	180	156
120	183	167	164	150	234	202	208	179
150	209	191	188	171	261	224	228	196
185	238	216	213	194	297	256	258	222
240	279	253	249	227	348	299	301	258
300	319	291	285	259	398	343	343	295
400	-	-	-	-	475	-	406	-
500	-	-	-	-	545	-	464	-

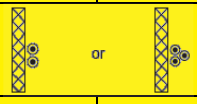
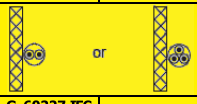
A

Note (Table 5-20)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.
2) If installation more than 1 circuit in single conduit , the correction factor given in Table 5-8.
3) Installation method given in Table 5-47.
4) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-21: Current-carrying capacities in amperes for copper insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 70°C or 90°C / ambient temperature 40 °C on wall

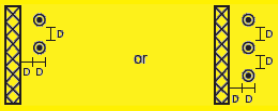
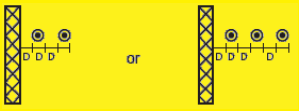
	Group for installation medthod : Group 3				
No. of Conductor	2	Not more than 3		Not more than 3	
Type of Cable	Flat	Round		Round	
Single/ muticores	Multi core	Single core		Multi core	
Type of insulation	PVC	PVC	XLPE	PVC	XLPE
Conductor temperature	70°C	70°C	90°C	70°C	90°C
Installation Medthod					
Type of Cable	VAF, VAF-G	NYY, IEC 60502-1	IEC 60502-1	NYY, NYY-G, 60227 IEC 10, IEC 60502-1	IEC 60502-1
Size (sq.mm.)	Current-carrying capacities (amperes)				
1	14	12	16	12	15
1.5	17	16	21	15	20
2.5	23	22	28	21	27
4	32	29	37	28	36
6	41	37	49	36	47
10	56	51	67	50	65
16	74	69	90	66	87
25	-	90	118	84	108
35	-	112	147	104	134
50	-	145	190	125	163
70	-	186	244	160	208
95	-	227	297	194	253
120	-	264	345	225	293
150	-	304	397	260	338
185	-	348	455	297	386
240	-	411	537	351	455
300	-	474	620	404	524
400	-	552	722	-	-
500	-	629	823	-	-

Note (Table 5-21)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43
2) Installation method given in Table 5-47
3) Type of cable given in Table 5-48

Remark : This page refer EIT Standard 2001-56

Table 5-22 : Current-carrying capacities in amperes accordance TIS 11-2553 for copper conductor, PVC insulated for rated voltage 450/750 V, conductor temperature 70°C, ambient temperature 40°C on insulator

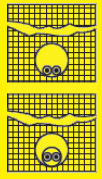
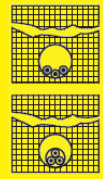
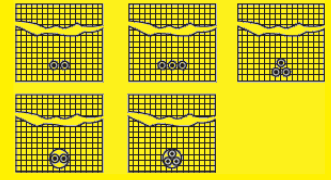
	Group for installation medthod : Group 4	
Installation Methods		
Type of Cable	60227 IEC 01, 60227 IEC 10, NYY	
Size (sq.mm.)	Current-carrying capacities (amperes)	
1	-	-
1.5	-	-
2.5	-	-
4	30	37
6	39	48
10	56	67
16	78	92
25	113	127
35	141	157
50	171	191
70	221	244
95	271	297
120	315	345
150	365	397
185	418	453
240	495	535
300	573	617
400	692	741
500	-	-

Note (Table 5-22)
1) Installation method given in Table 5-47
2) Type of cable given in Table 5-48

Remark : This page refer EIT Standard 2001-56

A

Table 5-23: Current-carrying capacities in amperes for copper conductor, PVC insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 70°C / ambient temperature 30 °C in duct in ground or direct burial.

	Group for installation medthod : Group 5		Group for installation medthod : Group 6
No. of conductor	2	3	Not more than 3
Type of Cable	Single core and Multi core	Single core and Multi core	Single core and Multi core
Installation Methods			
Type of Cable	NYY, NYY-G, IEC 60502-1		
Size (sq.mm.)	Current-carrying capacities (amperes)		
1	17	15	21
1.5	21	19	26
2.5	28	25	35
4	36	33	45
6	46	41	57
10	62	55	76
16	81	72	99
25	106	94	128
35	129	114	154
50	153	136	181
70	190	168	223
95	232	204	267
120	265	234	304
150	303	266	342
185	344	303	386
240	404	361	448
300	462	404	507
400	529	462	577
500	605	527	654

Note (Table 5-23)

1) Where the ambient temperature in the intended location of the cable differs from 30°C (reference ambient temperature), the correction factor given in Table 5-44
2) If installation more than 1 circuit , the correction factor given in table 5-45 or 5-46.
3) If installation more than 1 circuit in single conduit , the correction factor given in Table 5-8.
4) Installation method given in Table 5-47.
5) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-24 : Current-carrying capacities in amperes accordance TIS 11-2553 for copper conductor, PVC insulated for rated voltage 300/500 V, conductor temperature 70°C or 90°C / ambient temperature 40°C in free air

Conductor Temperature	70°C	90°C
Type of Cable	60227 IEC 05, 60227 IEC 06	60227 IEC 07, 60227 IEC 08
Size (sq.mm.)	Current-carrying capacities (amperes)	
0.5	3	3
0.75	6	6
1	10[2)]	10
1.5	-	16
2.5	-	25

Note (Table 5-24)
1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in below table.

- For insulated with PVC 70°C

Ambient Temperature (Degree celsius)	31-35	36-40	41-45	46-50	51-55
Correction factor	1.11	1.00	0.87	0.71	0.50

- For insulated with PVC 90°C

Ambient Temperature (Degree celsius)	31-50	51-55	56-60	61-65	66-70
Correction factor	1.00	0.96	0.83	0.67	0.47

2) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-25 : Current-carrying capacities in amperes accordance TIS 11-2553 for flexible copper conductor, PVC insulated for rated voltage 300/500 V, conductor temperature 70°C or 90°C / ambient temperature 40°C in free air

No. of conductor	2	3
Type of Cable	60227 IEC 52, 60227 IEC 53, 60227 IEC 56, 60227 IEC 57	
Size (sq.mm.)	Current-carrying capacities (amperes)	
0.5	3	3
0.75	6	6
1	10	10
1.5	16	16
2.5	25	20

A

Note (Table 5-25)
1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in below table.

- For insulated with PVC 70°C

Ambient Temperature (Degree celsius)	31-35	36-40	41-45	46-50	51-55
Correction factor	1.11	1.00	0.87	0.71	0.50

- For insulated with PVC 90°C

Ambient Temperature (Degree celsius)	31-50	51-55	56-60	61-65	66-70
Correction factor	1.00	0.96	0.83	0.67	0.47

2) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-26 : Current-carrying capacities in amperes accordance TIS 11-2553 for flexible copper conductor, PVC insulated for rated voltage 450/750 V, conductor temperature 70°C / ambient temperature 40°C in free air

No./Type of conductor	Single core 2 wires or 2 cores with or without ground	3, 4, 5 Cores
Type of cable	60227 IEC 02, VCT, VCT-G	VCT, VCT-G
Size (sq.mm.)	Current-carrying capacities (amperes)	
1.5	16	-
2.5	25	-
4	30	26
6	39	34
10	51	47
16	73	63
25	97	83
35	140	102
50	175	-
70	216	-
95	258	-
120	302	-
150	347	-
185	394	-
240	471	-

Note (Table 5-26)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in below table.

Ambient Temperature (Degree celsius)	31-35	36-40	41-45	46-50	51-55
Correction factor	1.11	1.00	0.87	0.71	0.50

2) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-27: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C in conduit

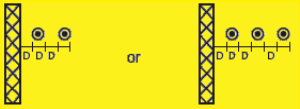
	Group for installation medthod : Group 1				Group for installation medthod : Group 2			
No. of Conductor	2		3		2		3	
Single/ muticores	Single core	Multi core	Single core	Multi core	Single core	Multi core	Single core	Multi core
Installation Medthod								
Type of Cable	IEC 60502-1 and special cable such as flame retardant (FR), low smoke and halogen free (LSHF) etc.							
Size (sq.mm.)	Current-carrying capacities (amperes)							
1	13	13	12	12	15	15	14	14
1.5	17	17	15	15	21	20	18	18
2.5	24	23	21	20	28	27	25	24
4	32	30	28	27	38	36	34	32
6	41	38	36	35	49	46	44	40
10	56	52	49	46	68	63	60	55
16	74	69	66	62	91	83	80	73
25	96	90	86	81	121	108	106	96
35	119	110	106	99	149	133	131	116
50	144	132	128	118	180	159	159	140
70	182	167	163	149	230	201	202	177
95	219	200	197	179	278	241	245	212
120	253	230	227	207	322	278	284	244
150	289	264	259	236	358	304	311	273
185	329	299	295	268	409	349	349	309
240	386	351	346	315	480	418	410	362
300	442	402	396	360	549	484	468	414
400	-	-	-	-	622	-	531	-
500	-	-	-	-	713	-	606	-

Note (Table 5-27)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.
2) If installation more than 1 circuit in single conduit , the correction factor given in Table 5-8.
3) Installation method given in Table 5-47.
4) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-28: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C on insulator

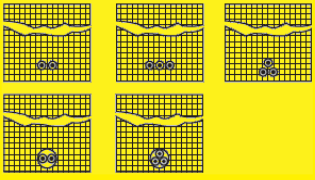
	Group for installation medthod : Group 4	
Installation Methods		
Type of Cable	IEC 60502-1	
Size (sq.mm.)	Current-carrying capacities (amperes)	
4	47	54
6	60	68
10	82	90
16	110	124
25	147	166
35	183	206
50	224	250
70	289	321
95	354	391
120	413	455
150	480	525
185	551	602
240	654	711
300	758	821
400	917	987
500	1064	1140

Note (Table 5-28)
1) Installation method given in Table 5-47

Remark : This page refer EIT Standard 2001-56

A

Table 5-29: Current-carrying capacities in amperes for copper conductor, XLPE insulated with sheathed for rated voltage 0.6/1kV, conductor temperature 90°C / ambient temperature 30 °C in duct in ground or direct burial.

	Group for installation medthod : Group 5		Group for installation medthod : Group 6
No. of conductor	2	3	Not more than 3
Type of Cable	Single core and Multi core	Single core and Multi core	Single core and Multi core
Installation Methods			
Type of Cable	IEC 60502-1		
Size (sq.mm.)	Current-carrying capacities (amperes)		
1.5	25	22	33
2.5	33	29	43
4	43	38	55
6	54	47	70
10	71	63	92
16	94	83	119
25	124	109	152
35	150	132	184
50	180	159	217
70	223	196	266
95	271	238	318
120	313	275	362
150	355	312	406
185	406	356	459
240	477	418	533
300	543	475	601
400	625	545	684
500	717	623	777

Note (Table 5-29)

1) Where the ambient temperature in the intended location of the cable differs from 30°C (reference ambient temperature), the correction factor given in Table 5-44

2) If installation more than 1 circuit , the correction factor given in table 5-45 or 5-46.

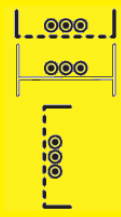
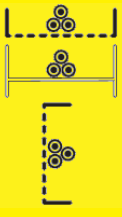
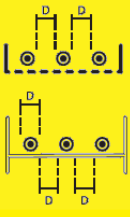
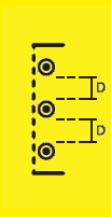
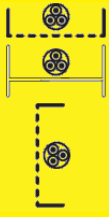
3) If installation more than 1 circuit in single conduit , the correction factor given in Table 5-8.

4) Installation method given in Table 5-47.

5) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-30: Current-carrying capacities in amperes for copper conductor, PVC insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C install in perforated trays or ladder cleats

	Group for installation medthod : Group 7				
Single/ muticores	Single core				Multi cores
Installation Medthod					
Type of Cable	60227 IEC 10, NYY, NYY-G and special cable flame retardant (FR), low smoke and halogen free (LSHF) etc.				
Size (sq.mm.)	Current-carrying capacities (amperes)				
1	-	-	-	-	13
1.5	-	-	-	-	16
2.5	-	-	-	-	22
4	-	-	-	-	30
6	-	-	-	-	37
10	-	-	-	-	52
16	-	-	-	-	70
25	99	96	127	113	88
35	124	119	157	141	110
50	151	145	191	171	133
70	196	188	244	221	171
95	239	230	297	271	207
120	279	268	345	315	240
150	324	310	397	365	278
185	371	356	453	418	317
240	441	422	535	495	374
300	511	488	617	573	432
400	599	571	741	692	-
500	686	652	854	800	-

Note (Table 5-30)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.

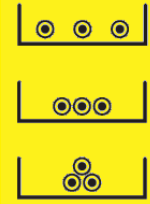
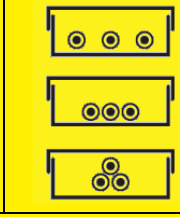
2) If installation more than 1 circuit, the correction factor given in table 5-40 or 5-41 for Single core and Multi cores respectively.

3) Installation method given in Table 5-47.

4) Type of cable given in Table 5-48.

Remark : This page refer EIT Standard 2001-56

Table 5-31: Current-carrying capacities in amperes for copper conductor, PVC insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 70°C / ambient temperature 40 °C install in ventilated or unventilated cable channel

	Group for installation medthod : Group 7			
Single/ muticores	Single core			
Installation Medthod				
Type of Cable	60227 IEC 10, NYY, NYY-G, IEC 60502-1 and special cable flame retardant (FR), low smoke and halogen free (LSHF) etc.			
Size (sq.mm.)	Current-carrying capacities (amperes)			
1	-	-	12	10
1.5	-	-	15	13
2.5	-	-	21	17
4	-	-	28	23
6	-	-	36	30
10	-	-	50	40
16	-	-	66	54
25	90	77	84	70
35	112	96	104	86
50	145	117	125	103
70	186	149	160	130
95	227	180	194	156
120	264	208	225	179
150	304	228	260	196
185	348	258	297	222
240	411	301	351	258
300	474	343	404	295
400	552	406	-	-
500	629	464	-	-

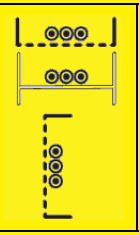
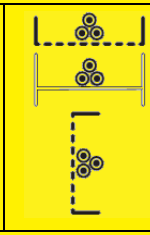
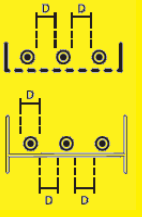
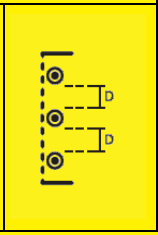
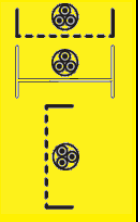
Note (Table 5-31)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.
2) If number of conductor more than 1 circuit for install in ventilated, correction factor given in table 5-8 and table 5-41 for install in unventilated.

Exception : If spacing for circuit more than two time of cable diameter, the correction factor do not apply.

Remark : This page refer EIT Standard 2001-56

Table 5-32: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C install in perforated trays or ladder cleats

	Group for installation medthod : Group7				
Single/ muticores	Single core				Multi cores
Installation Medthod					
Type of Cable	IEC 60502-1 and special cable flame retardant (FR), low smoke and halogen free (LSHF) etc.				
Size (sq.mm.)	Current-carrying capacities (amperes)				
1	-	-	-	-	16
1.5	-	-	-	-	21
2.5	-	-	-	-	29
4	-	-	-	-	38
6	-	-	-	-	49
10	-	-	-	-	68
16	-	-	-	-	91
25	128	123	166	147	116
35	160	154	206	183	144
50	197	188	250	224	175
70	254	244	321	289	224
95	311	298	391	354	271
120	364	349	455	413	315
150	422	404	525	480	363
185	485	464	602	551	415
240	577	552	711	654	490
300	670	640	821	758	565
400	790	7549	987	917	-
500	908	861	1140	1064	-

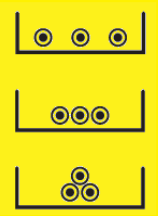
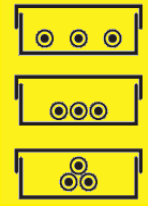
Note (Table 5-32)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.
2) If installation more than 1 circuit, the correction factor given in table 5-40 or 5-41 for Single core and Multi cores respectively.
3) Installation method given in Table 5-47.
4) Type of cable given in Table 5-47.

Remark : This page refer EIT Standard 2001-56

A

Table 5-33: Current-carrying capacities in amperes for copper conductor, XLPE insulated, with sheathed for rated voltage 0.6/1 kV, conductor temperature 90°C / ambient temperature 40 °C install in ventilated or unventilated cable channel

	Group for installation medthod : Group 7			
Single/ muticores	Single core			
Installation Medthod				
Type of Cable	IEC 60502-1 and special cable flame retardant (FR), low smoke and halogen free (LSHF) etc.			
Size (sq.mm.)	Current-carrying capacities (amperes)			
1	-	-	15	14
1.5	-	-	20	18
2.5	-	-	27	24
4	-	-	36	32
6	-	-	47	40
10	-	-	65	55
16	-	-	87	73
25	118	106	108	96
35	147	131	134	116
50	190	159	163	140
70	244	202	208	177
95	297	245	253	212
120	345	284	293	244
150	397	311	338	273
185	455	349	386	309
240	537	410	455	362
300	620	468	524	414
400	722	531	-	-
500	823	606	-	-

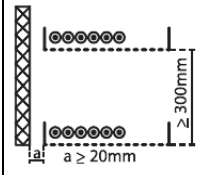
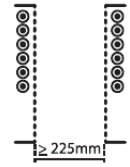
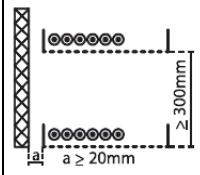
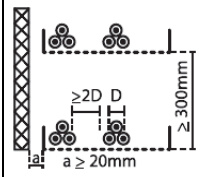
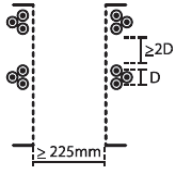
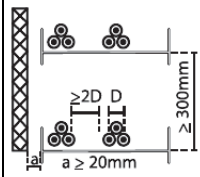
Note (Table 5-33)

1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43.
2) If number of conductor more than 1 circuit for install in ventilated, correction factor given in table 5-8 and table 5-41 for install in unventilated.

Exception : If spacing for circuit more than two time of cable diameter, the correction factor do not apply.

Remark : This page refer EIT Standard 2001-56

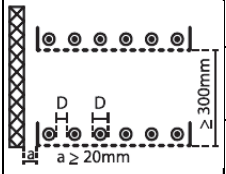
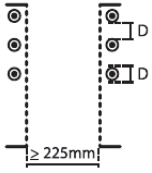
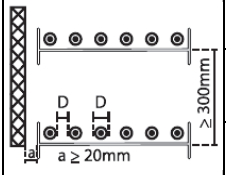
Table 5-40: The correction factor for grounps more than one circuit for Single core cable install on tray

Installation Medthod		No. of cable tray	Number of circuit per cable tray						
			1	2	3	4	5-6	7-8	
Perforated tray (note 2)		1	1.00	0.91	0.87	0.82	0.78	0.77	Cable in horizontal formation
		2	0.96	0.87	0.81	0.78	0.74	0.69	
		3	0.95	0.85	0.78	0.75	0.70	0.65	
Vertical perforated tray (note 3)		1	1.00	0.86	0.80	0.75	0.71	0.70	Cable in vertical formation
		2	0.95	0.84	0.77	0.72	0.67	0.66	
Ladder cleats (note 2)		1	1.00	0.97	0.96	0.94	0.93	0.92	Cable in horrizontal formation
		2	0.98	0.93	0.89	0.88	0.86	0.83	
		3	0.97	0.90	0.86	0.83	0.80	0.77	
Perforated tray (note 2)		1	1.00	0.98	0.96	0.93	0.89	-	Cable in trefoil formation space between circuit more than 2 time of cable diameter
		2	0.97	0.93	0.89	0.85	0.80	-	
		3	0.96	0.92	0.86	0.82	0.76	-	
Vertical perforated tray (note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	1.00	0.90	0.86	0.85	0.83	-	
Ladder cleats (note 2)		1	1.00	1.00	1.00	1.00	1.00	-	
		2	0.97	0.95	0.93	0.92	0.91	-	
		3	0.96	0.94	0.90	0.89	0.86	-	

Remark : This page refer EIT Standard 2001-56

A

Table 5-40: The correction factor for grounps more than one circuit for Single core cable install on tray

Installation Medthod		No. of cable tray	Number of circuit per cable tray						
			1	2	3	4	5-6	7-9	
Perforated tray (note 2)		1	1.00	0.93	0.90	0.87	0.83	-	Spacing between cable not less than diameter of cable
		2	0.97	0.89	0.85	0.81	0.76	-	
		3	0.96	0.88	0.82	0.78	0.72	-	
Vertical perforated tray (note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	0.94	0.90	0.86	0.85	0.83	-	
Ladder cleats (note 2)		1	1.00	0.97	0.96	0.96	0.96	-	
		2	0.97	0.94	0.93	0.92	0.91	-	
		3	0.96	0.93	0.92	0.91	0.88	-	

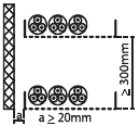
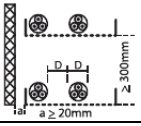
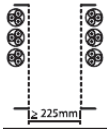
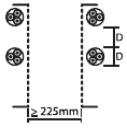
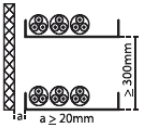
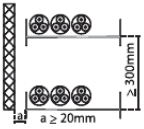
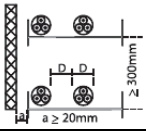
Note (Table 5-40)

1) Factors are given for single layer of cables (or trefoil groups) only
2) Values are given for vertical spacing between trays of at least 300 mm. and at least 20 mm. between the trays and any wall only.
3) Values are given for horizontal spacing between trays of at least 225 mm. with trays mounted back to back only.
4) For trays having more than one circuit, the correction factor should be considered as a maximum circuit in tray.

Remark : This page refer EIT Standard 2001-56

A

Table 5-41: The correction factor for groups more than one circuit for multi cores cable install on perforated or unperforated tray or ladder cleats

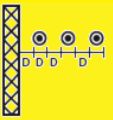
Installation Medthod		No. of cable tray	Number of circuit per cable tray					
			1	2	3	4	5-6	7-9
Perforated tray (note 2)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.87	0.80	0.77	0.73	0.68
		3	1.00	0.86	0.79	0.76	0.71	0.66
		4-6	1.00	0.84	0.77	0.73	0.68	0.64
		1	1.00	1.00	0.98	0.95	0.91	-
		2	1.00	0.99	0.96	0.92	0.87	-
		3	1.00	0.98	0.95	0.91	0.85	-
Vertical perforated tray (note 3)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.88	0.81	0.76	0.71	0.70
		1	1.00	0.91	0.89	0.88	0.87	-
		2	1.00	0.91	0.88	0.87	0.85	-
Unperforated tray (note 2)		1	0.97	0.84	0.78	0.75	0.71	0.68
		2	0.97	0.83	0.76	0.72	0.68	0.63
		3	0.97	0.82	0.75	0.71	0.66	0.61
		4-6	0.97	0.81	0.73	0.69	0.63	0.58
Ladder cleats (note 2)		1	1.00	0.87	0.82	0.80	0.79	0.78
		2	1.00	0.86	0.80	0.78	0.76	0.73
		3	1.00	0.85	0.79	0.76	0.73	0.70
		4-6	1.00	0.84	0.77	0.73	0.60	0.64
		1	1.00	1.00	1.00	1.00	1.00	-
		2	1.00	0.99	0.98	0.97	0.96	-
		3	1.00	0.98	0.97	0.96	0.93	-

Note (Table 5-41)

1) Factors are given for single layer of cables (or trefoil groups) only as shown in table and do not apply when cables are installed in more than one layer touching each other.
2) Values are given for vertical spacing between trays of at least 300 mm. and at least 20 mm. between the trays and any wall only.
3) Values are given for horizontal spacing between trays of at least 225 mm. with trays mounted back to back only.
4) For trays having more than one circuit, the correction factor should be considered as a maximum circuit in tray.

Remark : This page refer EIT Standard 2001-56

Table 5-42 : Current-carrying capacities in amperes accordance TIS 293-2541 for aluminium conductor, PVC insulated for rated voltage 450/750 , conductor temperature 70°C / ambient temperature 40°C on insulator

Installation Methods		
Size (sq.mm.)	Current-carrying capacities (amperes)	
25	97	86
35	121	108
50	147	132
70	189	171
95	231	210
120	268	245
150	310	284
185	354	327
240	419	389
300	485	452
400	584	547
500	674	635

Note (Table 5-42)
1) Where the ambient temperature in the intended location of the cable differs from 40°C (reference ambient temperature), the correction factor given in Table 5-43

Remark : This page refer EIT Standard 2001-56

Table 5-43: Correction factor for ambient air temperatures other than 40°C to be applied to current-carrying capacities for cables in free air

Ambient Temperature (Degree celcius)	Insulation			
	PVC	XLPE or EPR	MI	
			70°C	105°C
11-15	1.34	1.23	1.41	1.21
16-20	1.29	1.19	1.34	1.16
21-25	1.22	1.14	1.26	1.13
26-30	1.15	1.10	1.18	1.09
31-35	1.08	1.05	1.09	1.04
36-40	1.00	1.00	1.00	1.00
41-45	0.91	0.96	0.91	0.96
46-50	0.82	0.90	0.79	0.91
51-55	0.70	0.84	0.67	0.87
56-60	0.57	0.78	0.53	0.82
61-65	-	0.71	-	0.76
66-70	-	0.64	-	0.70
71-75	-	0.55	-	0.65
76-80	-	0.45	-	0.59
81-85	-	-	-	0.51
86-90	-	-	-	0.43
91-95	-	-	-	0.35

Table 5-44: Correction factor for ambient air temperatures other than 30°C to be applied to current-carrying capacities for cables in the ground

Ambient Temperature (Degree celcius)	Insulation	
	PVC	XLPE or EPR
11-15	1.18	1.12
16-20	1.12	1.08
21-25	1.07	1.03
26-30	1.00	1.00
31-35	0.94	0.96
36-40	0.87	0.91
41-45	0.80	0.86
46-50	0.71	0.82
51-55	0.62	0.76
56-60	0.51	0.70
61-65	-	0.65
66-70	-	0.57
71-75	-	0.49
76-80	-	0.41

Remark : This page refer EIT Standard 2001-56

Table 5-45: Correction factor for Single core or multi cores, rated voltaed 0.6/1 kV install in direct burial when group of circuit more than 1 circuit, flat horizontal

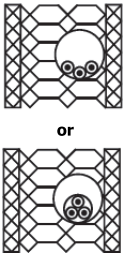
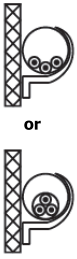
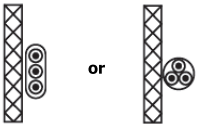
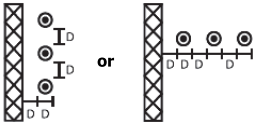
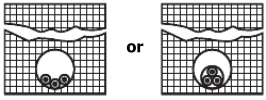
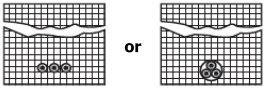
No. of circuit	Space between outside of each cable (mm.)				
	Touching	1 time of cable diameter	125	250	500
2	0.75	0.80	0.85	0.90	0.90
3	0.65	0.70	0.75	0.80	0.85
4	0.60	0.60	0.70	0.75	0.80
5	0.55	0.55	0.65	0.70	0.80
6	0.50	0.55	0.60	0.70	0.80

Table 5-46: Correction factor for Single core or multi cores, rated voltaed 0.6/1 kV install in conduit in direct burial when group of circuit more than 1 circuit, flat horizontal.

No. of circuit	Space between outside of each cable (mm.)			
	Touching	125	500	1000
2	0.85	0.90	0.95	0.95
3	0.75	0.85	0.90	0.95
4	0.70	0.80	0.85	0.90
5	0.65	0.80	0.85	0.90
6	0.60	0.80	0.80	0.90

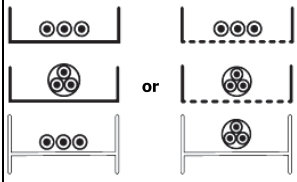
Remark : This page refer EIT Standard 2001-56

Table 5-47: Schedule of reference method of installation which form the basis of the tabulated current-carrying capacities

Methods of Wiring	Methods of Installation	Group of Installation	Note
Insulated conductors single core or multi cores with or without sheathed wiring in metallic or non-metallic conduit in thermal insulated wall.		Group 1	Ceiling or thermal insulated wall has a thermal conductant not less than 10 $W/m^2 \cdot K$
Insulated conductors single core or multi cores with or without sheathed wiring in metallic or non-metallic conduit in concrete wall.		Group 2	The inner skin of the concrete has a thermal conductant not greater than 2 K.m/W
Single core or multi cores cable ,insulated and sheathed on a wall		Group 3	-
Single core or multi cores cable, insulated with or without sheathed wiring in spacing on insulator		Group 4	Spacing between cable and cable, wall and cable not less than diameter of cable.
Single core or multi cores cable with sheathed install in duct in ground		Group 5	-
Single core or multi cores cable with sheathed install direct burial		Group 6	-

Remark : This page refer EIT Standard 2001-56

Table 5-47: Schedule of reference method of installation which form the basis of the tabulated current-carrying capacities

Methods of Wiring	Methods of Installation	Group of Installation	Note
Single core or multi cores cable with sheathed install on perforated or unperforated tray or ladder cleats.		Group 7	Perforated tray must have ventilated area not less than 30 percent of surface tray

A

Note (Table 5-47)
-If no confirmation that thermal conductant not less than 10 W/m²·K , consider that install in conduit in ceiling or thermal insulated wall shall be apply current carrying capacities in group 1.

Remark : This page refer EIT Standard 2001-56

Table 5-48: Requirements for Installation copper conductor, PVC insulated cable according to TIS 11-2553

Cable Name	Size (mm^2)	Type of Conductor	No. of core	Temp. of conductor	Sheath	Voltage Uo/U (V)	Application
60227 IEC 01	1.5-400	Solid or Stranded	1 core	70°C	-	450/750	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 02	1.5-240	Flexible	1 core	70°C	-	450/750	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 05	0.5-1.0	Solid or Stranded	1 core	70°C	-	300/500	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 06	0.5-1.0	Flexible	1 core	70°C	-	300/500	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 07	0.5-2.5	Solid	1 core	90°C	-	300/500	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 08	0.5-2.5	Flexible	1 core	90°C	-	300/500	- Installation in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 10	1.5-35	Solid or Stranded	Multi-core Multi-core with ground	70°C	✓	300/500	- Installation exposed or in raceway, dry location - Do not allow for under ground installing neither directly burial or in conduit in ground
60227 IEC 41	0.8	Stranded	2 cores	70°C	-	300/300	- For electronic appliances
60227 IEC 43	0.5-0.75	Flexible	1 core	70°C	✓	300/300	- Used in dry room for small indoor decorative lighting chains
60227 IEC 52	0.5-0.75	Flexible	Multi-core	70°C	✓	300/300	- For mobile-electrical equipment , electrical appliances
60227 IEC 53	0.75-2.5	Flexible	Multi-core	70°C	✓	300/500	- For mobile-electrical equipment , electrical appliances
60227 IEC 56	0.5-0.75	Flexible	Multi-core	90°C	✓	300/300	- For mobile-electrical equipment , electrical appliances
60227 IEC 57	0.75-2.5	Flexible	Multi-core Multi-core with ground	90°C	✓	300/500	- For mobile-electrical equipment , electrical appliances
NYY	1-500	Stranded	1 core	70°C	✓	450/750	- Installation into trey, ladder - Installation in conduit in ground or direct burial in ground
	50-300		Multi-core				
NYY-G	25-300		Multi-core with ground				
VAF VAG-G	1-16	Solid or Stranded	2 cores 2 cores with ground	70°C	✓	300/500	- For surface or direct embeded in plaster - Do not allow for installing in conduit. - Do not allow for under ground installing neither directly burial or in conduit in ground
VCT VCT-G	4-35	Flexible	1 core Multi-core Multi-core with ground	70°C	✓	450/750	- For electrical appliances - Installation into trey, ladder - Installation in conduit in ground or direct burial in ground

Remark : This page refer EIT Standard 2001-56

A

Voltage Drop for Single-Core Cable

Table §1 Single-core 70 °C PVC insulated copper conductor cables

Conductor cross sectional area	2 cables, single-phase a.c.			3 or 4 cables, three-phase a.c.			
	Group 1, 2 (enclosed in conduit or trunking)	Group 3, 7 (Clipped direct, on trey or in free air)		Group 1, 2 (enclosed in conduit or trunking)	Group 3, 7 (Clipped direct, on trey or in free air)		
		Touching	Spaced		Trefoil	Touching	Spaced
(mm²)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)
1.0	44	44	44	38	38	38	38
1.5	29	29	29	25	25	25	25
2.5	18	18	18	15	15	15	15
4	11	11	11	9.5	9.5	9.5	9.5
6	7.3	7.3	7.3	6.4	6.4	6.4	6.4
10	4.4	4.4	4.4	3.8	3.8	3.8	3.8
16	2.8	2.8	2.8	2.4	2.4	2.4	2.4
25	1.81	1.75	1.75	1.52	1.50	1.50	1.52
35	1.33	1.25	1.27	1.13	1.11	1.12	1.15
50	1.00	0.94	0.97	0.85	0.81	0.84	0.86
70	0.71	0.66	0.69	0.61	0.57	0.60	0.63
95	0.56	0.50	0.54	0.48	0.44	0.47	0.50
120	0.48	0.41	0.45	0.40	0.35	0.39	0.43
150	0.41	0.35	0.39	0.35	0.30	0.34	0.38
185	0.36	0.29	0.34	0.31	0.26	0.30	0.34
240	0.30	0.25	0.29	0.27	0.21	0.25	0.29
300	0.27	0.22	0.26	0.24	0.18	0.23	0.26
400	0.25	0.19	0.23	0.22	0.16	0.20	0.24
500	0.23	0.17	0.21	0.20	0.15	0.18	0.22

Table §3 Single-core 90 °C XLPE insulated copper conductor cables

Conductor cross sectional area	2 cables, single-phase a.c.			3 or 4 cables, three-phase a.c.			
	Group 1, 2 (enclosed in conduit or trunking)	Group 3, 7 (Clipped direct, on trey or in free air)		Group 1, 2 (enclosed in conduit or trunking)	Group 3, 7 (Clipped direct, on trey or in free air)		
		Touching	Spaced		Trefoil	Touching	Spaced
(mm²)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)	(mV/A/m)
1.0	46	46	46	40	40	40	40
1.5	31	31	31	27	27	27	27
2.5	19	19	19	16	16	16	16
4	12	12	12	10	10	10	10
6	7.9	7.9	7.9	6.8	6.8	6.8	6.8
10	4.7	4.7	4.7	4.0	4.0	4.0	4.0
16	2.9	2.9	2.9	2.5	2.5	2.5	2.5
25	1.85	1.85	1.85	1.60	1.57	1.58	1.60
35	1.37	1.35	1.37	1.17	1.14	1.15	1.17
50	1.04	1.00	1.02	0.91	0.87	0.87	0.90
70	0.75	0.70	0.73	0.65	0.61	0.62	0.64
95	0.58	0.52	0.56	0.50	0.45	0.46	0.50
120	0.49	0.42	0.47	0.42	0.37	0.38	0.42
150	0.42	0.36	0.40	0.37	0.31	0.33	0.37
185	0.37	0.31	0.35	0.32	0.26	0.27	0.31
240	0.32	0.25	0.30	0.27	0.22	0.23	0.27
300	0.28	0.22	0.26	0.24	0.19	0.20	0.24
400	0.25	0.19	0.23	0.22	0.17	0.18	0.22
500	0.23	0.17	0.21	0.20	0.15	0.16	0.20

Remark : This page refer EIT Standard 2001-56

Voltage Drop for Multi-Cores Cable

Table ฐ2 Multi-cores 70 °C PVC insulated copper conductor cable

Conductor cross sectional area (mm²)	Two-core cable, single-phase a.c. (mV/A/m)	Three- or four-core cable, three-phase a.c. (mV/A/m)
1.0	44	38
1.5	29	25
2.5	18	15
4	11	9.5
6	7.3	6.4
10	4.4	3.8
16	2.8	2.4
25	1.75	1.50
35	1.25	1.10
50	0.93	0.80
70	0.65	0.57
95	0.49	0.43
120	0.41	0.36
150	0.34	0.29
185	0.29	0.25
240	0.24	0.21
300	0.21	0.18
400	0.17	0.15

Table ฐ4 Multi-cores 90 °C XLPE insulated copper conductor cable

Conductor cross sectional area (mm²)	Two-core cable, single-phase a.c. (mV/A/m)	Three- or four-core cable, three-phase a.c. (mV/A/m)
1.0	46	40
1.5	31	27
2.5	19	16
4	12	10
6	7.9	6.8
10	4.7	4.0
16	2.9	2.5
25	1.85	1.60
35	1.35	1.15
50	0.99	0.86
70	0.68	0.60
95	0.52	0.44
120	0.42	0.36
150	0.35	0.31
185	0.30	0.25
240	0.24	0.22
300	0.21	0.18
400	0.19	0.16

Remark : This page refer EIT Standard 2001-56

Copper Conductor Cables

Building Wires and Cables

TIS 11 Part 3-2553 : Non-Sheathed Cables for Fixed Wiring

60227 IEC 01 THW or YK 60227 IEC 01 THW	450/750V 70°C SOILD AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE	B1
60227 IEC 02 THW (f)	450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B3
60227 IEC 05 IV	300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B4
60227 IEC 06 IV (f)	300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B5
60227 IEC 07 HIV	300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B6
60227 IEC 08 HIV (f)	300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B7

TIS 11 Part 4-2553 : Sheathed Cables for Fixed Wiring

60227 IEC 10	300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED	B8

60227 IEC 52 VKF	300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE	B12
60227 IEC 52	300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE	B13
60227 IEC 53 VKF	300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE	B14
60227 IEC 53	300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE	B15
60227 IEC 56 HVKF	300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE	B16
60227 IEC 56	300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE	B17
60227 IEC 57 HVKF	300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE	B18
60227 IEC 57	300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE	B19

TIS 11 Part 101-2559 : Sheathed Cables for General Purposes

VAF	300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE	B20
VAF-G	300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, FLAT TYPE	B21
NYY or YK NYY	450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED	B22
NYY-G	450/750 V 70°C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND	B30
VCT	450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE	B36
VCT-G	450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE	B39

Low Voltage Power Cables

NYY-SWA	450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE	B42
NYCY	450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE	B48
FD-0.6/1KV-CV or YK FD-06/1KV-CV	0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE	B50
FD-0.6/1KV-CV-AWA	0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE	B58
FD-0.6/1KV-CV-SWA	0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE	B60
FD-0.6/1KV-CV-STA	0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE	B63

Medium Voltage Power Cables

1.8/3KV-CV	1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B66
3.6/6KV-CV	3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B68
6/10KV-CV	6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B71
8.7/15KV-CV	8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B73
12/20KV-CV	12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B75
18/30KV-CV	18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE	B77

B

High Voltage Power Cables

69KV-CE	69 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATH POWER CABLE	B79
115KV-CE	115 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATH POWER CABLE	B80

Control Cables

CVV	600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE	B81
CVV-S	600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE	B81

Automobile Wire and Cables

T-AV	60°C LOW VOLTAGE FLEXIBLE CONDUCTOR PVC INSULATED FOR AUTOMOBILE	B89

Bare Conductor

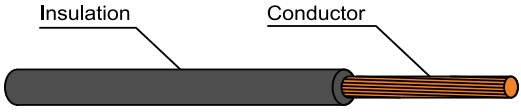
FHC	HARD DRAWN COPPER STRANDED CONDUCTOR	B90
FAC	ANNEALED COPPER STRANDED CONDUCTOR	B91

B

60227 IEC 01 or YK 60227 IEC 01 THW

450/750V 70°C SOILD AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1.5 mm² up to 400 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 3-2553, Table 1

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Cable name	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation esistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A)	Cable weight approx.	Standard Length	
60227 IEC 01 THW	1.5	Solid	0.7	2.6	3.2	12.1	0.011	21	21	100/C	
	1.5	Non-Compacted	0.7	2.7	3.3	12.1	0.010	21	22	100/C	
	2.5	Solid	0.8	3.2	3.9	7.41	0.010	28	32	100/C	
	2.5	Non-Compacted	0.8	3.3	4.0	7.41	0.009	28	35	100/C	
	4	Solid	0.8	3.6	4.4	4.61	0.0085	37	47	100/C	
	4	Non-Compacted	0.8	3.8	4.6	4.61	0.0077	37	50	100/C	
	6	Solid	0.8	4.1	5.0	3.08	0.0070	49	65	100/C	1000/D
	6	Non-Compacted	0.8	4.3	5.2	3.08	0.0065	49	70	100/C	1000/D
	10	Solid	1.0	5.3	6.4	1.83	0.0070	68	110	100/C	1000/D
YK 60227 IEC 01 THW	10	Non-Compacted	1.0	5.6	6.7	1.83	0.0065	68	120	100/C	1000/D
	16	Compacted	1.0	6.4	7.8	1.15	0.0050	91	180	100/C	1000/D
	25	Compacted	1.2	8.1	9.7	0.727	0.0050	122	280	100/C	1000/D
	35	Compacted	1.2	9.0	10.9	0.524	0.0043	151	370	100/C	1000/D
	50	Compacted	1.4	10.6	12.8	0.387	0.0043	184	500	1000/D	
	70	Compacted	1.4	12.1	14.6	0.263	0.0035	234	700	1000/D	
	95	Compacted	1.6	14.1	17.1	0.193	0.0035	292	1000	1000/D	
	120	Compacted	1.6	15.6	18.8	0.153	0.0032	341	1200	1000/D	
	150	Compacted	1.8	17.3	20.9	0.124	0.0032	391	1500	1000/D	
	185	Compacted	2.0	19.3	23.3	0.0991	0.0032	454	1900	1000/D	
	240	Compacted	2.2	22.0	26.6	0.0754	0.0032	543	2500	1000/D	
60227 IEC 01 THW	300	Non-Compacted	2.4	24.5	29.6	0.060	0.0030	628	3,100	500/D	
	400	Non-Compacted	2.6	27.5	33.2	0.047	0.0028	736	3,900	500/D	

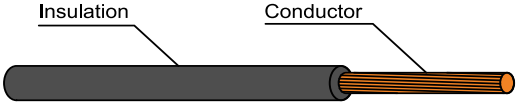
C : Packing in Coil
D : Packing in Drum

B

60227 IEC 01 THW or YK 60227 IEC 01 THW

450/750V 70°C SOILD AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1.5 mm² up to 400 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 3-2553, Table 1

APPLICATION

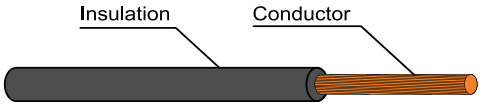
Building wiring for installation on insulator or in raceway dry location.

B

Cable name	Nominal cross sectional area (mm^2)	Conductor type	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
60227 IEC 01 THW	1.5	Solid	14.4777	0.5259	0.1652	14.4786
	1.5	Non-Compacted	14.4777	0.5276	0.1657	14.4786
	2.5	Solid	8.8661	0.5121	0.1609	8.8675
	2.5	Non-Compacted	8.8661	0.5202	0.1634	8.8676
	4	Solid	5.5159	0.4917	0.1545	5.5180
		Non-Compacted				
	6	Solid	3.6852	0.4742	0.1490	3.6883
	6	Non-Compacted	3.6852	0.5606	0.1761	3.6894
	10	Solid	2.1896	0.4694	0.1475	2.1946
YK 60227 IEC 01 THW	10	Non-Compacted	2.1896	0.5219	0.1639	2.1958
	16	Compacted	1.3776	0.4642	0.1458	1.3838
	25	Compacted	0.8700	0.4594	0.1443	0.8819
	35	Compacted	0.6271	0.4496	0.1413	0.6428
	50	Compacted	0.4633	0.4477	0.1407	0.4841
	70	Compacted	0.3210	0.4354	0.1368	0.3489
	95	Compacted	0.2314	0.4347	0.1366	0.2687
	120	Compacted	0.1836	0.4295	0.1349	0.2279
	150	Compacted	0.1491	0.4292	0.1348	0.2010
	185	Compacted	0.1194	0.4281	0.1345	0.1799
	240	Compacted	0.0914	0.4257	0.1337	0.1620
60227 IEC 01 THW	300	Non-Compacted	0.0734	0.4177	0.1312	0.1503
	400	Non-Compacted	0.0581	0.4160	0.1307	0.1430

60227 IEC 02 THW (f)

450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire
: Sizes 1.5 mm² up to 240 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 3-2553, Table 3

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
1.5	Flexible	0.7	2.8	3.4	13.3	0.010	16	24	100/C
2.5	Flexible	0.8	3.4	4.1	7.98	0.009	25	37	100/C
4	Flexible	0.8	3.9	4.8	4.95	0.0070	30	54	100/C
6	Flexible	0.8	4.4	5.3	3.30	0.0060	39	75	100/C
10	Flexible	1.0	5.7	6.8	1.91	0.0056	51	130	100/C
16	Flexible	1.0	6.7	8.1	1.21	0.0046	73	185	100/C
25	Flexible	1.2	8.4	10.2	0.780	0.0044	97	285	100/C
35	Flexible	1.2	9.7	11.7	0.554	0.0038	140	400	100/C
50	Flexible	1.4	11.5	13.9	0.386	0.0037	175	555	500/D
70	Flexible	1.4	13.2	16.0	0.272	0.0032	216	765	500/D
95	Flexible	1.6	15.1	18.2	0.206	0.0032	258	1,000	500/D
120	Flexible	1.6	16.7	20.2	0.161	0.0029	302	1,300	500/D
150	Flexible	1.8	18.6	22.5	0.129	0.0029	347	1,600	500/D
185	Flexible	2.0	20.6	24.9	0.106	0.0029	394	1,900	500/D
240	Flexible	2.2	23.5	28.4	0.0801	0.0028	471	2,500	500/D

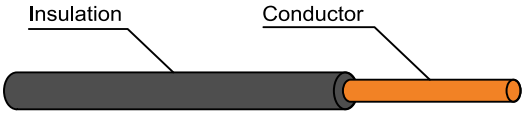
Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.5481	0.5038	0.1583	9.5494
4	5.9227	0.4846	0.1522	5.9246
6	3.9485	0.4637	0.1457	3.9512
10	2.2854	0.4531	0.1423	2.2898
16	1.4478	0.4437	0.1394	1.4545
25	0.9334	0.4409	0.1385	0.9436
35	0.6630	0.4312	0.1355	0.6767
50	0.4621	0.4294	0.1349	0.4814
70	0.3258	0.4215	0.1324	0.3517
95	0.2469	0.4230	0.1329	0.2804
120	0.1932	0.4174	0.1311	0.2335
150	0.1550	0.4172	0.1311	0.2030
185	0.1277	0.4187	0.1315	0.1833
240	0.0969	0.4164	0.1308	0.1628

C : Packing in Coil
D : Packing in Drum

60227 IEC 05 IV

300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Solid annealed copper wire
: Sizes 0.5 mm² up to 1 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 70 °C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 3-2553, Table 5

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.8	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.012	6	12	100/C
1	Solid	0.6	2.2	2.7	18.1	0.011	10	14	100/C

C : Packing in Coil

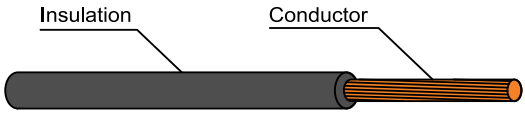
Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
0.5	43.0740	0.5798	0.1821	43.0744
0.75	29.3143	0.5486	0.1723	29.3148
1	21.6567	0.5366	0.1686	21.6573

B

60227 IEC 06 IV (f)

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire
: Sizes 0.5 mm² up to 1 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 70 °C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 3-2553, Table 7

B

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40 °C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.011	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C

C : Packing in Coil

Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323

60227 IEC 07 HIV

300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Solid annealed copper wire
: Sizes 0.5 mm² up to 2.5 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 3-2553, Table 9

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40 °C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.6	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.013	6	11	100/C
1	Solid	0.6	2.2	2.7	18.1	0.012	10	14	100/C
1.5	Solid	0.7	2.6	3.2	12.1	0.011	16	20	100/C
2.5	Solid	0.8	3.2	3.9	7.41	0.009	25	32	100/C

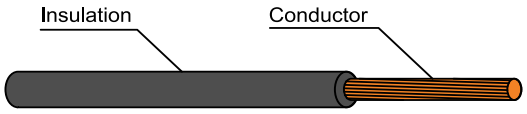
C : Packing in Coil

Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
0.5	43.0740	0.5758	0.1809	43.0744
0.75	29.3143	0.5526	0.1736	29.3148
1	21.6567	0.5401	0.1697	21.6573
1.5	14.4777	0.5288	0.1661	14.4786
2.5	8.8661	0.5198	0.1633	8.8676

60227 IEC 08 HIV (f)

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire
: Sizes 0.5 mm² up to 2.5 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 3-2553, Table 11

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40 °C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.012	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C
1.5	Flexible	0.7	2.8	3.4	13.3	0.009	16	21	100/C
2.5	Flexible	0.8	3.4	4.1	7.98	0.009	25	33	100/C

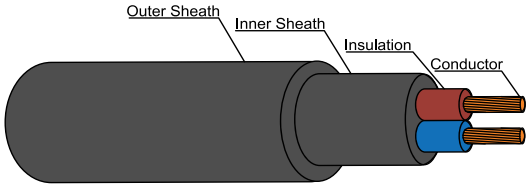
C : Packing in Coil

Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.5481	0.5038	0.1583	9.5494

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores : Blue, Brown

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 4-2553, Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location

B

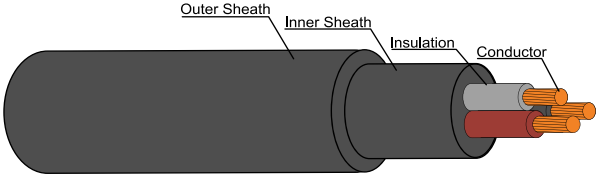
Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Solid	0.7	0.4	1.2	7.6	10.0	12.1	0.011	19	120	100/C
	1.5	Stranded	0.7	0.4	1.2	7.8	10.5	12.1	0.010	19	130	100/C
	2.5	Solid	0.8	0.4	1.2	8.6	11.5	7.41	0.010	26	160	100/C
	2.5	Stranded	0.8	0.4	1.2	9.0	12.0	7.41	0.009	26	180	100/C
	4	Solid	0.8	0.4	1.2	9.6	12.5	4.61	0.0085	34	210	100/C
	4	Stranded	0.8	0.4	1.2	10.0	13.0	4.61	0.0077	34	220	100/C
	6	Solid	0.8	0.4	1.2	1.5	13.5	3.08	0.0070	44	270	100/C
	6	Stranded	0.8	0.4	1.2	11.0	14.0	3.08	0.0065	44	290	100/C
	10	Solid	1.0	0.6	1.4	13.0	16.5	1.83	0.0070	60	420	500/D
	10	Stranded	1.0	0.6	1.4	13.5	17.5	1.83	0.0065	60	460	500/D
	16	Stranded	1.0	0.6	1.4	15.5	20.0	1.15	0.0052	80	650	500/D
	25	Stranded	1.2	0.8	1.4	18.5	24.0	0.727	0.0050	107	950	500/D
	35	Stranded	1.2	1.0	1.6	21.0	27.5	0.524	0.0044	131	1,300	500/D

C : Packing in Coil
D : Packing in Drum

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Solid	3.6853	0.2951	0.0927	3.6864
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Solid	2.1897	0.2891	0.0908	2.1915
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3788
	25	Stranded	0.8700	0.2748	0.0863	0.8743
	35	Stranded	0.6272	0.2554	0.0803	0.6323

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown, Black, Grey or Blue, Brown,Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 4-2553, Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location

B

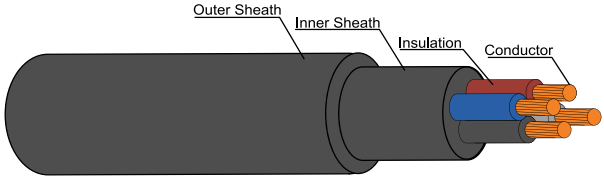
Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
3	1.5	Solid	0.7	0.4	1.2	8.0	10.5	12.1	0.011	16	140	100/C
	1.5	Stranded	0.7	0.4	1.2	8.2	11.0	12.1	0.010	16	150	100/C
	2.5	Solid	0.8	0.4	1.2	9.2	12.0	7.41	0.010	22	190	100/C
	2.5	Stranded	0.8	0.4	1.2	9.4	12.5	7.41	0.009	22	210	100/C
	4	Solid	0.8	0.4	1.2	10.0	13.0	4.61	0.0085	30	250	100/C
	4	Stranded	0.8	0.4	1.2	10.5	13.5	4.61	0.0077	30	270	100/C
	6	Solid	0.8	0.4	1.4	11.5	14.5	3.08	0.0070	37	340	100/C
	6	Stranded	0.8	0.4	1.4	12.0	15.5	3.08	0.0065	37	370	100/C
	10	Solid	1.0	0.6	1.4	14.0	17.5	1.83	0.0070	52	520	500/D
	10	Stranded	1.0	0.6	1.4	14.5	19.0	1.83	0.0065	52	570	500/D
	16	Stranded	1.0	0.8	1.4	16.5	27.5	1.15	0.0052	70	810	500/D
	25	Stranded	1.2	0.8	1.6	20.5	26.0	0.727	0.0050	88	1,200	500/D
	35	Stranded	1.2	1.0	1.6	22.0	29.0	0.524	0.0044	110	1,600	500/D

C : Packing in Coil
D : Packing in Drum

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Solid	3.6853	0.2951	0.0927	3.6864
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Solid	2.1897	0.2891	0.0908	2.1916
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores: Blue, Brown, Black, Grey
or Brown, Black, Grey and Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 4-2553, Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location

B

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
4	1.5	Solid	0.7	0.4	1.2	8.6	11.5	12.1	0.011	16	160	100/C
	1.5	Stranded	0.7	0.4	1.2	9.0	12.0	12.1	0.010	16	180	100/C
	2.5	Solid	0.8	0.4	1.2	10.0	13.0	7.41	0.010	22	230	100/C
	2.5	Stranded	0.8	0.4	1.2	10.0	13.5	7.41	0.009	22	250	100/C
	4	Solid	0.8	0.4	1.4	11.5	14.5	4.61	0.0085	30	320	100/C
	4	Stranded	0.8	0.4	1.4	12.0	15.0	4.61	0.0077	30	340	100/C
	6	Solid	0.8	0.6	1.4	12.5	16.0	3.08	0.0070	37	440	500/D
	6	Stranded	0.8	0.6	1.4	13.0	17.0	3.08	0.0065	37	470	500/D
	10	Solid	1.0	0.6	1.4	15.5	19.0	1.83	0.0070	52	660	500/D
	10	Stranded	1.0	0.6	1.4	16.0	20.5	1.83	0.0065	52	700	500/D
	16	Stranded	1.0	0.8	1.4	18.0	23.5	1.15	0.0052	70	1,000	500/D
	25	Stranded	1.2	1.0	1.6	22.5	28.5	0.727	0.0050	88	1,600	500/D
	35	Stranded	1.2	1.0	1.6	24.5	32.0	0.524	0.0044	110	2,000	500/D

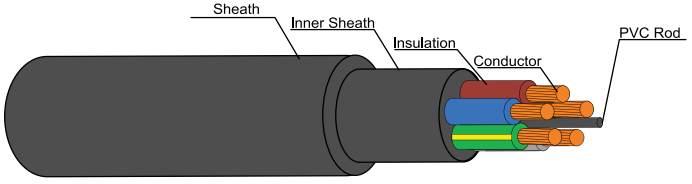
C : Packing in Coil
D : Packing in Drum

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Solid	3.6853	0.2951	0.0927	3.6864
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Solid	2.1897	0.2891	0.0908	2.1916
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification 5 Cores: Blue, Brown, Black, Grey and Black or Blue, Brown, Black, Grey and Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 4-2553, Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location

B

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter Minimum (mm)	Overall diameter Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
5	1.5	Solid	0.7	0.7	1.2	9.4	12.0	12.1	0.011	16	200	100/C
	1.5	Stranded	0.7	0.7	1.2	9.8	12.5	12.1	0.010	16	220	100/C
	2.5	Solid	0.8	0.8	1.2	11.0	14.0	7.41	0.010	22	280	100/C
	2.5	Stranded	0.8	0.8	1.2	11.0	14.5	7.41	0.009	22	310	100/C
	4	Solid	0.8	0.8	1.4	12.5	16.0	4.61	0.0085	30	410	100/C
	4	Stranded	0.8	0.8	1.4	13.0	17.0	4.61	0.0077	30	430	100/C
	6	Solid	0.8	0.8	1.4	13.5	17.5	3.08	0.0070	37	530	500/D
	6	Stranded	0.8	0.8	1.4	14.5	18.5	3.08	0.0065	37	570	500/D
	10	Solid	1.0	1.0	1.4	17.0	21.0	1.83	0.0070	52	800	500/D
	10	Stranded	1.0	1.0	1.4	17.5	22.0	1.83	0.0065	52	870	500/D
	16	Stranded	1.0	1.0	1.6	20.5	26.0	1.15	0.0052	70	1,300	500/D
	25	Stranded	1.2	1.2	1.6	24.5	31.5	0.727	0.0050	88	1,900	500/D
	35	Stranded	1.2	1.2	1.6	27.0	35.0	0.524	0.0044	110	2,500	500/D

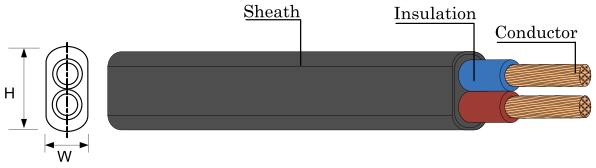
C : Packing in Coil
D : Packing in Drum

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
5	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Solid	3.6853	0.2951	0.0927	3.6864
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Solid	2.1897	0.2891	0.0908	2.1916
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 52 VKF

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.5 mm² up to 0.75 mm²

Insulation : Polyvinyl chloride (PVC/D)

Core identification
2 Cores : Blue and Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical equipment and electrical illumination.

Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					W x H Minimum	W x H Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

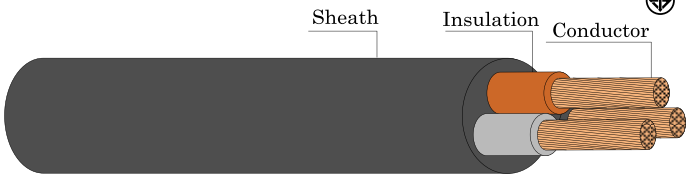
C = Packing in coil

B

60227 IEC 52

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.5 mm² up to 0.75 mm²

Insulation : Polyvinyl chloride (PVC/D)

Core identification
2 Cores : Blue and Brown
3 Cores : Brown, Black, Grey
or Blue, Brown and Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical equipment and electrical illumination.

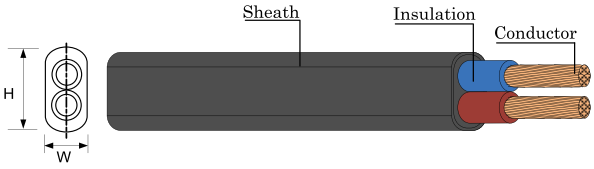
B

Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					Minimum	Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	40	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	48	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	47	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	58	100/C

60227 IEC 53 VKF

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.75 mm² up to 1 mm²

Insulation : Polyvinyl chloride (PVC/D)

Core identification
2 Cores : Blue and Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical equipment and electrical illumination.

Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					W X H Minimum	W X H Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	43	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

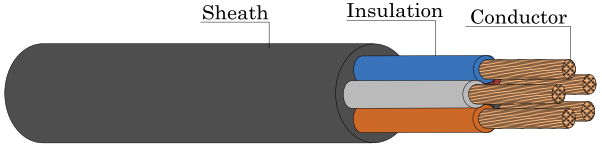
C = Packing in coil

B

60227 IEC 53

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.75 mm² up to 2.5 mm²

Insulation : Polyvinyl chloride (PVC/D)

Core identification

2 Cores	: Blue and Brown
3 Cores	: Brown, Black, Grey or Blue, Brown and Green/Yellow
4 Cores	: Blue, Brown, Black and Grey or Brown, Black, Grey and Green/Yellow
5 Cores	: Blue, Brown, Black, Grey and Black or Blue, Brown, Black, Grey and Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 9

B

APPLICATION

For household appliances, electrical equipment and electrical illumination.

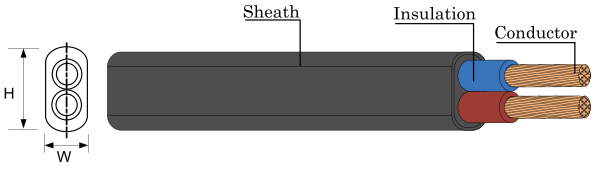
Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					Minimum	Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	60	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	70	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	93	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	140	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	70	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	82	100/C
	1.5	Flexible	0.7	0.8	7.4	9.4	13.3	0.010	16	115	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	175	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	6	84	100/C
	1	Flexible	0.6	0.8	7.1	9.0	19.5	0.010	10	105	100/C
	1.5	Flexible	0.7	0.8	8.4	10.5	13.3	0.010	16	145	100/C
	2.5	Flexible	0.8	1.0	10.1	12.5	7.98	0.009	20	215	100/C
5	0.75	Flexible	0.6	0.8	7.4	9.3	26.0	0.011	6	105	100/C
	1	Flexible	0.6	0.8	7.8	9.8	19.5	0.010	10	125	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	175	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	265	100/C

C = Packing in coil

60227 IEC 56 HVKF

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.5 mm² up to 0.75 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification
2 Cores : Blue and Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical equipment and electrical illumination.

Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					W x H Minimum	W x H Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

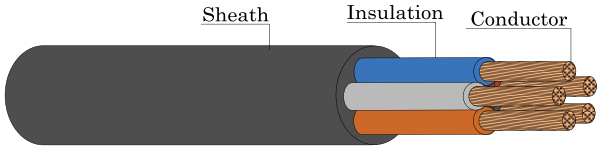
C = Packing in coil

B

60227 IEC 56

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.5 mm² up to 0.75 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification
2 Cores : Blue and Brown
3 Cores : Brown, Black, Grey
or Blue, Brown and Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical equipment and electrical illumination.

B

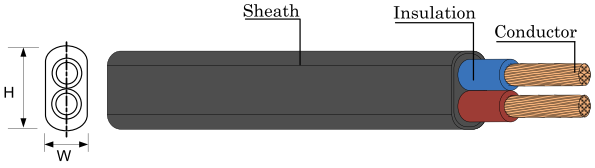
Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					Minimum	Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	38	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	46	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	44	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	55	100/C

C = Packing in coil

60227 IEC 57 HVKF

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.75 mm² up to 1 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification
2 Cores : Blue and Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 13

APPLICATION

For household appliances, electrical equipment and electrical illumination.

Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					W x H Minimum	W x H Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	42	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

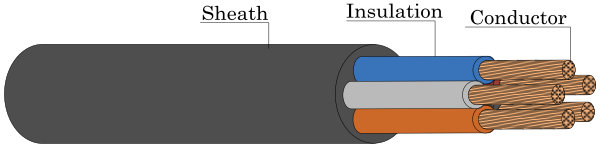
C = Packing in coil

B

60227 IEC 57

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper
: Sizes 0.75 mm² up to 2.5 mm²

Insulation : Polyvinyl chloride (PVC/E)

Core identification

2 Cores	: Blue and Brown
3 Cores	: Brown, Black, Grey or Blue, Brown and Green/Yellow
4 Cores	: Blue, Brown, Black and Grey or Brown, Black, Grey and Green/Yellow
5 Cores	: Blue, Brown, Black, Grey and Black or Blue, Brown, Black, Grey and Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 5-2553 Table 13

B

APPLICATION

For household appliances, electrical equipment and electrical illumination.

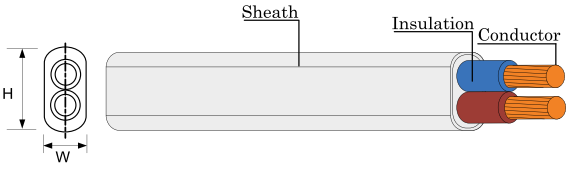
Number of cores	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
					Minimum	Maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	57	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	66	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	89	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	135	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	66	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	78	100/C
	1.5	Flexible	0.7	0.9	7.4	9.4	13.3	0.010	16	110	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	170	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	6	80	100/C
	1	Flexible	0.6	0.9	7.1	9.0	19.5	0.010	10	99	100/C
	1.5	Flexible	0.7	1.0	8.4	10.5	13.3	0.010	16	140	100/C
	2.5	Flexible	0.8	1.1	10.1	12.5	7.98	0.009	20	205	100/C
5	0.75	Flexible	0.6	0.9	7.4	9.3	26.0	0.011	6	99	100/C
	1	Flexible	0.6	0.9	7.8	9.8	19.5	0.010	10	120	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	170	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	250	100/C

C = Packing in coil

VAF

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification
2 Cores : Blue and Brown

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 101-2559 Table 1

APPLICATION

Building wiring for surface or above ceiling wiring or direct embeded in plaster.

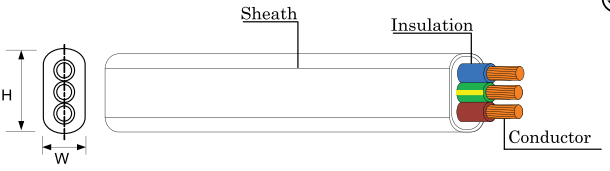
Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter W X H Minimum (mm)	Overall diameter W X H Maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	0.0110	14	50	100/C
	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	0.0110	17	70	100/C
	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	0.0100	23	100	100/C
	4	Stranded	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	0.0077	32	150	100/C
	6	Stranded	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	0.0065	41	200	100/C
	10	Stranded	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	0.0065	56	310	100/C
	16	Stranded	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	0.0052	74	450	100/C

B

VAF-G

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Core identification
2 Cores + Ground : Blue, Brown and Green/Yellow

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

Testing voltage : 2,000 Volts

Reference standard : TIS 11 Part 101-2559 Table 1

B

APPLICATION

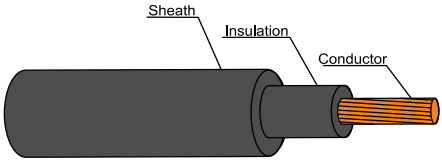
Building wiring for surface or above ceiling wiring or direct embeded in plaster.

Number of cores	Nominal cross sectional area		Conductor type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard Length
						W x H	W x H						
	Phase (mm^2)	Ground (mm^2)		(mm)	(mm)	Minimum (mm)	Maximum (mm)	Phase (Ω/km)	Ground (Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	1	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	18.1	0.0110	14	75	100/C
	1.5	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	12.1	0.0110	17	100	100/C
	2.5	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	7.41	0.0100	23	150	100/C
	4	4	Stranded	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	4.61	0.0077	32	220	100/C
	6	6	Stranded	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	3.08	0.0065	41	290	100/C
	10	10	Stranded	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	1.83	0.0065	56	460	100/C
	16	16	Stranded	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	1.15	0.0052	74	650	500/D

C = Packing in coil
D = Packing in drum

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED SINGLE CORE



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Annealed copper
: Sizes 1 mm² up to 500 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification Single-cores : Black

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 3

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
	1	Solid	1.5	1.8	8.6	18.1	0.0207	19	16	15	21	80	100/C
	1	Non-Compacted	1.5	1.8	8.8	18.1	0.0200	19	16	15	21	80	100/C
	1.5	Solid	1.5	1.8	9.0	12.1	0.0184	24	19	19	26	85	100/C
NYY	1.5	Non-Compacted	1.5	1.8	9.2	12.1	0.0175	24	19	19	26	90	100/C
	2.5	Solid	1.5	1.8	9.4	7.41	0.0157	32	24	26	35	100	100/C
	2.5	Non-Compacted	1.5	1.8	9.8	7.41	0.0146	32	24	26	35	110	100/C
	4	Solid	1.5	1.8	10.0	4.61	0.0135	42	33	34	45	120	100/C
	4	Non-Compacted	1.5	1.8	10.5	4.61	0.0124	42	33	34	45	130	100/C
	6	Non-Compacted	1.5	1.8	11.0	3.08	0.0107	54	42	43	57	160	1000/D
	10	Non-Compacted	1.5	1.8	12.0	1.83	0.0088	73	57	59	76	210	1000/D
	16	Compacted	1.5	1.8	13.0	1.15	0.0074	96	76	78	99	290	1000/D
	25	Compacted	1.5	1.8	14.5	0.727	0.0061	127	99	96	128	390	1000/D
	35	Compacted	1.5	1.8	16.0	0.524	0.0053	157	124	119	154	490	1000/D
YK NYY	50	Compacted	1.5	1.8	17.0	0.387	0.0046	191	151	145	181	600	1000/D
	70	Compacted	1.5	1.8	19.0	0.268	0.0039	244	196	188	223	850	1000/D
	95	Compacted	1.7	1.8	21.5	0.193	0.0038	297	239	230	267	1100	1000/D
	120	Compacted	1.7	1.8	23.0	0.153	0.0034	345	279	268	304	1300	1000/D
	150	Compacted	1.9	2.0	26.0	0.124	0.0034	397	324	310	342	1600	1000/D
	185	Compacted	2.1	2.0	28.0	0.0991	0.0034	453	371	356	386	2000	1000/D
	240	Compacted	2.3	2.2	31.5	0.0754	0.0033	535	441	422	448	2800	1000/D
	300	Non-Compacted	2.5	2.2	35.0	0.0601	0.0032	617	511	488	507	3,400	500/D
NYY	400	Non-Compacted	2.7	2.2	38.5	0.0470	0.0030	741	599	571	577	4,300	500/D
	500	Non-Compacted	3.1	2.4	43.0	0.0366	0.0031	854	686	652	654	5,400	500/D

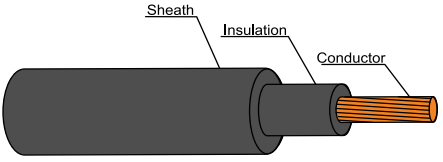
Remark Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
:

C : Packing in Coil
D : Packing in drum

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH SINGLE CORE



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Annealed copper
: Sizes 1 mm² up to 500 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification Single-cores : Black,

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 3

B

APPLICATION

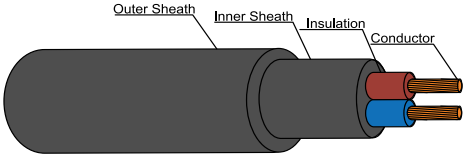
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm²)	Conductor type	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
			Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	1	Solid	21.6567	21.6567	21.6567	0.7840	0.6454	0.5991	0.2463	0.2027	0.1882	21.6581	21.6576	21.6575
	1	Non-Compacted	21.6567	21.6567	21.6567	0.7740	0.6353	0.5891	0.2431	0.1996	0.1851	21.6580	21.6576	21.6574
	1.5	Solid	14.4777	14.4777	14.4777	0.7485	0.6099	0.5637	0.2352	0.1916	0.1771	14.4796	14.4789	14.4787
NYY	1.5	Non-Compacted	14.4777	14.4777	14.4777	0.7388	0.6001	0.5539	0.2321	0.1885	0.1740	14.4795	14.4789	14.4787
	2.5	Solid	8.8661	8.8661	8.8661	0.7063	0.5677	0.5214	0.2219	0.1783	0.1638	8.8689	8.8679	8.8676
	2.5	Non-Compacted	8.8661	8.8661	8.8661	0.7025	0.5639	0.5176	0.2207	0.1771	0.1626	8.8688	8.8678	8.8676
	4	Solid	5.5159	5.5159	5.5159	0.6698	0.5312	0.4850	0.2104	0.1669	0.1524	5.5199	5.5184	5.5180
	4	Non-Compacted	5.5159	5.5159	5.5159	0.6649	0.5263	0.4801	0.2089	0.1653	0.1508	5.5198	5.5184	5.5179
	6	Non-Compacted	3.6852	3.6852	3.6852	0.6360	0.4974	0.4512	0.1998	0.1563	0.1417	3.6907	3.6886	3.6880
	10	Non-Compacted	2.1896	2.1896	2.1896	0.5999	0.4612	0.4150	0.1885	0.1449	0.1304	2.1977	2.1944	2.1935
	16	Compacted	1.3760	1.3761	1.3761	0.5702	0.4315	0.3853	0.1791	0.1356	0.1210	1.3876	1.3827	1.3814
	25	Compacted	0.8700	0.8700	0.8700	0.5450	0.4064	0.3602	0.1712	0.1277	0.1132	0.8866	0.8793	0.8773
	35	Compacted	0.6271	0.6272	0.6272	0.5175	0.3789	0.3327	0.1626	0.119	0.1045	0.6478	0.6384	0.6358
YK NYY	50	Compacted	0.4632	0.4633	0.4634	0.5023	0.3637	0.3175	0.1578	0.1143	0.0997	0.4894	0.4772	0.4740
	70	Compacted	0.3210	0.3211	0.3212	0.4862	0.3476	0.3014	0.1527	0.1092	0.0947	0.3555	0.3391	0.3348
	95	Compacted	0.2313	0.2315	0.2317	0.4772	0.3386	0.2923	0.1499	0.1064	0.0918	0.2757	0.2548	0.2492
	120	Compacted	0.1836	0.1838	0.1840	0.4664	0.3278	0.2816	0.1465	0.1030	0.0885	0.2349	0.2107	0.2420
	150	Compacted	0.1490	0.1493	0.1496	0.4663	0.3276	0.2814	0.1465	0.1029	0.0884	0.2090	0.1814	0.1737
	185	Compacted	0.1194	0.1198	0.1201	0.4622	0.3235	0.2773	0.1452	0.1016	0.0871	0.1880	0.1571	0.1484
	240	Compacted	0.0913	0.0918	0.0922	0.4568	0.3182	0.2719	0.1435	0.1000	0.0854	0.1701	0.1357	0.1257
	300	Non-Compacted	0.0733	0.0740	0.0745	0.4517	0.3131	0.2668	0.1419	0.0984	0.0838	0.1597	0.1231	0.1122
NYY	400	Non-Compacted	0.0580	0.0589	0.0596	0.4465	0.3079	0.2617	0.1403	0.0967	0.0822	0.1518	0.1132	0.1015
	500	Non-Compacted	0.0460	0.0471	0.0480	0.4460	0.3074	0.2612	0.1401	0.0966	0.0820	0.1475	0.1074	0.0951

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED TWO CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
	1	Solid	0.8	0.8	1.8	12.0	18.1	0.0141	15	21	170	100/C
	1	Non-Compacted	0.8	0.8	1.8	12.5	18.1	0.0135	15	21	170	100/C
	1.5	Solid	0.8	0.8	1.8	12.5	12.1	0.0123	19	27	180	100/C
NYY	1.5	Non-Compacted	0.8	0.8	1.8	13.0	12.1	0.0116	19	27	200	100/C
	2.5	Solid	0.8	0.8	1.8	13.5	7.41	0.0102	25	35	220	100/C
	2.5	Non-Compacted	0.8	0.8	1.8	14.0	7.41	0.0093	25	35	240	100/C
	4	Solid	0.9	0.8	1.8	15.0	4.61	0.0094	33	47	290	100/C
	4	Non-Compacted	0.9	0.8	1.8	15.5	4.61	0.0085	33	47	310	100/C
	6	Non-Compacted	0.9	0.8	1.8	17.0	3.08	0.0073	43	60	370	1000/D
	10	Non-Compacted	1.1	0.8	1.8	19.5	1.83	0.0069	60	81	550	1000/D
	16	Compacted	1.1	0.8	2.0	22.5	1.15	0.0057	80	105	1000	1000/D
YK NYY	25	Compacted	1.3	1.2	2.0	27.0	0.727	0.0054	108	136	1000	1000/D
	35	Compacted	1.3	1.2	2.0	29.5	0.524	0.0047	132	165	1000	1000/D
	50	Compacted	1.5	1.2	2.2	33.5	0.387	0.0046	160	195	1700	1000/D
	70	Compacted	1.5	1.5	2.2	38.0	0.268	0.0039	200	239	2300	1000/D
	95	Non-Compacted	1.7	1.5	2.2	42.5	0.193	0.0038	245	288	3300	500/D
	120	Non-Compacted	1.7	1.5	2.4	46.5	0.153	0.0034	285	329	4000	500/D
NYY	150	Non-Compacted	1.9	1.8	2.6	52.0	0.124	0.0034	325	368	4900	500/D
	185	Non-Compacted	2.1	1.8	2.8	57.0	0.0991	0.0034	374	417	6000	500/D
	240	Non-Compacted	2.3	2.0	3.0	64.0	0.0754	0.0033	440	481	8000	300/D
	300	Non-Compacted	2.5	2.0	3.2	70.5	0.0601	0.0032	505	541	9500	300/D

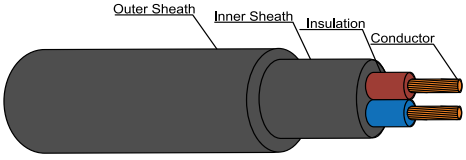
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

C : Packing in coil
D : Packing in drum

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED TWO CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

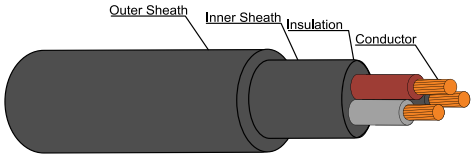
B

Cable name	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-Compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Non-Compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-Compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Non-Compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-Compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-Compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	16	Compacted	1.3800	0.2631	0.0827	1.3820
	25	Compacted	0.8700	0.2607	0.0819	0.8738
	35	Compacted	0.6272	0.2593	0.0814	0.6325
	50	Compacted	0.4634	0.2604	0.0818	0.4706
	70	Compacted	0.3212	0.2506	0.0787	0.3307
NYY	95	Non-Compacted	0.2317	0.2480	0.0779	0.2444
	120	Non-Compacted	0.1840	0.2409	0.0757	0.1990
	150	Non-Compacted	0.1495	0.2402	0.0755	0.1675
	185	Non-Compacted	0.1201	0.2401	0.0754	0.1418
	240	Non-Compacted	0.0922	0.2361	0.0742	0.1183
	300	Non-Compacted	0.0744	0.2343	0.0736	0.1047

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED THREE CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown,Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

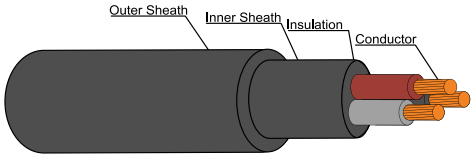
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
NYY	1	Solid	0.8	0.8	1.8	12.5	18.1	0.0141	13	18	180	100/C
	1	Non-Compacted	0.8	0.8	1.8	13.0	18.1	0.0135	13	18	190	100/C
	1.5	Solid	0.8	0.8	1.8	13.0	12.1	0.0123	16	22	210	100/C
	1.5	Non-Compacted	0.8	0.8	1.8	13.5	12.1	0.0116	16	22	220	100/C
	2.5	Solid	0.8	0.8	1.8	14.0	7.41	0.0102	22	30	260	100/C
	2.5	Non-Compacted	0.8	0.8	1.8	15.0	7.41	0.0093	22	30	270	100/C
	4	Solid	0.9	0.8	1.8	15.5	4.61	0.0094	30	39	34	100/C
	4	Non-Compacted	0.9	0.8	1.8	16.5	4.61	0.0085	30	39	360	100/C
	6	Non-Compacted	0.9	0.8	1.8	18.0	3.08	0.0073	37	50	440	1000/D
	10	Non-Compacted	1.1	0.8	1.8	20.5	1.83	0.0069	52	68	650	1000/D
YK NYY	16	Compacted	1.1	1.2	2.0	24.5	1.15	0.0057	70	87	900	1000/D
	25	Compacted	1.3	1.2	2.0	28.5	0.727	0.0054	88	128	1300	1000/D
	35	Compacted	1.3	1.2	2.0	31.5	0.524	0.0047	110	154	1600	1000/D
	50	Compacted	1.5	1.5	2.2	36.0	0.387	0.0046	133	181	2200	1000/D
NYY	70	Compacted	1.5	1.5	2.2	40.5	0.268	0.0039	171	223	2900	1000/D
	95	Non-Compacted	1.7	1.5	2.4	46.0	0.193	0.0038	207	267	4200	500/D
	120	Non-Compacted	1.7	1.8	2.6	50.5	0.153	0.0034	240	304	5000	500/D
	150	Non-Compacted	1.9	1.8	2.8	56.0	0.124	0.0034	278	342	6500	500/D
	185	Non-Compacted	2.1	2.0	3.0	61.5	0.0991	0.0034	317	386	8000	300/D
	240	Non-Compacted	2.3	2.0	3.2	69.0	0.0754	0.0033	374	448	10000	300/D
	300	Non-Compacted	2.5	2.2	3.4	76.0	0.0601	0.0032	432	507	12500	200/D

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED THREE CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown,Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

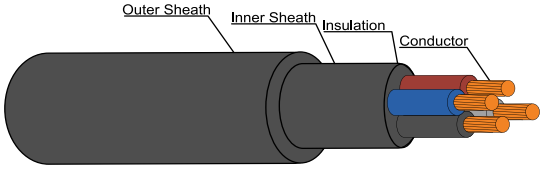
B

Cable name	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-Compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Non-Compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-Compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Non-Compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-Compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-Compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	16	Compacted	1.3800	0.2631	0.0827	1.3820
	25	Compacted	0.8700	0.2607	0.0819	0.8738
	35	Compacted	0.6273	0.2593	0.0814	0.6326
	50	Compacted	0.4635	0.2604	0.0818	0.4707
	70	Compacted	0.3213	0.2506	0.0787	0.3308
NYY	95	Non-Compacted	0.2319	0.2480	0.0779	0.2446
	120	Non-Compacted	0.1843	0.2409	0.0757	0.1992
	150	Non-Compacted	0.1499	0.2402	0.0755	0.1678
	185	Non-Compacted	0.1205	0.2401	0.0754	0.1422
	240	Non-Compacted	0.0928	0.2361	0.0742	0.1188
	300	Non-Compacted	0.0751	0.2343	0.0736	0.1052

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED FOUR CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
NYY	1	Solid	0.8	0.8	1.8	13.5	18.1	0.0141	13	18	210	100/C
	1	Non-Compacted	0.8	0.8	1.8	14.0	18.1	0.0135	13	18	220	100/C
	1.5	Solid	0.8	0.8	1.8	14.0	12.1	0.0123	16	22	240	100/C
	1.5	Non-Compacted	0.8	0.8	1.8	14.5	12.1	0.0116	16	22	260	100/C
	2.5	Solid	0.8	0.8	1.8	15.0	7.41	0.0102	22	30	300	100/C
	2.5	Non-Compacted	0.8	0.8	1.8	16.0	7.41	0.0093	22	30	320	100/C
	4	Solid	0.9	0.8	1.8	17.0	4.61	0.0094	30	39	400	100/C
	4	Non-Compacted	0.9	0.8	1.8	17.5	4.61	0.0085	30	39	430	100/C
	6	Non-Compacted	0.9	0.8	1.8	19.0	3.08	0.0073	37	50	550	1000/D
	10	Non-Compacted	1.1	0.8	2.0	23.0	1.83	0.0069	52	68	800	1000/D
YK NYY	16	Compacted	1.1	1.2	2.0	26.5	1.15	0.0057	70	87	1100	1000/D
	25	Compacted	1.3	1.2	2.0	31.0	0.727	0.0054	88	128	1600	1000/D
	35	Compacted	1.3	1.5	2.2	35.0	0.524	0.0047	110	154	2100	1000/D
	50	Compacted	1.5	1.5	2.2	39.5	0.387	0.0046	133	181	2800	1000/D
	70	Compacted	1.5	1.5	2.4	44.5	0.268	0.0039	171	223	3700	800/D
NYY	95	Non-Compacted	1.7	1.8	2.6	51.5	0.193	0.0038	207	267	5500	500/D
	120	Non-Compacted	1.7	1.8	2.8	56.0	0.153	0.0034	240	304	6500	500/D
	150	Non-Compacted	1.9	2.0	3.0	62.0	0.124	0.0034	278	342	8000	300/D
	185	Non-Compacted	2.1	2.0	3.2	68.0	0.0991	0.0034	317	386	10000	300/D
	240	Non-Compacted	2.3	2.2	3.4	76.5	0.0754	0.0033	374	448	13000	200/D
	300	Non-Compacted	2.5	2.2	3.8	85.0	0.0601	0.0032	432	507	16000	200/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

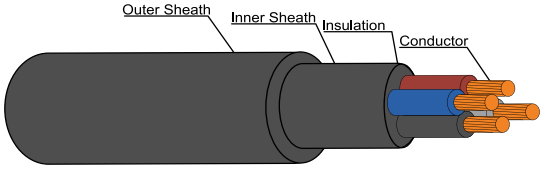
C : Packing in coil
D : Packing in drum

B

NYY or YK NYY

450/750 V 70° C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED FOUR CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Annealed copper wire
: Sizes 1 mm² up to 300 mm²

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

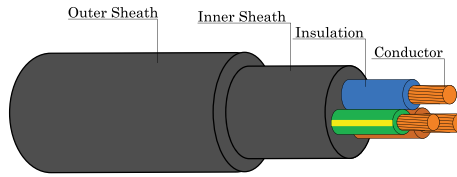
Cable name	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Non-Compacted	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Non-Compacted	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Non-Compacted	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Non-Compacted	5.5200	0.3022	0.0950	5.5210
	6	Non-Compacted	3.6900	0.2869	0.0901	3.6910
	10	Non-Compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	16	Compacted	1.3800	0.2631	0.0827	1.3820
	25	Compacted	0.8700	0.2607	0.0819	0.8738
	35	Compacted	0.6273	0.2593	0.0814	0.6326
	50	Compacted	0.4635	0.2604	0.0818	0.4707
	70	Compacted	0.3213	0.2506	0.0787	0.3308
	95	Non-Compacted	0.2319	0.2480	0.0779	0.2446
NYY	120	Non-Compacted	0.1843	0.2409	0.0757	0.1992
	150	Non-Compacted	0.1499	0.2402	0.0755	0.1678
	185	Non-Compacted	0.1205	0.2401	0.0754	0.1422
	240	Non-Compacted	0.0928	0.2361	0.0742	0.1188
	300	Non-Compacted	0.0751	0.2343	0.0736	0.1052

B

NYY-G

450/750 V 70 °C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : PolyvInyl chloride (PVC/C)

Core identification : 2 Cores + Ground : Blue, Brown, + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

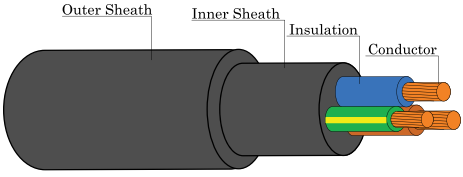
Number of cores	Conductor				Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance maximum at 20°C		Insulation resistance at 70°C minimum	Continuous currunt rating maximum		Cable weight approx.	Standard length per drum
	Nominal cross section area		Type of Conductor									on cable Ladder at 40°C	direct burial in ground at 30°C		
	Phase	Ground	Phase	Ground					Phase	Ground					
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
2+G	1	1	Solid		0.8	0.8	1.8	13.0	18.1	18.1	0.0141	15	21	180	500
	1	1	Stranded		0.8	0.8	1.8	13.5	18.1	18.1	0.0135	15	21	190	500
	1.5	1.5	Solid		0.8	0.8	1.8	13.5	12.1	12.1	0.0123	19	27	210	500
	1.5	1.5	Stranded		0.8	0.8	1.8	14.0	12.1	12.1	0.0116	19	27	220	500
	2.5	2.5	Solid		0.8	0.8	1.8	14.5	7.41	7.41	0.0102	25	35	260	500
	2.5	2.5	Stranded		0.8	0.8	1.8	15.0	7.41	7.41	0.0093	25	35	270	500
	4	4	Solid		0.9	0.8	1.8	16.0	4.61	4.61	0.0094	33	47	340	500
	4	4	Stranded		0.9	0.8	1.8	16.5	4.61	4.61	0.0085	33	47	360	500
	6	6	Stranded		0.9	0.8	1.8	18.0	3.08	3.08	0.0073	43	60	450	500
	10	10	Stranded		1.1	0.8	1.8	21.0	1.83	1.83	0.0069	60	81	650	500
	16	16	Stranded		1.1	0.8	2.0	23.5	1.15	1.15	0.0057	80	105	900	500
	25	16	Stranded		1.3	1.2	2.0	28.0	0.727	0.727	0.0054	108	136	1200	500
	35	16	Stranded		1.3	1.2	2.0	30.0	0.524	0.524	0.0047	132	165	1500	500
	50	25	Stranded		1.5	1.2	2.2	34.0	0.387	0.387	0.0046	160	195	2000	500
	70	35	Stranded		1.5	1.5	2.2	38.5	0.268	0.268	0.0039	200	239	2700	500
	95	50	Stranded		1.7	1.5	2.2	43.5	0.193	0.193	0.0038	245	288	3600	500
	120	70	Stranded		1.7	1.5	2.4	47.5	0.153	0.153	0.0034	285	329	4500	500
	150	95	Stranded		1.9	1.8	2.6	53.0	0.124	0.124	0.0034	325	368	5500	500
	185	95	Stranded		2.1	1.8	2.8	57.5	0.0991	0.0991	0.0034	374	417	6500	500
	240	120	Stranded		2.3	2.0	3.0	64.5	0.0754	0.0754	0.0033	440	481	8500	500
	300	150	Stranded		2.5	2.0	3.2	71.0	0.0601	0.0601	0.0032	505	541	10500	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores + Ground : Blue, Brown + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

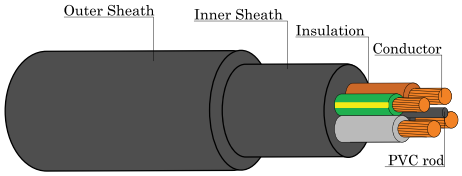
Number of cores	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6272	0.2593	0.0814	0.6325
	50	25	0.4634	0.2604	0.0818	0.4706
	70	35	0.3212	0.2506	0.0787	0.3307
	95	50	0.2317	0.2480	0.0779	0.2444
	120	70	0.1840	0.2409	0.0757	0.1990
	150	95	0.1495	0.2402	0.0755	0.1675
	185	95	0.2101	0.2401	0.0754	0.1418
	240	120	0.0922	0.2361	0.0742	0.1183
	300	150	0.0744	0.2343	0.0736	0.1047

B

NYY-G

450/750 V 70 °C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores + Ground : Brown, Black, Grey + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

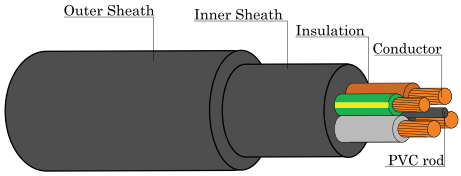
Number of cores	Conductor				Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance maximum at 20°C		Insulation resistance at 70°C minimum	Continuous currunt rating maximum		Cable weight approx.	Standard length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial in ground at 30°C		
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
3+G	1	1	Solid		0.8	0.8	1.8	13.5	18.1	18.1	0.0141	13	18	210	500
	1	1	Stranded		0.8	0.8	1.8	14.0	18.1	18.1	0.0135	13	18	220	500
	1.5	1.5	Solid		0.8	0.8	1.8	14.0	12.1	12.1	0.0123	16	22	240	500
	1.5	1.5	Stranded		0.8	0.8	1.8	15.0	12.1	12.1	0.0116	16	22	260	500
	2.5	2.5	Solid		0.8	0.8	1.8	15.5	7.41	7.41	0.0102	22	30	300	500
	2.5	2.5	Stranded		0.8	0.8	1.8	16.0	7.41	7.41	0.0093	22	30	320	500
	4	4	Solid		0.9	0.8	1.8	17.0	4.61	4.61	0.0094	30	39	400	500
	4	4	Stranded		0.9	0.8	1.8	18.0	4.61	4.61	0.0085	30	39	430	500
	6	6	Stranded		0.9	0.8	1.8	19.0	3.08	3.08	0.0073	37	50	550	500
	10	10	Stranded		1.1	0.8	1.8	22.5	1.83	1.83	0.0069	52	68	800	500
	16	16	Stranded		1.1	1.2	2.0	26.5	1.15	1.15	0.0057	70	87	1200	500
	25	16	Stranded		1.3	1.2	2.0	30.5	0.727	0.727	0.0054	88	128	1600	500
	35	16	Stranded		1.3	1.2	2.0	33.0	0.524	0.524	0.0047	110	154	1900	500
	50	25	Stranded		1.5	1.5	2.2	38.5	0.387	0.387	0.0046	133	181	2600	500
	70	35	Stranded		1.5	1.5	2.2	42.5	0.268	0.268	0.0039	171	223	3500	500
	95	50	Stranded		1.7	1.5	2.4	48.5	0.193	0.193	0.0038	207	267	4700	500
	120	70	Stranded		1.7	1.8	2.6	53.5	0.153	0.153	0.0034	240	304	6000	500
	150	95	Stranded		1.9	1.8	2.8	59.0	0.124	0.124	0.0034	278	342	7500	500
	185	95	Stranded		2.1	2.0	3.0	64.5	0.0991	0.0991	0.0034	317	386	9000	500
	240	120	Stranded		2.3	2.0	3.2	72.0	0.0754	0.0754	0.0033	374	448	11500	300
	300	150	Stranded		2.5	2.2	3.4	79.5	0.0601	0.0601	0.0032	432	507	14000	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores + Ground : Brown, Black, Grey + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

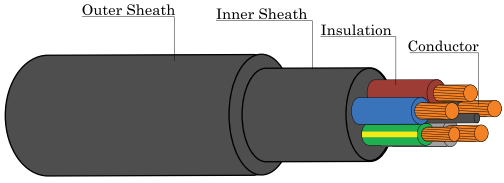
Number of cores	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

B

NYY-G

450/750 V 70 °C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores + Ground : Blue, Brown, Black, Grey + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

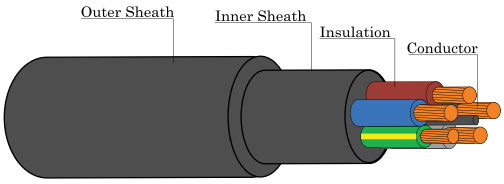
Number of cores	Conductor				Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance maximum at 20°C		Insulation resistance at 70°C minimum	Continuous currunt rating maximum		Cable weight approx.	Standard length per drum
	Nominal cross section area		Type of Conductor									on cable	direct burial		
	Phase	Ground	Phase	Ground					Phase	Ground		Ladder at 40°C	in ground at 30°C		
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
4+G	1	1	Solid		0.8	0.8	1.8	14.5	18.1	18.1	0.0141	13	18	250	500
	1	1	Stranded		0.8	0.8	1.8	15.0	18.1	18.1	0.0135	13	18	260	500
	1.5	1.5	Solid		0.8	0.8	1.8	15.0	12.1	12.1	0.0123	16	22	280	500
	1.5	1.5	Stranded		0.8	0.8	1.8	16.0	12.1	12.1	0.0116	16	22	300	500
	2.5	2.5	Solid		0.8	0.8	1.8	16.5	7.41	7.41	0.0102	22	30	360	500
	2.5	2.5	Stranded		0.8	0.8	1.8	17.0	7.41	7.41	0.0093	22	30	390	500
	4	4	Solid		0.9	0.8	1.8	18.0	4.61	4.61	0.0094	30	39	480	500
	4	4	Stranded		0.9	0.8	1.8	19.0	4.61	4.61	0.0085	30	39	500	500
	6	6	Stranded		0.9	0.8	1.8	20.5	3.08	3.08	0.0073	37	50	650	500
	10	10	Stranded		1.1	0.8	2.0	25.0	1.83	1.83	0.0069	52	68	1000	500
	16	16	Stranded		1.1	1.2	2.0	28.5	1.15	1.15	0.0057	70	87	1400	500
	25	16	Stranded		1.3	1.2	2.0	34.0	0.727	0.727	0.0054	88	128	1900	500
	35	16	Stranded		1.3	1.5	2.2	39.0	0.524	0.524	0.0047	110	154	2500	500
	50	25	Stranded		1.5	1.5	2.2	43.5	0.387	0.387	0.0046	133	181	3300	500
	70	35	Stranded		1.5	1.5	2.4	49.0	0.268	0.268	0.0039	171	223	4500	500
	95	50	Stranded		1.7	1.8	2.6	56.5	0.193	0.193	0.0038	207	267	6000	500
	120	70	Stranded		1.7	1.8	2.8	61.5	0.153	0.153	0.0034	240	304	7500	500
	150	95	Stranded		1.9	2.0	3.0	68.0	0.124	0.124	0.0034	278	342	9500	300
	185	95	Stranded		2.1	2.0	3.2	75.0	0.0991	0.0991	0.0034	317	386	11500	300
	240	120	Stranded		2.3	2.2	3.4	84.5	0.0754	0.0754	0.0033	374	448	14500	300
	300	150	Stranded		2.5	2.2	3.8	93.5	0.0601	0.0601	0.0032	432	507	18000	200

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores + Ground : Blue, Brown, Black, Grey + Green/Yellow

Inner Sheath : Black polyvinyl chloride (PVC)

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

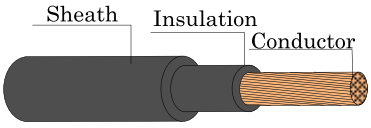
Number of cores	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase	Ground	R	L	XL	Z
	(mm^2)	(mm^2)	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
4+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

B

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification 1 Cores : Black

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 7

B

APPLICATION

For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness approx. (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
1	1	Flexible	0.8	1.2	6.2	19.5	0.0127	14	40	100/C
	1.5	Flexible	0.8	1.2	6.6	13.3	0.0111	16	50	100/C
	2.5	Flexible	0.8	1.2	7.4	7.98	0.0092	25	65	100/C
	4	Flexible	0.9	1.4	8.6	4.95	0.0084	30	90	100/C
	6	Flexible	0.9	1.4	9.4	3.30	0.0071	39	120	100/C
	10	Flexible	1.1	1.8	12.0	1.91	0.0068	51	210	100/C
	16	Flexible	1.1	1.8	13.5	1.21	0.0050	73	270	100/C
	25	Flexible	1.3	2.2	16.0	0.780	0.0048	97	410	100/C
	35	Flexible	1.3	2.2	17.5	0.554	0.0041	140	550	500/D

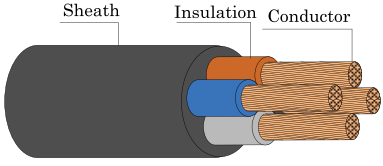
C : Packing in coil
D : Packing in drum

Number of cores	Nominal cross sectional area (mm^2)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
1	1	23.3000	0.6620	0.2079	23.3000
	1.5	15.9000	0.6310	0.1983	15.9000
	2.5	9.5500	0.5930	0.1864	9.5520
	4	5.9227	0.5946	0.1868	5.9256
	6	3.9485	0.5605	0.1761	3.9524
	10	2.2854	0.5529	0.1737	2.2919
	16	1.4478	0.5306	0.1667	1.4574
	25	0.9334	0.5275	0.1657	0.9480
	35	0.6630	0.5086	0.1598	0.6820

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification
2 Cores : Blue, Brown
3 Cores : Brown, Black, Grey
4 Cores : Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 7

B

APPLICATION

For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

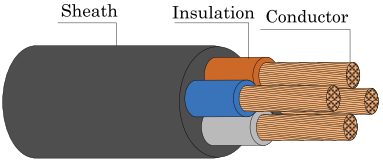
Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness approx. (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	1	Flexible	0.8	1.2	9.6	19.5	0.0127	14	100	100/C
	1.5	Flexible	0.8	1.4	11.0	13.3	0.0111	16	130	100/C
	2.5	Flexible	0.8	1.4	12.5	7.98	0.0092	25	170	100/C
	4	Flexible	0.9	1.6	14.5	4.95	0.0084	30	230	100/C
	6	Flexible	0.9	1.6	16.0	3.30	0.0071	39	320	100/C
	10	Flexible	1.1	1.8	20.0	1.91	0.0068	51	500	500/D
	16	Flexible	1.1	2.2	23.0	1.21	0.0050	73	700	500/D
	25	Flexible	1.3	2.4	27.5	0.780	0.0048	97	1000	500/D
	35	Flexible	1.3	2.6	31.0	0.554	0.0041	140	1400	500/D
3	1	Flexible	0.8	1.4	10.5	19.5	0.0127	12	100	100/C
	1.5	Flexible	0.8	1.4	11.5	13.3	0.0111	15	130	100/C
	2.5	Flexible	0.8	1.4	13.0	7.98	0.0092	20	170	100/C
	4	Flexible	0.9	1.6	15.5	4.95	0.0084	26	230	100/C
	6	Flexible	0.9	1.8	17.5	3.30	0.0071	34	320	100/C
	10	Flexible	1.1	2.0	21.5	1.91	0.0068	47	500	500/D
	16	Flexible	1.1	2.4	25.0	1.21	0.0050	63	700	500/D
	25	Flexible	1.3	2.6	30.0	0.780	0.0048	83	1000	500/D
	35	Flexible	1.3	2.8	33.5	0.554	0.0041	102	1400	500/D
4	1	Flexible	0.8	1.6	10.5	19.5	0.0127	12	100	100/C
	1.5	Flexible	0.8	1.6	11.5	13.3	0.0111	15	130	100/C
	2.5	Flexible	0.8	1.6	13.0	7.98	0.0092	20	170	100/C
	4	Flexible	0.9	1.8	15.5	4.95	0.0084	26	230	100/C
	6	Flexible	0.9	2.0	17.5	3.30	0.0071	34	320	100/C
	10	Flexible	1.1	2.2	21.5	1.91	0.0068	47	500	500/D
	16	Flexible	1.1	2.6	25.0	1.21	0.0050	63	700	500/D
	25	Flexible	1.3	2.8	30.0	0.780	0.0048	83	1000	500/D
	35	Flexible	1.3	3.1	33.5	0.554	0.0041	102	1400	500/D

C : Packing in coil
D : Packing in drum

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification
2 Cores : Blue, Brown
3 Cores : Brown, Black, Grey
4 Cores : Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 7

B

APPLICATION

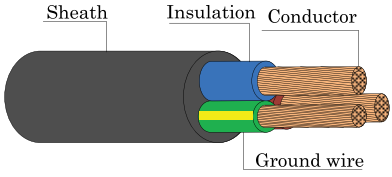
For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

Number of cores	Nominal cross sectional area (mm^2)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.8662	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4502
	25	0.9334	0.2602	0.0817	0.9370
	35	0.6631	0.2500	0.0785	0.6677
3	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678
4	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70° C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification 2 Cores + Ground : Blue, Brown + Green/Yellow

Sheath : Black polyvinyl choride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

B

Number of cores	Conductor: Nominal cross section area Phase (mm^2)	Conductor: Nominal cross section area Ground (mm^2)	Conductor: Type of Conductor Phase	Conductor: Type of Conductor Ground	Insulation thickness nominal (mm)	Sheath thickness approx. (mm)	Overall diameter maximum (mm)	Conductor resistance maximum at 20°C Phase (Ω/km)	Conductor resistance maximum at 20°C Ground (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2+G	1	1	Flexible		0.8	1.2	10.0	19.5	19.5	0.0127	14	120	100/C
	1.5	1.5	Flexible		0.8	1.4	12.0	13.3	13.3	0.0111	16	150	100/C
	2.5	2.5	Flexible		0.8	1.4	13.0	7.98	7.98	0.0092	25	200	100/C
	4	4	Flexible		0.9	1.6	15.5	4.95	4.95	0.0084	30	280	100/C
	6	6	Flexible		0.9	1.8	17.5	3.30	3.30	0.0071	39	400	100/C
	10	10	Flexible		1.1	2.0	21.5	1.91	1.91	0.0068	51	650	500/D
	16	16	Flexible		1.1	2.4	25.0	1.21	1.21	0.0050	73	900	500/D
	25	16	Flexible		1.3	2.6	28.5	0.780	0.780	0.0048	97	1200	500/D
	35	16	Flexible		1.3	2.8	31.5	0.554	0.554	0.0041	140	1500	500/D

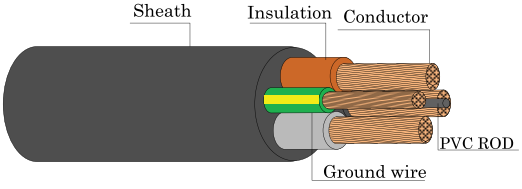
C : Packing in coil
D : Packing in drum

Number of cores	Nominal cross section area Phase (mm^2)	Nominal cross section area Ground (mm^2)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5500
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4502
	25	16	0.9334	0.2602	0.0817	0.9370
	35	16	0.6631	0.2500	0.0785	0.6677

VCT-G

450/750 V 70° C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification
3 Cores + Ground : Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl choride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 8

B

APPLICATION

For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance maximum at 20°C		Insulation resistance at 70°C minimum	Continuous currunt rating in free air at 40°C maximum	Cable weight approx.	Standard length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase	Ground	Phase	Ground									
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
3+G	1	1	Flexible		0.8	1.4	11.5	19.5	19.5	0.0127	12	150	100/C
	1.5	1.5	Flexible		0.8	1.4	12.5	13.3	13.3	0.0111	15	180	100/C
	2.5	2.5	Flexible		0.8	1.4	14.0	7.98	7.98	0.0092	20	240	100/C
	4	4	Flexible		0.9	1.8	17.0	4.95	4.95	0.0084	26	360	100/C
	6	6	Flexible		0.9	2.0	19.5	3.30	3.30	0.0071	34	500	500/D
	10	10	Flexible		1.1	2.2	24.0	1.91	1.91	0.0068	47	850	500/D
	16	16	Flexible		1.1	2.6	28.0	1.21	1.21	0.0050	63	1200	500/D
	25	16	Flexible		1.3	2.8	33.0	0.780	0.780	0.0048	83	1600	500/D
	35	16	Flexible		1.3	3.1	37.0	0.554	0.554	0.0041	102	2100	500/D

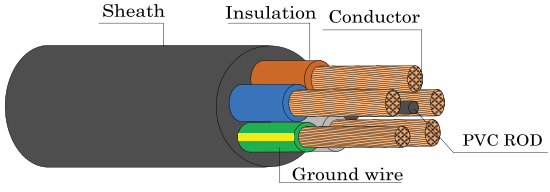
C : Packing in coil
D : Packing in drum

Number of cores	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase	Ground	R	L	XL	Z
	(mm^2)	(mm^2)	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
3+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5500
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70° C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification
4 Cores + Ground : Blue, Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl choride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For mobile-electrical equipment used in mines, factories, farm or household appliances. This cable is suitable for use in places where cables come in contact with oils.

B

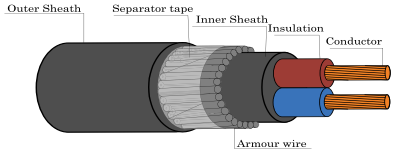
Number of cores	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance maximum at 20°C		Insulation resistance at 70°C minimum	Continuous currunt rating in free air at 40°C maximum	Cable weight approx.	Standard length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
4+G	1	1	Flexible		0.8	1.6	13.0	19.5	19.5	0.0127	12	190	100/C
	1.5	1.5	Flexible		0.8	1.6	14.0	13.3	13.3	0.0111	15	220	100/C
	2.5	2.5	Flexible		0.8	1.6	15.5	7.98	7.98	0.0092	20	310	100/C
	4	4	Flexible		0.9	1.8	18.5	4.95	4.95	0.0084	26	440	100/C
	6	6	Flexible		0.9	2.0	21.5	3.30	3.30	0.0071	34	600	500/D
	10	10	Flexible		1.1	2.2	26.5	1.91	1.91	0.0068	47	1000	500/D
	16	16	Flexible		1.1	2.6	30.5	1.21	1.21	0.0050	63	1400	500/D
	25	16	Flexible		1.3	2.8	36.5	0.780	0.780	0.0048	83	2000	500/D
	35	16	Flexible		1.3	3.1	41.5	0.554	0.554	0.0041	102	2600	500/D

C : Packing in coil
D : Packing in drum

Number of cores	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
4+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5500
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

NYY-SWA

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores : Blue, Brown

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

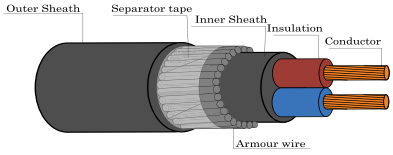
B

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Diameter of steel wire amor norminal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length per drum (m)
2	1	Solid	0.8	0.8	0.8	1.8	13.5	18.1	0.0141	22	300	500
	1	Stranded	0.8	0.8	0.8	1.8	14.0	18.1	0.0135	22	310	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.0	12.1	0.0123	27	320	500
	1.5	Stranded	0.8	0.8	0.8	1.8	14.5	12.1	0.0116	27	340	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.0	7.4	0.0102	36	370	500
	2.5	Stranded	0.8	0.8	0.8	1.8	15.5	7.4	0.0093	36	400	500
	4	Solid	0.9	0.8	0.8	1.8	16.5	4.6	0.0094	47	460	500
	4	Stranded	0.9	0.8	1.3	1.8	18.0	4.61	0.0085	47	600	500
	6	Stranded	0.9	0.8	1.3	1.8	19.0	3.08	0.0073	61	700	500
	10	Stranded	1.1	0.8	1.3	1.8	22.0	1.83	0.0069	82	950	500
	16	Stranded	1.1	0.8	1.6	1.8	24.0	1.15	0.0057	107	1300	500
	25	Stranded	1.3	1.2	2.0	1.9	30.0	0.727	0.0054	138	2000	500
	35	Stranded	1.3	1.2	2.0	2.0	33.0	0.524	0.0047	168	2400	500
	50	Stranded	1.5	1.2	2.0	2.1	36.0	0.387	0.0046	199	3000	500
	70	Stranded	1.5	1.5	2.0	2.2	41.0	0.268	0.0039	243	3800	500
	95	Stranded	1.7	1.5	2.5	2.4	47.0	0.193	0.0038	294	5000	500
	120	Stranded	1.7	1.5	2.5	2.6	51.0	0.153	0.0034	336	6000	500
	150	Stranded	1.9	1.8	2.5	2.7	56.0	0.124	0.0034	375	7000	500
	185	Stranded	2.1	1.8	2.5	2.9	61.0	0.0991	0.0034	424	8500	300
	240	Stranded	2.3	2.0	2.5	3.1	68.0	0.0754	0.0033	489	10500	300
	300	Stranded	2.5	2.0	3.2	3.4	76.0	0.0601	0.0032	553	13500	200

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 2 Cores : Blue, Brown

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

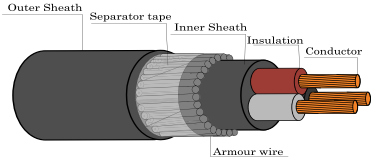
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6272	0.2593	0.0814	0.6325
	50	Stranded	0.4634	0.2604	0.0818	0.4706
	70	Stranded	0.3212	0.2506	0.0787	0.3307
	95	Stranded	0.2317	0.2480	0.0779	0.2444
	120	Stranded	0.1840	0.2409	0.0757	0.1990
	150	Stranded	0.1495	0.2402	0.0755	0.1675
	185	Stranded	0.1201	0.2401	0.0754	0.1418
	240	Stranded	0.0922	0.2361	0.0742	0.1183
	300	Stranded	0.0744	0.2343	0.0736	0.1047

NYY-SWA

450/750 V 70o C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

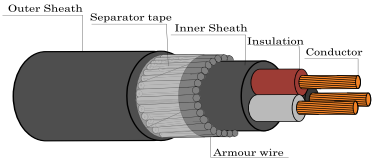
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Diameter of steel wire amor norminal	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length per drum (m)
3	1	Solid	0.8	0.8	0.8	1.8	14.0	18.1	0.0141	18	330	500
	1	Stranded	0.8	0.8	0.8	1.8	14.5	18.1	0.0135	18	340	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.5	12.1	0.0123	23	350	500
	1.5	Stranded	0.8	0.8	0.8	1.8	15.0	12.1	0.0116	23	380	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.5	7.41	0.0102	30	420	500
	2.5	Stranded	0.8	0.8	0.8	1.8	16.5	7.41	0.0093	30	450	500
	4	Solid	0.9	0.8	1.3	1.8	18.0	4.61	0.0094	40	650	500
	4	Stranded	0.9	0.8	1.3	1.8	18.5	4.61	0.0085	40	700	500
	6	Stranded	0.9	0.8	1.3	1.8	20.0	3.08	0.0073	51	800	500
	10	Stranded	1.1	0.8	1.6	1.8	23.0	1.83	0.0069	69	1200	500
	16	Stranded	1.1	1.2	1.6	1.8	26.0	1.15	0.0057	88	1600	500
	25	Stranded	1.3	1.2	2.0	1.9	31.0	0.727	0.0054	115	2300	500
	35	Stranded	1.3	1.2	2.0	2.0	34.0	0.524	0.0047	140	2800	500
	50	Stranded	1.5	1.5	2.0	2.2	39.0	0.387	0.0046	168	3600	500
	70	Stranded	1.5	1.5	2.0	2.3	43.0	0.268	0.0039	209	4500	500
	95	Stranded	1.7	1.5	2.5	2.5	50.0	0.193	0.0038	248	6500	500
	120	Stranded	1.7	1.8	2.5	2.7	55.0	0.153	0.0034	283	7500	300
	150	Stranded	1.9	1.8	2.5	2.8	59.0	0.124	0.0034	310	9000	300
	185	Stranded	2.1	2.0	2.5	3.0	65.0	0.0991	0.0034	357	10500	300
	240	Stranded	2.3	2.0	2.5	3.3	73.0	0.0754	0.0033	427	13000	200
	300	Stranded	2.5	2.2	3.2	3.5	81.0	0.0601	0.0032	453	17000	200

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

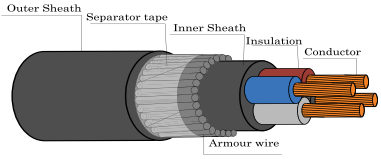
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

B

NYY-SWA

450/750 V 70o C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores : Blue, Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

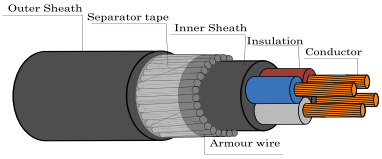
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Diameter of steel wire amor norminal	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length per drum (m)
4	1	Solid	0.8	0.8	0.8	1.8	15.0	18.1	0.0141	18	360	500
	1	Stranded	0.8	0.8	0.8	1.8	15.0	18.1	0.0135	18	380	500
	1.5	Solid	0.8	0.8	0.8	1.8	15.5	12.1	0.0123	23	400	500
	1.5	Stranded	0.8	0.8	0.8	1.8	16.0	12.1	0.0116	23	420	500
	2.5	Solid	0.8	0.8	0.8	1.8	16.5	7.41	0.0102	30	480	500
	2.5	Stranded	0.8	0.8	1.3	1.8	18.0	7.41	0.0093	30	650	500
	4	Solid	0.9	0.8	1.3	1.8	19.0	4.61	0.0094	40	750	500
	4	Stranded	0.9	0.8	1.3	1.8	20.0	4.61	0.0085	40	800	500
	6	Stranded	0.9	0.8	1.3	1.8	21.0	3.08	0.0073	51	950	500
	10	Stranded	1.1	0.8	1.6	1.8	25.0	1.83	0.0069	69	1400	500
	16	Stranded	1.1	1.2	1.6	1.8	28.0	1.15	0.0057	88	1800	500
	25	Stranded	1.3	1.2	2.0	2.0	34.0	0.727	0.0054	115	2800	500
	35	Stranded	1.3	1.5	2.0	2.1	38.0	0.524	0.0047	140	3500	500
	50	Stranded	1.5	1.5	2.0	2.3	43.0	0.387	0.0046	168	4300	500
	70	Stranded	1.5	1.5	2.5	2.5	49.0	0.268	0.0039	209	6000	500
	95	Stranded	1.7	1.8	2.5	2.7	55.0	0.193	0.0038	248	8000	300
	120	Stranded	1.7	1.8	2.5	2.9	60.0	0.153	0.0034	283	9000	300
	150	Stranded	1.9	2.0	2.5	3.0	65.0	0.124	0.0034	310	11000	300
	185	Stranded	2.1	2.0	2.5	3.2	72.0	0.0991	0.0034	357	13000	200
	240	Stranded	2.3	2.2	3.2	3.5	81.0	0.0754	0.0033	427	17500	100
	300	Stranded	2.5	2.2	3.2	3.8	89.0	0.0601	0.0032	453	21000	100

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 4 Cores : Blue, Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

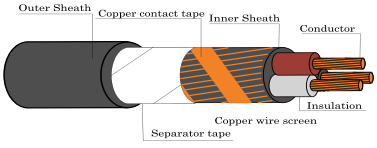
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

B

NYCY

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

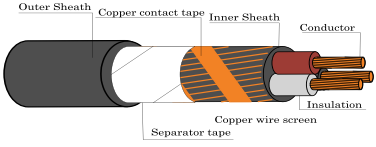
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm2)		Conductor type	Diameter of Concentric Shield	Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous currunt rating in free air at 40°C maximum	Continuous currunt rating in ground at 30°C maximum	Cable weight approx.	Standard length per drum
	Phase	Concentric Shield		(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
3	1.5	1.5	Solid	1.5	0.8	0.8	1.8	14.5	12.1	0.0123	16	22	240	500
	1.5	1.5	Stranded	1.5	0.8	0.8	1.8	15.0	12.1	0.0116	16	22	260	500
	2.5	2.5	Solid	2.5	0.8	0.8	1.8	15.5	7.41	0.0102	22	30	300	500
	2.5	2.5	Stranded	2.5	0.8	0.8	1.8	16.5	7.41	0.0093	22	30	320	500
	4	4	Solid	4	0.9	0.8	1.8	17.5	4.61	0.0094	30	39	400	500
	4	4	Stranded	4	0.9	0.8	1.8	18.0	4.61	0.0085	30	39	420	500
	6	6	Stranded	6	0.9	0.8	1.8	19.5	3.08	0.0073	37	50	550	500
	10	10	Stranded	10	1.1	0.8	1.8	22.0	1.83	0.0069	52	68	750	500
	16	16	Stranded	16	1.1	0.8	2.0	26.0	1.15	0.0057	66	87	1100	500
	25	16	Stranded	16	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1600	500
	25	25	Stranded	25	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1600	500
	35	16	Stranded	16	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	1900	500
	35	25	Stranded	25	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	2000	500
	50	25	Stranded	25	1.5	1.5	2.2	38.0	0.387	0.0046	130	142	2600	500
	50	35	Stranded	35	1.5	1.5	2.2	39.0	0.387	0.0046	130	142	2700	500
	70	35	Stranded	35	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3500	500
	70	50	Stranded	50	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3600	500
	95	50	Stranded	50	1.7	1.5	2.4	48.0	0.193	0.0038	200	219	4700	500
	95	70	Stranded	70	1.7	1.5	2.4	49.0	0.193	0.0038	200	219	4900	500
	120	70	Stranded	70	1.7	1.8	2.6	53.0	0.153	0.0034	233	254	6000	500
	120	95	Stranded	95	1.7	1.8	2.6	54.0	0.153	0.0034	233	254	6000	500
	150	70	Stranded	70	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	7000	500
	150	95	Stranded	95	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	7500	500
	150	120	Stranded	120	1.9	1.8	2.8	59.0	0.124	0.0034	266	290	7500	500
	185	95	Stranded	95	2.1	2.0	3.0	64.0	0.0991	0.0034	306	332	9000	300
	185	120	Stranded	120	2.1	2.0	3.0	65.0	0.0991	0.0034	306	332	9000	300
	240	120	Stranded	120	2.3	2.0	3.2	72.0	0.0754	0.0033	364	389	11500	300
	300	150	Stranded	150	2.5	2.2	3.4	79.0	0.0601	0.0032	417	445	14000	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYCY

450/750 V 70° C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification 3 Cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

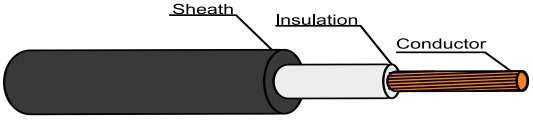
FD-0.61KV-CV or YK FD-0.6/1KV-CV

YAZAKI

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE SINGLE CORE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 1000 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification Single-core : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Cable name	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
								Space 2D (A)	Touching (A)	Trefoil (A)			
FD-0.6/1KV-CV	1.5	Non-Compacted	0.7	1.4	6.3	12.1	2,500	31	24	23	33	50	500/D
	2.5	Non-Compacted	0.7	1.4	6.80	7.41	2,100	42	32	31	43	65	1000/D
	4	Non-Compacted	0.7	1.4	7.30	4.61	1,700	54	42	41	55	80	1000/D
	6	Non-Compacted	0.7	1.4	7.90	3.08	1,450	68	53	52	70	100	1000/D
	10	Non-Compacted	0.7	1.4	8.80	1.83	1,250	90	73	71	92	150	1000/D
	16	Compacted	0.7	1.4	9.50	1.15	1,000	124	95	93	119	200	1000/D
	25	Compacted	0.9	1.4	11.0	0.727	1,050	166	128	123	152	300	1000/D
YK FD-0.6/1KV-CV	35	Compacted	0.9	1.4	12.2	0.524	900	206	160	154	184	390	1000/D
	50	Compacted	1.0	1.4	13.5	0.387	850	250	197	188	217	500	1000/D
	70	Compacted	1.1	1.4	15.5	0.268	800	321	254	244	266	700	1000/D
	95	Compacted	1.1	1.5	17.5	0.193	650	391	311	298	318	950	1000/D
	120	Compacted	1.2	1.5	19.0	0.153	650	455	364	349	362	1200	1000/D
	150	Compacted	1.4	1.6	21	0.124	700	525	422	404	406	1500	1000/D
	185	Compacted	1.6	1.6	23	0.0991	700	602	485	464	459	1800	1000/D
	240	Compacted	1.7	1.7	26	0.0754	650	711	577	552	533	2400	1000/D
	300	Compacted	1.8	1.8	29	0.0601	600	821	670	640	601	3100	500/D
	400	Compacted	2.0	1.9	32	0.0470	600	987	790	749	684	3900	500/D
FD-0.6/1KV-CV	500	Compacted	2.2	2.0	36	0.0366	600	1140	908	861	777	5000	500/D
	630	Compacted	2.4	2.2	40	0.0283	550	1298	1064	1014	1229	6500	500/D
	800	Compacted	2.6	2.3	45	0.0221	550	1494	1220	1156	1380	8000	500/D
	1000	Compacted	2.8	2.4	51	0.0176	500	1712	1391	1307	1532	10500	500/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

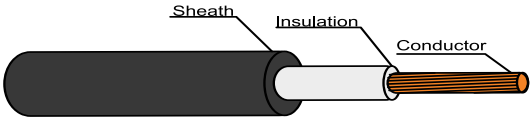
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE SINGLE CORE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 1000 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification Single-core : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

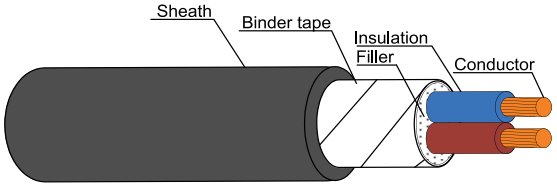
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
	(mm^2)	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
FD-0.6/1KV-CV	1.5	15.4287	15.4287	15.4287	0.6630	0.5244	0.4782	0.2083	0.1647	0.1502	15.4301	15.4296	15.4294
	2.5	9.4485	9.4485	9.4485	0.6314	0.4928	0.4466	0.1984	0.1548	0.1403	9.4506	9.4498	9.4495
	4	5.8782	5.8782	5.8782	0.5988	0.4602	0.4140	0.1881	0.1446	0.1301	5.8812	5.8800	5.8797
	6	3.9273	3.9273	3.9273	0.5754	0.4368	0.3906	0.1808	0.1372	0.1227	3.9315	3.9297	3.9293
	10	2.3335	2.3335	2.3335	0.5459	0.4072	0.3610	0.1715	0.1279	0.1134	2.3398	2.3370	2.3362
	16	1.4664	1.4664	1.4665	0.5284	0.3898	0.3436	0.1660	0.1225	0.1079	1.4758	1.4715	1.4704
	25	0.9271	0.9271	0.9272	0.5159	0.3772	0.3310	0.1621	0.1185	0.1040	0.9412	0.9347	0.9330
YK FD-0.6/1KV-CV	35	0.6683	0.6683	0.6684	0.5017	0.3630	0.3168	0.1576	0.1141	0.0995	0.6866	0.6780	0.6758
	50	0.4937	0.4937	0.4938	0.4913	0.3527	0.3065	0.1544	0.1108	0.0963	0.5172	0.5060	0.5031
	70	0.3420	0.3421	0.3422	0.4716	0.3330	0.2867	0.1482	0.1046	0.0901	0.3727	0.3578	0.3539
	95	0.2465	0.2467	0.2468	0.4651	0.3265	0.2803	0.1461	0.1026	0.0881	0.2865	0.2672	0.2621
	120	0.1956	0.1959	0.1961	0.4587	0.3201	0.2738	0.1441	0.1005	0.0860	0.2429	0.2202	0.2141
	150	0.1587	0.1591	0.1593	0.4555	0.3169	0.2706	0.1431	0.0995	0.0850	0.2137	0.1876	0.1806
	185	0.1271	0.1275	0.1279	0.4536	0.3149	0.2687	0.1425	0.0989	0.0844	0.1910	0.1614	0.1532
	240	0.0972	0.0977	0.0982	0.4484	0.3098	0.2635	0.1409	0.0973	0.0828	0.1711	0.1379	0.1284
	300	0.0779	0.0787	0.0792	0.4413	0.3027	0.2565	0.1387	0.0951	0.0806	0.1591	0.1234	0.1130
	400	0.0616	0.0625	0.0632	0.4393	0.3007	0.2545	0.1380	0.0945	0.0800	0.1511	0.1133	0.1019
FD-0.6/1KV-CV	500	0.0488	0.0499	0.0509	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1455	0.1061	0.0940
	630	0.0387	0.0402	0.0414	0.4341	0.2954	0.2492	0.1364	0.0928	0.0783	0.1418	0.1011	0.0886
	800	0.0314	0.0332	0.0346	0.4309	0.2923	0.2461	0.1354	0.0918	0.0773	0.1390	0.0977	0.0847
	1000	0.0263	0.0284	0.0301	0.4265	0.2879	0.2416	0.1340	0.0904	0.0759	0.1366	0.0948	0.0817

B

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1 kV 90 °C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE TWO CORE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
2 Cores: Blue, Brown

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
FD-0.6/1KV-CV	1.5	Non-Compacted	0.7	1.8	11.0	12.1	2500	27	33	130	500/D
	2.5	Non-Compacted	0.7	1.8	11.5	7.41	2,100	36	44	150	1000/D
	4	Non-Compacted	0.7	1.8	12.5	4.61	1,700	47	58	190	1000/D
	6	Non-Compacted	0.7	1.8	13.5	3.08	1,450	60	73	240	1000/D
	10	Non-Compacted	0.7	1.8	15.8	1.83	1,250	81	97	340	1000/D
	16	Compacted	0.7	1.8	17.5	1.15	1,000	107	125	500	1000/D
	25	Compacted	0.9	1.8	21	0.727	1,050	143	165	700	1000/D
YK FD-0.6/1KV-CV	35	Compacted	0.9	1.8	23	0.524	900	175	195	900	1000/D
	50	Compacted	1.0	1.8	26	0.387	850	214	235	1200	1000/D
	70	Compacted	1.1	1.8	30	0.268	800	270	290	1700	1000/D
	95	Compacted	1.1	2.0	33	0.193	650	329	350	2200	500/D
	120	Compacted	1.2	2.1	37	0.153	650	381	400	2800	500/D
	150	Compacted	1.4	2.2	41	0.124	700	436	450	3400	500/D
	185	Compacted	1.6	2.3	45	0.0991	700	503	505	4200	500/D
	240	Compacted	1.7	2.5	51	0.0754	650	593	585	5500	500/D
FD-0.6/1KV-CV	300	Compacted	1.8	2.7	56	0.0601	600	676	665	7000	500/D
	400	Compacted	2.0	2.9	63	0.0470	600	777	750	8500	500/D

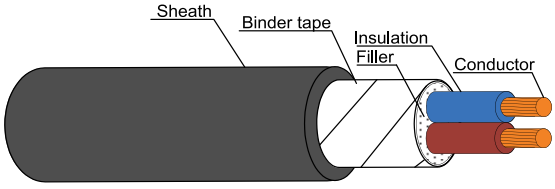
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in Drum

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1 kV 90 °C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE TWO CORE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
2 Cores: Blue, Brown

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3210	0.1009	9.4490
	4	5.8782	0.3010	0.0946	5.8790
	6	3.9273	0.2871	0.0902	3.9284
	10	2.3335	0.2710	0.0851	2.3351
	16	1.4665	0.2624	0.0824	1.4688
	25	0.9272	0.2645	0.0831	0.9309
YK FD-0.6/1KV-CV	35	0.6684	0.2569	0.0807	0.6733
	50	0.4938	0.2536	0.0797	0.5002
	70	0.3422	0.2421	0.0761	0.3506
	95	0.2468	0.2331	0.0732	0.2575
	120	0.1960	0.2315	0.0727	0.2091
	150	0.1593	0.2302	0.0723	0.1749
	185	0.1278	0.2338	0.0734	0.1474
	240	0.0981	0.2295	0.0721	0.1217
FD-0.6/1KV-CV	300	0.0791	0.2260	0.0710	0.1063
	400	0.0630	0.2259	0.0710	0.0949

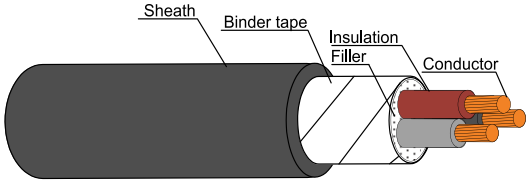
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in Drum

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE THREE CORE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
3 Cores: Brown, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C (A)	Cable weight approx. (kg/km)	Standard Length (m)
FD-0.6/1KV-CV	1.5	Non-Compacted	0.7	1.8	11.5	12.1	2,500	22	28	150	500/D
	2.5	Non-Compacted	0.7	1.8	12.5	7.41	2,100	29	43	190	1000/D
	4	Non-Compacted	0.7	1.8	13.5	4.61	1,700	38	55	250	1000/D
	6	Non-Compacted	0.7	1.8	14.5	3.08	1,450	49	70	320	1000/D
	10	Non-Compacted	0.7	1.8	16.5	1.83	1,250	68	92	460	1000/D
	16	Compacted	0.7	1.8	18.5	1.15	1,000	91	119	650	1000/D
	25	Compacted	0.9	1.8	22	0.727	1,050	116	152	950	1000/D
YK FD-0.6/1KV-CV	35	Compacted	0.9	1.8	25	0.524	900	144	184	1200	1000/D
	50	Compacted	1.0	1.8	28	0.387	850	175	217	1600	1000/D
	70	Compacted	1.1	1.9	32	0.268	800	224	266	2300	1000/D
	95	Compacted	1.1	2.0	36	0.193	650	272	295	3100	500/D
	120	Compacted	1.2	2.1	39	0.153	650	320	335	3900	500/D
	150	Compacted	1.4	2.3	44	0.124	700	366	380	4800	500/D
	185	Compacted	1.6	2.4	49	0.0991	700	422	425	6000	500/D
	240	Compacted	1.7	2.6	55	0.0754	650	498	495	8000	500/D
FD-0.6/1KV-CV	300	Compacted	1.8	2.8	61	0.0601	600	567	560	9500	500/D
	400	Compacted	2.0	3.1	68	0.0470	600	652	630	12500	500/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

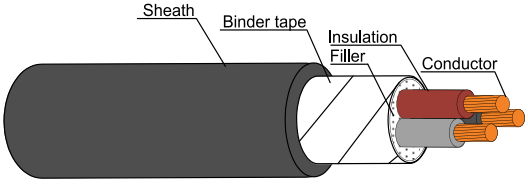
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in Drum

B

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

).6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE THREE CORE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
3 Cores: Brown, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	1.5	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	2.5	9.4485	0.3210	0.1009	9.4490
	4	5.8782	0.3010	0.0946	5.8790
	6	3.9273	0.2871	0.0902	3.9284
	10	2.3335	0.2710	0.0851	2.3351
	16	1.4665	0.2624	0.0824	1.4688
	25	0.9272	0.2645	0.0831	0.9309
	35	0.6684	0.2569	0.0807	0.6733
	50	0.4938	0.2536	0.0797	0.5002
	70	0.3422	0.2421	0.0761	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2315	0.0727	0.2094
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1282	0.2338	0.0734	0.1478
	240	0.0987	0.2295	0.0721	0.1222
FD-0.6/1KV-CV	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

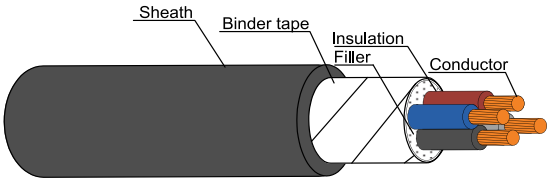
D : Packing in Drum

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

).6/1 kV 90 °C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE FOUR CORE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
4 Cores: Blue, Brown, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross sectional area (mm^2)	Number of wires	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
FD-06/1KV-CV	1.5	Non-Compacted	0.7	1.8	12.0	12.1	2,500	22	28	180	500/D
YK FD-0.6/1KV-CV	2.5	Non-Compacted	0.7	1.8	13.0	7.41	2,100	29	43	230	1000/D
	4	Non-Compacted	0.7	1.8	14.5	4.61	1,700	38	55	300	1000/D
	6	Non-Compacted	0.7	1.8	16.0	3.08	1,450	49	70	390	1000/D
	10	Non-Compacted	0.7	1.8	18.0	1.83	1,250	68	92	550	1000/D
	16	Compacted	0.7	1.8	20.0	1.15	1,000	91	119	800	1000/D
	25	Compacted	0.9	1.8	24	0.727	1,050	116	152	1200	1000/D
	35	Compacted	0.9	1.8	27	0.524	900	144	184	1600	1000/D
	50	Compacted	1.0	1.9	30	0.387	850	175	217	2100	1000/D
	70	Compacted	1.1	2.0	35	0.268	800	224	266	3000	1000/D
	95	Compacted	1.1	2.0	39	0.193	650	272	295	4000	500/D
	120	Compacted	1.2	2.1	44	0.153	650	320	335	5000	500/D
	150	Compacted	1.4	2.3	49	0.124	700	366	380	6500	500/D
	185	Compacted	1.6	2.4	54	0.0991	700	422	425	8000	500/D
	240	Compacted	1.7	2.6	61	0.0754	650	496	495	10000	500/D
FD-06/1KV-CV	300	Compacted	1.8	2.8	68	0.0601	600	567	560	12500	500/D
	400	Compacted	2.0	3.1	76	0.0470	600	652	630	16000	500/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

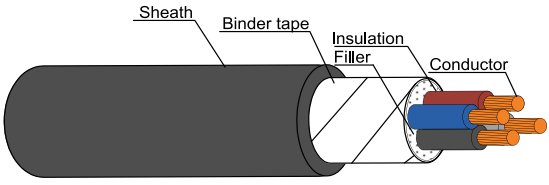
D : Packing in Drum

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

).6/1 kV 90 °C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE FOUR CORE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
4 Cores: Blue, Brown, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L L (mH/km)	Reactance XL XL (Ω/km)	Impedance Z Z (Ω/km)
FD-0.6/1KV-CV	1.5	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	2.5	9.4485	0.3210	0.1009	9.4490
	4	5.8782	0.3010	0.0946	5.8790
	6	3.9273	0.2871	0.0902	3.9284
	10	2.3335	0.2710	0.0851	2.3351
	16	1.4665	0.2624	0.0824	1.4688
	25	0.9272	0.2645	0.0831	0.9309
	35	0.6684	0.2569	0.0807	0.6733
	50	0.4938	0.2536	0.0797	0.5002
	70	0.3422	0.2421	0.0761	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2315	0.0727	0.2094
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1282	0.2338	0.0734	0.1478
	240	0.0987	0.2295	0.0721	0.1222
FD-0.6/1KV-CV	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

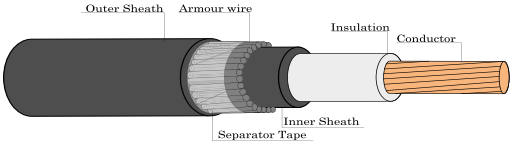
D : Packing in Drum

FD-0.6/1KV-CV-AWA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
Single-core : Natural (Translucent)

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Aluminium wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground .

Number of core	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
											Spaced	Touching	Trefoil			
	1.5	Non-Compacted	0.7	1.2	5.9	1.25	1.8	12.5	12.1	2,500	36	30	29	32	200	500/D
	2.5	Non-Compacted	0.7	1.2	6.4	1.25	1.8	13.0	7.41	2,100	48	39	38	41	220	500/D
	4	Non-Compacted	0.7	1.2	6.9	1.25	1.8	13.5	4.61	1,700	62	51	50	53	250	500/D
	6	Non-Compacted	0.7	1.2	7.5	1.25	1.8	14.0	3.08	1,450	78	64	63	65	280	500/D
	10	Compacted	0.7	1.2	8.0	1.25	1.8	14.5	1.83	1,250	104	85	83	86	330	500/D
	15	Compacted	0.7	1.2	9.0	1.25	1.8	16	1.15	1,000	136	112	109	110	410	500/D
	25	Compacted	0.9	1.2	10.5	1.25	1.8	17	0.727	1,050	179	147	143	141	550	500/D
	35	Compacted	0.9	1.2	11.5	1.25	1.8	19	0.524	900	217	179	174	169	650	500/D
	50	Compacted	1.0	1.2	13.0	1.25	1.8	20	0.387	850	261	216	210	199	800	500/D
	70	Compacted	1.1	1.2	15.0	1.25	1.8	22	0.268	800	327	270	262	243	1,000	500/D
1	95	Compacted	1.1	1.2	16.5	1.60	1.8	24	0.193	650	404	334	325	292	1,400	500/D
	120	Compacted	1.2	1.2	18.5	1.60	1.8	26	0.153	650	467	387	376	331	1,600	500/D
	150	Compacted	1.4	1.2	20	1.60	1.8	28	0.124	700	532	442	429	371	2,000	500/D
	185	Compacted	1.6	1.2	22	2.00	1.8	31	0.0991	700	617	515	499	421	2,500	500/D
	240	Compacted	1.7	1.2	25	2.00	1.9	33	0.0754	650	733	613	594	487	3,100	500/D
	300	Compacted	1.8	1.2	28	2.00	2.0	36	0.0601	600	844	707	684	549	3,700	500/D
	400	Compacted	2.0	1.2	31	2.00	2.2	40	0.0470	600	979	822	794	622	4,700	500/D
	500	Compacted	2.2	1.2	34	2.00	2.3	43	0.0366	600	1139	957	921	703	6,000	500/D
	630	Compacted	2.4	1.3	38	2.50	2.4	49	0.0283	550	1333	1120	1075	795	7,500	500/D
	800	Compacted	2.6	1.3	43	2.50	2.6	53	0.0221	550	1527	1280	1222	881	9,000	300/D
	1000	Compacted	2.8	1.4	49	2.50	2.7	60	0.0176	500	1739	1453	1377	965	12,000	300/D

D : Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

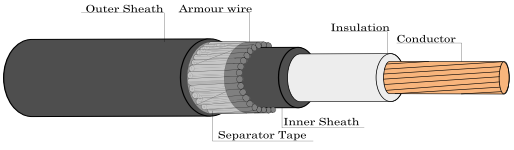
B

FD-0.6/1KV-CV-AWA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
Single-core : Natural (Translucent)

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Aluminium wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum concuctor temperature 90°C
: Circuit voltage not exceeding 1,200 volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

B

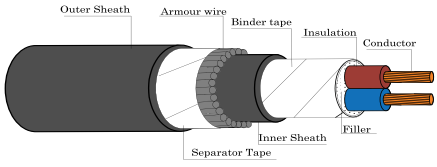
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	1.5	15.4287	15.4287	15.4287	0.8017	0.6630	0.6168	0.2519	0.2083	0.1938	15.4308	15.4301	15.4299
	2.5	9.4485	9.4485	9.4485	0.7626	0.6239	0.5777	0.2396	0.1960	0.1815	9.4515	9.4505	9.4502
	4	5.8782	5.8782	5.8782	0.7225	0.5838	0.5376	0.2270	0.1834	0.1689	5.8826	5.8811	5.8807
	6	3.9273	3.9273	3.9273	0.6908	0.5521	0.5059	0.2170	0.1735	0.1589	3.9333	3.9312	3.9305
	10	2.3335	2.3335	2.3335	0.6636	0.5250	0.4787	0.2085	0.1649	0.1504	2.3428	2.3393	2.3383
	16	1.4664	1.4664	1.4664	0.6289	0.4903	0.4440	0.1976	0.1540	0.1395	1.4797	1.4745	1.4731
	25	0.9271	0.9271	0.9271	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	0.9463	0.9386	0.9364
	35	0.6683	0.6683	0.6683	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	0.6930	0.6828	0.6800
	50	0.4936	0.4937	0.4937	0.5562	0.4176	0.3713	0.1747	0.1312	0.1167	0.5237	0.5108	0.5073
	70	0.3420	0.3421	0.3421	0.5379	0.3992	0.3530	0.1690	0.1254	0.1109	0.3815	0.3643	0.3596
	95	0.2465	0.2466	0.2466	0.5260	0.3873	0.3411	0.1652	0.1217	0.1072	0.2967	0.2750	0.2689
	120	0.1956	0.1957	0.1958	0.5126	0.3740	0.3278	0.1610	0.1175	0.1030	0.2533	0.2283	0.2212
	150	0.1587	0.1589	0.1590	0.5057	0.3671	0.3209	0.1589	0.1153	0.1008	0.2246	0.1963	0.1883
	185	0.1271	0.1273	0.1275	0.5054	0.3668	0.3206	0.1588	0.1152	0.1007	0.2034	0.1717	0.1625
	240	0.0971	0.0974	0.0977	0.4937	0.3551	0.3089	0.1551	0.1116	0.0970	0.1830	0.1481	0.1377
	300	0.0778	0.0783	0.0787	0.3487	0.3487	0.3025	0.1531	0.1096	0.0950	0.1718	0.1347	0.1234
	400	0.0615	0.0621	0.0625	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1635	0.1245	0.1124
	500	0.0486	0.0494	0.0501	0.4746	0.3360	0.2898	0.1491	0.1056	0.0910	0.1568	0.1166	0.1039
	630	0.0386	0.0396	0.0403	0.4729	0.3343	0.2880	0.1486	0.1050	0.0905	0.1535	0.1122	0.0991
	800	0.0313	0.0325	0.0335	0.4670	0.3284	0.2822	0.1467	0.1032	0.0887	0.1500	0.1082	0.0948
	1000	0.0262	0.0276	0.0288	0.4593	0.3207	0.2745	0.1443	0.1008	0.0862	0.1467	0.1045	0.0909

FD-0.6/1KV-CV-SWA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 2 Cores: Blue, Brown

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Galvanized Steel Wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-Compacted	0.7	1.2	9.7	0.8	1.8	15.0	12.1	2,500	28	33	380	500/D
	2.5	Non-Compacted	0.7	1.2	10.5	0.8	1.8	16.5	7.41	2,100	37	43	420	500/D
	4	Non-Compacted	0.7	1.2	11.5	1.25	1.8	18.0	4.61	1,700	50	57	600	500/D
	6	Non-Compacted	0.7	1.2	12.5	1.25	1.8	19.5	3.08	1,450	63	71	700	500/D
	10	Compacted	0.7	1.2	14.0	1.25	1.8	20	1.83	1,250	83	93	800	500/D
	16	Compacted	0.7	1.2	16.0	1.25	1.8	23	1.150	1,000	111	121	1,200	500/D
	25	Compacted	0.9	1.2	19.0	1.6	1.8	26	0.727	1,050	147	156	1,500	500/D
	35	Compacted	0.9	1.2	22	2.0	1.8	30	0.524	900	182	188	2,000	500/D
	50	Compacted	1.0	1.2	24	2.0	1.9	33	0.387	850	219	222	2,400	500/D
	70	Compacted	1.1	1.2	28	2.0	2.0	36	0.268	800	275	271	3,100	500/D
	95	Compacted	1.1	1.2	32	2.0	2.1	40	0.193	650	337	325	3,800	500/D
	120	Compacted	1.2	1.2	35	2.0	2.3	44	0.153	650	389	368	4,600	500/D
	150	Compacted	1.4	1.3	39	2.0	2.4	48	0.124	700	444	412	6,000	500/D
	185	Compacted	1.6	1.3	43	2.5	2.6	54	0.0991	700	509	463	7,000	500/D
	240	Compacted	1.7	1.4	49	2.5	2.7	60	0.0754	650	600	534	8,500	500/D
	300	Compacted	1.8	1.5	54	2.5	2.9	66	0.0601	600	684	597	10,000	300/D
	400	Compacted	2.0	1.7	61	2.5	3.2	73	0.0470	600	783	670	12,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

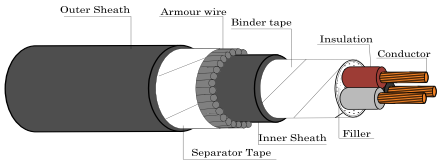
D : Packing in drum

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6684	0.2567	0.0807	0.6733
	50	0.4938	0.2435	0.0765	0.4997
	70	0.3423	0.2395	0.0752	0.3504
	95	0.2468	0.2331	0.0732	0.2575
	120	0.1960	0.2289	0.0719	0.2088
	150	0.1593	0.2302	0.0723	0.1749
	185	0.1278	0.2326	0.0731	0.1472
	240	0.0981	0.2281	0.0717	0.1215
	300	0.0791	0.2260	0.0710	0.1063
	400	0.0630	0.2259	0.0710	0.0949

B

FD-0.6/1KV-CV-SWA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT Category C

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 3 Cores: Brown, Black, Grey

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Galvanized Steel Wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	1.5	Non-Compacted	0.7	1.2	10.0	0.8	1.8	16.0	12.1	2,500	24	26	400	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	18.0	7.41	2,100	32	34	550	500/D
	4	Non-Compacted	0.7	1.2	12.0	1.25	1.8	19.0	4.61	1,700	42	44	650	500/D
	6	Non-Compacted	0.7	1.2	13.5	1.25	1.8	20	3.08	1,450	53	55	800	500/D
	10	Compacted	0.7	1.2	14.5	1.6	1.8	21	1.83	1,250	71	72	950	500/D
	16	Compacted	0.7	1.2	17.0	1.6	1.8	24	1.150	1,000	94	93	1,300	500/D
	25	Compacted	0.9	1.2	21	2.0	1.8	28	0.727	1,050	125	120	1,800	500/D
	35	Compacted	0.9	1.2	23	2.0	1.8	31	0.524	900	154	145	2,400	500/D
	50	Compacted	1.0	1.2	26	2.0	2.0	34	0.387	850	186	171	3,000	500/D
	70	Compacted	1.1	1.2	30	2.0	2.1	39	0.268	800	233	208	3,800	500/D
	95	Compacted	1.1	1.2	34	2.0	2.2	43	0.193	650	286	249	4,800	500/D
	120	Compacted	1.2	1.2	38	2.0	2.3	47	0.153	650	332	283	6,000	500/D
	150	Compacted	1.4	1.3	42	2.5	2.5	52	0.124	700	376	315	7,500	500/D
	185	Compacted	1.6	1.4	47	2.5	2.7	58	0.0991	700	430	354	9,000	500/D
	240	Compacted	1.7	1.5	53	2.5	2.9	64	0.0754	650	505	406	11,000	300/D
	300	Compacted	1.8	1.6	58	2.5	3.0	70	0.0601	600	574	453	13,500	300/D
	400	Compacted	2.0	1.8	65	3.15	3.4	80	0.0470	600	652	501	17,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

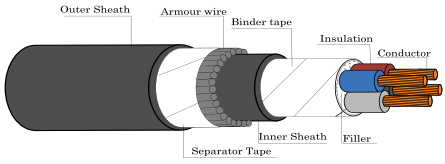
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-SWA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 4 Cores: Blue, Brown, Black, Grey

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Galvanized Steel Wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	1.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	17.5	12.1	2,500	24	26	550	500/D
	2.5	Non-Compacted	0.7	1.2	12.0	1.25	1.8	19.0	7.41	2,100	32	34	650	500/D
	4	Non-Compacted	0.7	1.2	13.5	1.25	1.8	20.0	4.61	1,700	42	44	750	500/D
	6	Non-Compacted	0.7	1.2	15.0	1.25	1.8	21	3.08	1,450	53	55	900	500/D
	10	Compacted	0.7	1.2	16.0	1.25	1.8	23	1.83	1,250	71	72	1100	500/D
	16	Compacted	0.7	1.2	18.5	1.6	1.8	26	1.150	1,000	94	93	1,600	500/D
	25	Compacted	0.9	1.2	23	2.0	1.8	31	0.727	1,050	125	120	2,300	500/D
	35	Compacted	0.9	1.2	25	2.0	1.9	34	0.524	900	154	145	2,900	500/D
	50	Compacted	1.0	1.2	29	2.0	2.1	38	0.387	850	186	171	3,600	500/D
	70	Compacted	1.1	1.2	33	2.0	2.2	42	0.268	800	233	208	4,700	500/D
	95	Compacted	1.1	1.2	38	2.0	2.3	48	0.193	650	286	249	6,000	500/D
	120	Compacted	1.2	1.3	42	2.5	2.5	53	0.153	650	332	283	7,500	500/D
	150	Compacted	1.4	1.4	46	2.5	2.7	58	0.124	700	376	315	9,000	500/D
	185	Compacted	1.6	1.5	52	2.5	2.8	64	0,0991	700	430	354	11,000	500/D
	240	Compacted	1.7	1.6	59	2.5	3.1	71	0,0754	650	505	406	14,000	300/D
	300	Compacted	1.8	1.7	65	3.15	3.3	79	0,0601	600	574	453	17,000	300/D
	400	Compacted	2.0	1.9	73	3.15	3.6	87	0,0470	600	652	501	22,000	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

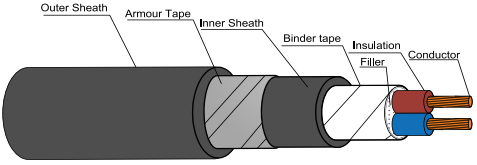
Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

B

FD-0.6/1KV-CV-STA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Multi-core : Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 2 Cores: Blue, Brown

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Two galvanized flat steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-Compacted	0.7	1.2	9.70	0.2	1.8	15.0	12.1	2,500	28	33	330	500/D
	2.5	Non-Compacted	0.7	1.2	10.5	0.2	1.8	16.0	7.41	2,100	37	43	380	500/D
	4	Non-Compacted	0.7	1.2	11.5	0.2	1.8	17.0	4.61	1,700	48	56	440	500/D
	6	Non-Compacted	0.7	1.2	12.5	0.2	1.8	18.0	3.08	1,450	61	70	500	500/D
	10	Compacted	0.7	1.2	13.5	0.2	1.8	19.0	1.83	1,250	82	92	600	500/D
	16	Compacted	0.7	1.2	16.0	0.2	1.8	21	1.150	1,000	108	120	800	500/D
	25	Compacted	0.9	1.2	19.0	0.2	1.8	24	0.727	1,050	144	154	1100	500/D
	35	Compacted	0.9	1.2	21	0.2	1.8	26	0.524	900	176	185	1300	500/D
	50	Compacted	1.0	1.2	24	0.2	1.9	30	0.387	850	213	219	1700	500/D
	70	Compacted	1.1	1.2	28	0.2	2.0	33	0.268	800	267	268	2200	500/D
	95	Compacted	1.1	1.2	31	0.5	2.2	38	0.193	650	331	322	3100	500/D
	120	Compacted	1.2	1.2	35	0.5	2.3	42	0.153	650	383	366	3800	500/D
	150	Compacted	1.4	1.3	39	0.5	2.4	46	0.124	700	435	409	4500	500/D
	185	Compacted	1.6	1.3	43	0.5	2.6	51	0.0991	700	500	461	5400	500/D
	240	Compacted	1.7	1.4	49	0.5	2.8	57	0.0754	650	590	531	6900	500/D
	300	Compacted	1.8	1.5	54	0.5	2.9	62	0.0601	600	676	596	8300	500/D
	400	Compacted	2.0	1.7	61	0.5	3.2	70	0.0470	600	765	664	10500	500/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

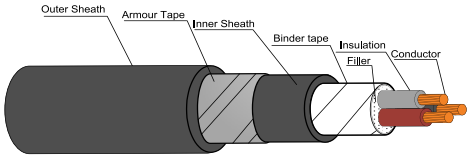
Deep of laying (For cable laid direct in ground) 0.8 m

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6684	0.2567	0.0807	0.6733
	50	0.4938	0.2435	0.0765	0.4997
	70	0.3423	0.2395	0.0752	0.3504
	95	0.2468	0.2331	0.0732	0.2575
	120	0.1960	0.2289	0.0719	0.2088
	150	0.1593	0.2302	0.0723	0.1749
	185	0.1278	0.2326	0.0731	0.1472
	240	0.0981	0.2281	0.0717	0.1215
	300	0.0791	0.2260	0.0710	0.1063
	400	0.0630	0.2259	0.0710	0.0949

FD-0.6/1KV-CV-STA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Multi-core : Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 3 Cores: Brown, Black, Grey

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Two galvanized flat steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	1.5	Non-Compacted	0.7	1.2	10.0	0.2	1.8	15.5	12.1	2,500	24	28	370	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	0.2	1.8	16.5	7.41	2,100	31	37	420	500/D
	4	Non-Compacted	0.7	1.2	12.0	0.2	1.8	17.5	4.61	1,700	41	48	500	500/D
	6	Non-Compacted	0.7	1.2	13.5	0.2	1.8	19.0	3.08	1,450	52	59	600	500/D
	10	Compacted	0.7	1.2	14.5	0.2	1.8	20	1.83	1,250	69	78	700	500/D
	16	Compacted	0.7	1.2	17.0	0.2	1.8	22	1.150	1,000	91	101	1000	500/D
	25	Compacted	0.9	1.2	20	0.2	1.8	26	0.727	1,050	122	130	1300	500/D
	35	Compacted	0.9	1.2	23	0.2	1.9	28	0.524	900	149	156	1700	500/D
	50	Compacted	1.0	1.2	26	0.2	2.0	31	0.387	850	181	185	2200	500/D
	70	Compacted	1.1	1.2	30	0.2	2.1	36	0.268	800	227	226	2900	500/D
	95	Compacted	1.1	1.2	34	0.5	2.3	41	0.193	650	281	272	4000	500/D
	120	Compacted	1.2	1.2	37	0.5	2.4	45	0.153	650	325	309	5000	500/D
	150	Compacted	1.4	1.3	41	0.5	2.5	49	0.124	700	370	345	6000	500/D
	185	Compacted	1.6	1.4	47	0.5	2.7	55	0.0991	700	426	389	7500	500/D
	240	Compacted	1.7	1.5	53	0.5	2.9	61	0.0754	650	504	449	9500	300/D
	300	Compacted	1.8	1.6	58	0.5	3.1	67	0.0601	600	576	504	11500	300/D
	400	Compacted	2.0	1.8	65	0.5	3.4	75	0.0470	600	662	567	14500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

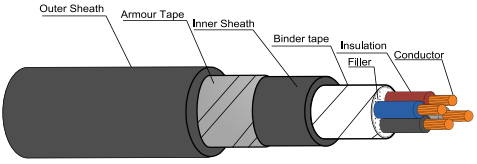
Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

B

FD-0.6/1KV-CV-STA

0.6/1 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted round annealed copper
: Multi-core : Sizes 1.5 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification : 4 Cores: Blue, Brown, Black, Grey

Inner Sheath: Black polyvinyl chloride (PVC)

Armour : Two galvanized flat steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltag : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
: IEC 60332-3-24 (Cat.C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	11.0	0.2	1.8	16.0	12.1	2,500	24	28	410	500/D
	2.5	Non-Compacted	0.7	1.2	12.0	0.2	1.8	17.5	7.41	2,100	31	37	480	500/D
	4	Non-Compacted	0.7	1.2	13.5	0.2	1.8	18.5	4.61	1,700	41	48	550	500/D
	6	Non-Compacted	0.7	1.2	15.0	0.2	1.8	20	3.08	1,450	52	59	700	500/D
	10	Compacted	0.7	1.2	16.0	0.2	1.8	22	1.83	1,250	69	78	850	500/D
	16	Compacted	0.7	1.2	18.5	0.2	1.8	23	1.150	1,000	91	101	1200	500/D
	25	Compacted	0.9	1.2	22	0.2	1.8	28	0.727	1,050	122	130	1700	500/D
	35	Compacted	0.9	1.2	25	0.2	1.9	30	0.524	900	149	156	2100	500/D
4	50	Compacted	1.0	1.2	28	0.2	2.1	34	0.387	850	181	185	2700	500/D
	70	Compacted	1.1	1.2	33	0.5	2.2	40	0.268	800	227	226	3900	500/D
	95	Compacted	1.1	1.2	37	0.5	2.4	45	0.193	650	281	272	5000	500/D
	120	Compacted	1.2	1.3	42	0.5	2.5	49	0.153	650	325	309	6500	500/D
	150	Compacted	1.4	1.4	46	0.5	2.7	54	0.124	700	370	345	7500	500/D
	185	Compacted	1.6	1.5	52	0.5	2.9	61	0.0991	700	426	389	9500	500/D
	240	Compacted	1.7	1.6	59	0.5	3.1	68	0.0754	650	504	449	12000	500/D
	300	Compacted	1.8	1.7	65	0.5	3.4	74	0.0601	600	576	504	14500	500/D
	400	Compacted	2.0	1.9	73	0.5	3.6	83	0.0470	600	662	567	18500	500/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

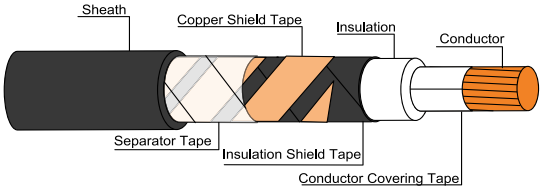
Deep of laying (For cable laid direct in ground) 0.8 m

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
4	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-1



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,300 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
	10	6	2.0	1.8	12.0	1.83	2,900	100	81	79	85	220	500/D
	16	6	2.0	1.8	13.0	1.15	2,450	132	106	104	109	290	500/D
	25	6	2.0	1.8	14.5	0.727	2,050	173	140	136	140	390	300/D
	35	6	2.0	1.9	15.5	0.524	1,800	211	171	166	167	490	300/D
	50	6	2.0	2.0	16.5	0.387	1,550	255	207	201	198	600	300/D
	70	12	2.0	2.1	18.5	0.268	1,350	321	261	253	241	850	300/D
1	95	15	2.0	2.2	21	0.193	1,150	395	321	311	289	1,100	300/D
	120	18	2.0	2.3	22	0.153	1,050	457	373	362	328	1,400	300/D
	150	18	2.0	2.4	24	0.124	950	522	426	413	368	1,600	300/D
	185	30	2.0	2.5	26	0.0991	850	601	492	476	415	2,000	300/D
	240	34	2.0	2.7	28	0.0754	750	716	587	567	480	2,600	300/D
	300	34	2.0	2.9	30	0.0601	700	827	678	654	541	3,200	300/D
	400	53	2.0	3.1	33	0.0470	600	963	791	762	611	4,000	200/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

Deep of laying (For cable laid direct in ground) 0.8 m

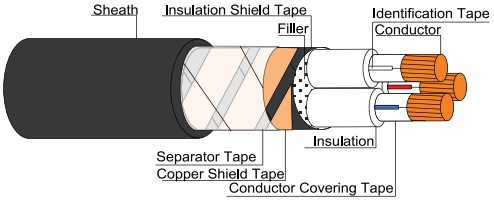
Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	10	2.3335	2.3335	2.3335	0.6258	0.4872	0.4410	0.1966	0.1531	0.1385	2.3417	2.3385	2.3376
	16	1.4664	1.4664	1.4664	0.5945	0.4559	0.4096	0.1868	0.1432	0.1287	1.4783	1.4734	1.4721
	25	0.9271	0.9271	0.9271	0.5669	0.4283	0.3820	0.1781	0.1345	0.1200	0.9440	0.9368	0.9349
	35	0.6683	0.6683	0.6683	0.5492	0.4106	0.3644	0.1725	0.1290	0.1145	0.6902	0.6807	0.6781
	50	0.4936	0.4937	0.4937	0.5223	0.3836	0.3374	0.1641	0.1205	0.1060	0.5202	0.5082	0.5050
	70	0.3420	0.3421	0.3422	0.5093	0.3706	0.3244	0.1600	0.1164	0.1019	0.3776	0.3614	0.3570
1	95	0.2465	0.2466	0.2467	0.4940	0.3553	0.3091	0.1552	0.1116	0.0971	0.2913	0.2707	0.2652
	120	0.1956	0.1958	0.1959	0.4829	0.3443	0.2981	0.1517	0.1082	0.0936	0.2475	0.2237	0.2172
	150	0.1587	0.1590	0.1592	0.4749	0.3362	0.2900	0.1492	0.1056	0.0911	0.2178	0.1909	0.1834
	185	0.1271	0.1275	0.1277	0.4681	0.3295	0.2833	0.1471	0.1035	0.0890	0.1944	0.1642	0.1557
	240	0.0972	0.0976	0.0980	0.4595	0.3209	0.2747	0.1444	0.1008	0.0863	0.1740	0.1403	0.1306
	300	0.0779	0.0786	0.0791	0.4521	0.3135	0.2672	0.1420	0.0985	0.0840	0.1620	0.1260	0.1153
	400	0.0616	0.0624	0.0631	0.4478	0.3092	0.2630	0.1407	0.0971	0.0826	0.1536	0.1155	0.1039

B

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-1



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Core identification
3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,300 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	10	6	2.0	1.8	23	1.83	2,900	73	80	650	500/D
	16	6	2.0	1.8	25	1.15	2,450	96	103	850	500/D
	25	6	2.0	1.8	28	0.727	2,050	126	133	1,200	300/D
	35	6	2.0	1.9	30	0.524	1,800	154	159	1,500	300/D
	50	6	2.0	2.0	33	0.387	1,550	186	188	1,900	300/D
	70	12	2.0	2.1	37	0.268	1,350	233	230	2,600	300/D
	95	15	2.0	2.2	41	0.193	1,150	286	275	3,500	300/D
	120	18	2.0	2.3	44	0.153	1,050	331	313	4,300	300/D
	150	18	2.0	2.4	48	0.124	950	377	350	5,000	300/D
	185	30	2.0	2.5	52	0.0991	850	434	395	6,500	300/D
	240	34	2.0	2.7	57	0.0754	750	514	457	8,000	300/D
	300	34	2.0	2.9	62	0.0601	700	589	513	12,000	300/D
	400	53	2.0	3.1	69	0.0470	600	679	578	12,500	200/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

Deep of laying (For cable laid direct in ground) 0.8 m

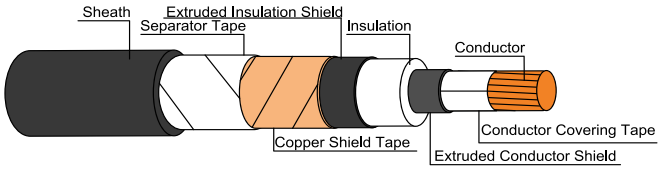
Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	2.3335	0.3685	0.1158	2.3364
	16	1.4665	0.3435	0.1079	1.4704
	25	0.9272	0.3222	0.1012	0.9327
	35	0.6684	0.3090	0.0971	0.6754
	50	0.4938	0.2868	0.0901	0.5020
	70	0.3423	0.2744	0.0862	0.3530
	95	0.2469	0.2640	0.0829	0.2605
	120	0.1962	0.2546	0.0800	0.2118
	150	0.1595	0.2493	0.0783	0.1777
	185	0.1281	0.2440	0.0767	0.1493
	240	0.0985	0.2359	0.0741	0.1233
	300	0.0797	0.2331	0.0732	0.1082
	400	0.0638	0.2288	0.0719	0.0961

3.6/6KV-CV

3,6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2

TIS 2143-2546



CABLE STRUCTURE

Conductor : Compacted round annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 7,200 Volts

Rated voltage : 3,600 Volts between Line to Earth
: 6,000 Volts between Line to Line

Testing voltage : 12,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced
*Insulation shield shall be applied semi-conductive tape

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
1	*10	6	2.5	1.4	14.0	1.83	2,850	100	83	81	84	260	500/D
	*16	6	2.5	1.5	15.6	1.15	2,500	132	109	107	108	350	500/D
	25	6	2.5	1.5	17.5	0.727	2,150	175	145	142	139	480	500/D
	35	6	2.5	1.5	18.5	0.524	1,900	213	177	172	167	600	500/D
	50	6	2.5	1.6	20	0.387	1,700	256	213	208	197	750	500/D
	70	12	2.5	1.6	21	0.268	1,500	321	267	259	240	950	500/D
	95	15	2.5	1.7	24	0.193	1,300	393	327	318	288	1200	500/D
	120	18	2.5	1.7	25	0.153	1,200	455	379	368	327	1500	500/D
	150	18	2.5	1.8	27	0.124	1,100	518	432	419	366	1800	500/D
	185	30	2.5	1.8	28	0.0991	1,000	597	498	484	414	2200	500/D
	240	34	2.6	1.9	31	0.0754	900	710	594	575	479	2800	500/D
	300	34	2.8	2.0	34	0.0601	900	822	688	666	541	3400	500/D
	400	53	3.0	2.1	37	0.0470	850	960	804	777	614	4300	500/D
	500	53	3.2	2.2	42	0.0366	800	1126	943	908	696	5500	500/D
	630	53	3.2	2.4	46	0.0283	700	1308	1094	1048	782	7000	500/D
	800	53	3.2	2.5	50	0.0221	600	1504	1251	1191	865	8500	300/D
	1000	53	3.2	2.6	55	0.0176	550	1720	1422	1343	944	11000	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

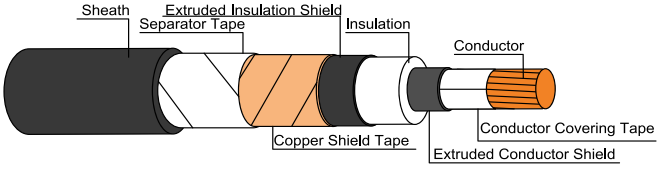
D : Packing in drum

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2

TIS 2143-2546



CABLE STRUCTURE

Conductor : Compacted round annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 7,200 Volts

Rated voltage : 3,600 Volts between Line to Earth
: 6,000 Volts between Line to Line

Testing voltage : 12,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

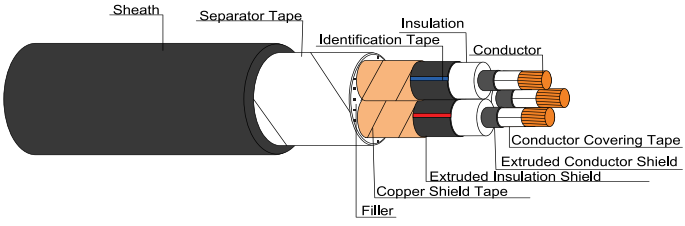
B

Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	10	2.3335	2.3335	2.3335	0.6541	0.5155	0.4693	0.2055	0.1619	0.1474	2.3425	2.3391	2.3381
	16	1.4664	1.4664	1.4664	0.6260	0.4873	0.4411	0.1967	0.1531	0.1386	1.4796	1.4744	1.4730
	25	0.9271	0.9271	0.9271	0.6052	0.4665	0.4203	0.1901	0.1466	0.1320	0.9464	0.9386	0.9365
	35	0.6683	0.6683	0.6683	0.5863	0.4477	0.4015	0.1842	0.1406	0.1261	0.6932	0.6829	0.6801
	50	0.4936	0.4937	0.4937	0.5578	0.4191	0.3729	0.1752	0.1317	0.1172	0.5238	0.5109	0.5074
	70	0.3420	0.3421	0.3421	0.5377	0.3990	0.3528	0.1689	0.1254	0.1108	0.3814	0.3643	0.3596
	95	0.2465	0.2466	0.2467	0.5217	0.3831	0.3369	0.1639	0.1204	0.1058	0.2960	0.2744	0.2684
	120	0.1956	0.1957	0.1958	0.5072	0.3686	0.3223	0.1593	0.1158	0.1013	0.2523	0.2274	0.2205
	150	0.1587	0.1589	0.1591	0.4992	0.3606	0.3144	0.1568	0.1133	0.0988	0.2231	0.1952	0.1872
	185	0.1271	0.1274	0.1276	0.4915	0.3529	0.3067	0.1544	0.1109	0.0963	0.2000	0.1689	0.1599
	240	0.0971	0.0975	0.0978	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1799	0.1454	0.1352
	300	0.0779	0.0784	0.0788	0.4772	0.3386	0.2924	0.1499	0.1064	0.0919	0.1689	0.1321	0.1210
	400	0.0615	0.0622	0.0627	0.4719	0.3332	0.2870	0.1482	0.1047	0.0902	0.1605	0.1217	0.1098
	500	0.0487	0.0495	0.0502	0.4672	0.3286	0.2823	0.1468	0.1032	0.0887	0.1546	0.1145	0.1019
	630	0.0386	0.0397	0.0406	0.4599	0.3213	0.2751	0.1445	0.1009	0.0864	0.1496	0.1085	0.0955
	800	0.0313	0.0327	0.0339	0.4528	0.3142	0.2680	0.1423	0.0987	0.0842	0.1457	0.1040	0.0907
	1000	0.0262	0.0279	0.0293	0.4445	0.3059	0.2596	0.1396	0.0961	0.0816	0.1421	0.1001	0.0867

3.6/6KV-CV

3,6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 7,200 Volts

Rated voltage : 3,600 Volts between Line to Earth
: 6,000 Volts between Line to Line

Testing voltage : 12,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced
: *Insulation shield shall be applied semi-conductive tape

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	*10	6	2.5	2.0	28	1.83	2,850	81	85	850	500/D
	*16	6	2.5	2.0	30	1.15	2,500	106	108	1,100	500/D
	25	6	2.5	2.1	35	0.727	2,150	139	139	1,600	500/D
	35	6	2.5	2.2	38	0.524	1,900	170	174	1,900	500/D
	50	6	2.5	2.3	40	0.387	1,700	203	195	2,400	500/D
	70	12	2.5	2.4	44	0.268	1,500	252	238	3,100	500/D
	95	15	2.5	2.5	48	0.193	1,300	308	284	4,000	500/D
	120	18	2.5	2.6	52	0.153	1,200	355	322	4,900	500/D
	150	18	2.5	2.8	55	0.124	1,100	402	360	6,000	500/D
	185	30	2.5	2.9	59	0.0991	1,000	461	406	7,000	500/D
	240	34	2.6	3.1	65	0.0754	900	545	470	9,000	500/D
	300	34	2.8	3.3	71	0.0601	900	625	529	11,000	300/D
	400	53	3.0	3.5	79	0.0470	850	724	598	13,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

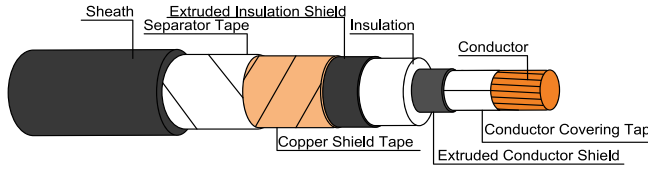
Deep of laying (For cable laid direct in ground) 0.8 m

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	2.3335	0.4117	0.1294	2.3371
	16	1.4664	0.3827	0.1202	1.4714
	25	0.9271	0.3694	0.1161	0.9344
	35	0.6684	0.3539	0.1112	0.6775
	50	0.4938	0.3265	0.1026	0.5043
	70	0.3422	0.3102	0.0975	0.3558
	95	0.2468	0.2962	0.0931	0.2637
	120	0.1960	0.2843	0.0893	0.2154
	150	0.1593	0.2770	0.0870	0.1815
	185	0.1278	0.2721	0.0855	0.1538
	240	0.0981	0.2646	0.0831	0.1286
	300	0.0792	0.2606	0.0819	0.1139
	400	0.0632	0.2570	0.0807	0.1025

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
1	16	6	3.4	1.5	18.5	1.15	3,100	135	114	112	109	440	500/D
	25	6	3.4	1.6	20	0.727	2,700	177	150	146	140	550	500/D
	35	6	3.4	1.6	21	0.524	2,450	216	182	177	167	700	500/D
	50	6	3.4	1.7	22	0.387	2,200	260	219	213	197	850	500/D
	70	12	3.4	1.7	24	0.268	1,900	324	273	265	241	1100	500/D
	95	15	3.4	1.8	26	0.193	1,700	397	334	325	289	1300	500/D
	120	18	3.4	1.8	27	0.153	1,550	459	386	375	328	1600	500/D
	150	18	3.4	1.9	29	0.124	1,450	521	439	426	367	1900	500/D
	185	30	3.4	1.9	31	0.0991	1,300	601	506	492	415	2300	500/D
	240	34	3.4	2.0	33	0.0754	1,150	713	601	583	481	2900	500/D
	300	34	3.4	2.1	36	0.0601	1,050	820	692	670	542	3500	500/D
	400	53	3.4	2.2	39	0.0470	950	954	804	777	614	4400	500/D
	500	53	3.4	2.3	42	0.0366	850	1116	939	905	695	5500	500/D
	630	53	3.4	2.4	46	0.0283	750	1299	1090	1045	781	7000	500/D
	800	53	3.4	2.5	50	0.0221	650	1494	1247	1188	865	8500	500/D
	1000	53	3.4	2.6	56	0.0176	600	1708	1417	1340	945	11000	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

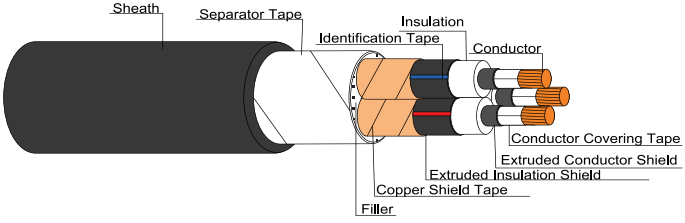
D : Packing in drum

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm^2)												
1	16	1.4664	1.4664	1.4664	0.6597	0.5210	0.4748	0.6597	0.1637	0.1492	1.4810	1.4755	1.4740
	25	0.9271	0.9271	0.9271	0.6295	0.4908	0.4446	0.6295	0.1542	0.1397	0.9479	0.9398	0.9376
	35	0.6683	0.6683	0.6683	0.6093	0.4707	0.4244	0.6093	0.1479	0.1333	0.6952	0.6845	0.6815
	50	0.4936	0.4937	0.4937	0.5792	0.4406	0.3944	0.5792	0.1384	0.1239	0.5261	0.5127	0.5090
	70	0.3420	0.3420	0.3421	0.5576	0.4190	0.3728	0.5576	0.1316	0.1171	0.3842	0.3665	0.3616
	95	0.2465	0.2465	0.2466	0.5401	0.4015	0.3553	0.5401	0.1261	0.1116	0.2992	0.2769	0.2707
	120	0.1956	0.1957	0.1958	0.5245	0.3859	0.3397	0.5245	0.1212	0.1067	0.2557	0.2302	0.2230
	150	0.1587	0.1589	0.1590	0.5156	0.3770	0.3307	0.5156	0.1184	0.1039	0.2268	0.1981	0.1899
	185	0.1271	0.1273	0.1275	0.5068	0.3681	0.3219	0.5068	0.1157	0.1011	0.2037	0.1720	0.1627
	240	0.0971	0.0974	0.0977	0.4955	0.3569	0.3107	0.4955	0.1121	0.0976	0.1835	0.1485	0.1381
	300	0.0778	0.0783	0.0787	0.4868	0.3482	0.3020	0.4868	0.1094	0.0949	0.1716	0.1345	0.1232
	400	0.0615	0.0621	0.0626	0.4781	0.3394	0.2932	0.4781	0.1066	0.0921	0.1623	0.1234	0.1114
	500	0.0486	0.0495	0.0501	0.4709	0.3323	0.2861	0.4709	0.1044	0.0899	0.1557	0.1155	0.1029
	630	0.0386	0.0397	0.0406	0.4625	0.3239	0.2776	0.4625	0.1017	0.0872	0.1503	0.1092	0.0962
	800	0.0313	0.0327	0.0338	0.4552	0.3166	0.2703	0.4552	0.0994	0.0849	0.1464	0.1047	0.0914
	1000	0.0262	0.0279	0.0292	0.4466	0.3080	0.2618	0.4466	0.0968	0.0822	0.1427	0.1007	0.0873

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification

3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	16	6	3.4	2.0	30	1.15	2,500	109	108	1100	500/D
	25	6	3.4	2.1	35	0.727	2,150	142	139	1600	500/D
	35	6	3.4	2.2	38	0.524	1,900	173	166	1900	500/D
	50	6	3.4	2.3	40	0.387	1,700	207	196	2400	500/D
	70	12	3.4	2.4	44	0.268	1,500	257	239	3100	500/D
	95	15	3.4	2.5	48	0.193	1,300	313	285	4000	500/D
	120	18	3.4	2.6	52	0.153	1,200	360	323	49000	500/D
	150	18	3.4	2.8	55	0.124	1,100	407	361	6000	500/D
	185	30	3.4	2.9	59	0.0991	1,000	467	408	7000	500/D
	240	34	3.4	3.1	65	0.0754	900	549	471	9000	500/D
	300	34	3.4	3.3	71	0.0601	900	628	529	11000	300/D
	400	53	3.4	3.5	79	0.0470	800	721	597	13500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

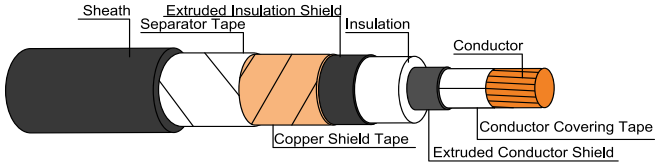
D : Packing in drum

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	16	1.4664	0.4267	0.1340	1.4726
	25	0.9271	0.3977	0.1250	0.9355
	35	0.6683	0.3803	0.1195	0.6789
	50	0.4937	0.3511	0.1103	0.5059
	70	0.3421	0.3327	0.1045	0.3577
	95	0.2467	0.3167	0.0995	0.2660
	120	0.1959	0.3034	0.0953	0.2179
	150	0.1592	0.2950	0.0927	0.1842
	185	0.1277	0.2886	0.0907	0.1566
	240	0.0980	0.2782	0.0874	0.1313
	300	0.0790	0.2705	0.0850	0.1160
	400	0.0631	0.2630	0.0826	0.1039

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
:15,000 Volts between Line to Line

Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
1	25	6	4.5	1.6	22	0.727	3,300	177	151	148	140	650	500/D
	35	6	4.5	1.7	23	0.524	3,000	215	184	179	167	750	500/D
	50	6	4.5	1.7	25	0.387	2,700	258	220	215	197	900	500/D
	70	12	4.5	1.8	26	0.268	2,400	322	275	268	240	1,200	500/D
	95	15	4.5	1.8	28	0.193	2,100	394	336	327	288	1,400	500/D
	120	18	4.5	1.9	30	0.153	1,950	454	388	377	327	1,700	500/D
	150	18	4.5	1.9	31	0.124	1,800	517	441	429	367	2,000	500/D
	185	30	4.5	2.0	33	0.0991	1,650	595	508	494	414	2,400	500/D
	240	34	4.5	2.1	36	0.0754	1,500	705	602	584	480	3,000	500/D
	300	34	4.5	2.1	38	0.0601	1,350	805	688	667	539	3,700	500/D
	400	53	4.5	2.2	41	0.0470	1,200	935	798	773	611	4,500	500/D
	500	53	4.5	2.3	45	0.0366	1,100	1093	932	900	693	5,500	500/D
	630	53	4.5	2.4	48	0.0283	950	1272	1081	1039	780	7,000	500/D
	800	53	4.5	2.6	53	0.0221	850	1460	1235	1181	864	8,500	500/D
	1000	53	4.5	2.7	58	0.0176	750	1669	1403	1331	945	11,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

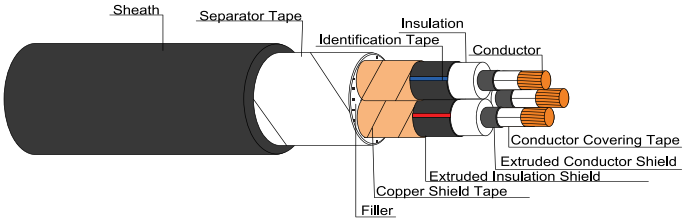
Deep of laying (For cable laid direct in ground) 0.8 m

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm^2)												
1	25	0.9271	0.9271	0.9271	0.6511	0.5125	0.4663	0.2046	0.1610	0.1465	0.9494	0.9410	0.9386
	35	0.6683	0.6683	0.6683	0.6316	0.4930	0.4467	0.1984	0.1549	0.1403	0.6971	0.6860	0.6829
	50	0.4936	0.4937	0.4937	0.5986	0.4600	0.4138	0.1881	0.1445	0.1300	0.5282	0.5144	0.5105
	70	0.3420	0.3420	0.3421	0.5773	0.4387	0.3925	0.1814	0.1378	0.1233	0.3871	0.3687	0.3636
	95	0.2465	0.2465	0.2466	0.5569	0.4183	0.3721	0.1750	0.1314	0.1169	0.3022	0.2794	0.2729
	120	0.1955	0.1957	0.1957	0.5418	0.4032	0.3570	0.1702	0.1267	0.1121	0.2593	0.2331	0.2256
	150	0.1587	0.1588	0.1589	0.5307	0.3921	0.3459	0.1667	0.1232	0.1087	0.2302	0.2010	0.1925
	185	0.1271	0.1273	0.1274	0.5227	0.3841	0.3379	0.1642	0.1207	0.1061	0.2076	0.1754	0.1659
	240	0.0971	0.0974	0.0976	0.5097	0.3711	0.3249	0.1601	0.1166	0.1021	0.1873	0.1519	0.1412
	300	0.0778	0.0782	0.0785	0.4991	0.3604	0.3142	0.1568	0.1132	0.0987	0.1750	0.1376	0.1261
	400	0.0615	0.0620	0.0624	0.4895	0.3508	0.3046	0.1538	0.1102	0.0957	0.1656	0.1265	0.1143
	500	0.0486	0.0494	0.0500	0.4814	0.3427	0.2965	0.1512	0.1077	0.0932	0.1588	0.1184	0.1057
	630	0.0386	0.0396	0.0404	0.4721	0.3335	0.2872	0.1483	0.1048	0.0902	0.1532	0.1120	0.0989
	800	0.0313	0.0325	0.0335	0.4648	0.3262	0.2799	0.1460	0.1025	0.0879	0.1493	0.1075	0.0941
	1000	0.0262	0.0277	0.0289	0.4553	0.3167	0.2704	0.1430	0.0995	0.0850	0.1454	0.1033	0.0898

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	25	6	4.5	2.4	45	0.727	3,300	142	137	2,200	500/D
	35	6	4.5	2.5	48	0.524	3,000	173	165	2,600	500/D
	50	6	4.5	2.6	51	0.387	2,700	208	195	3,100	500/D
	70	12	4.5	2.7	54	0.268	2,400	258	238	3,900	500/D
	95	15	4.5	2.8	58	0.193	2,100	314	284	4,800	500/D
	120	18	4.5	2.9	62	0.153	1,950	362	323	5,500	500/D
	150	18	4.5	3.1	66	0.124	1,800	409	361	6,500	500/D
	185	30	4.5	3.2	69	0.0991	1,650	468	407	8,000	500/D
	240	34	4.5	3.4	75	0.0754	1,500	551	470	10,000	300/D
	300	34	4.5	3.5	80	0.0601	1,350	629	529	12,000	300/D
	400	53	4.5	3.7	86	0.0470	1,200	722	598	15,000	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

Deep of laying (For cable laid direct in ground) 0.8 m

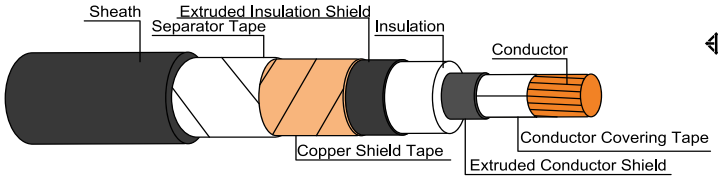
Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	25	0.9271	0.4248	0.1334	0.9367
	35	0.6683	0.4057	0.1274	0.6804
	50	0.4937	0.3749	0.1178	0.5076
	70	0.3421	0.3546	0.1114	0.3598
	95	0.2467	0.3369	0.1058	0.2684
	120	0.1958	0.3223	0.1013	0.2205
	150	0.1591	0.3129	0.0983	0.1870
	185	0.1276	0.3053	0.0959	0.1596
	240	0.0978	0.2935	0.0922	0.1344
	300	0.0788	0.2848	0.0895	0.1192
	400	0.0628	0.2762	0.0868	0.1071

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2

TIS 2143-2546



CABLE STRUCTURE

Conductor : Compacted round annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
1	35	6	5.5	1.8	26	0.524	3,460	210	183	179	165	850	500/D
	50	6	5.5	1.8	27	0.387	3,130	253	219	214	195	1,000	500/D
	70	12	5.5	1.8	28	0.268	2,790	315	273	266	238	1,300	500/D
	95	15	5.5	1.9	30	0.193	2,500	385	333	325	285	1,600	500/D
	120	18	5.5	2.0	32	0.153	2,290	445	385	375	324	1,900	500/D
	150	18	5.5	2.0	34	0.124	2,130	506	438	426	364	2,200	500/D
	185	30	5.5	2.1	35	0.0991	1,970	581	503	490	411	2,600	500/D
	240	34	5.5	2.1	38	0.0754	1,770	689	595	579	477	3,200	500/D
	300	34	5.5	2.2	40	0.0601	1,620	792	684	665	538	3,800	500/D
	400	53	5.5	2.3	43	0.0470	1,480	920	794	770	610	4,700	500/D
	500	53	5.5	2.4	47	0.0366	1,320	1066	920	890	689	6,000	500/D
	630	53	5.5	2.5	51	0.0283	1,190	1241	1067	1028	777	7,500	500/D
	800	53	5.5	2.6	55	0.0221	1,070	1426	1221	1169	863	9,000	500/D
	1000	53	5.5	2.8	60	0.0176	940	1628	1385	1318	945	11,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

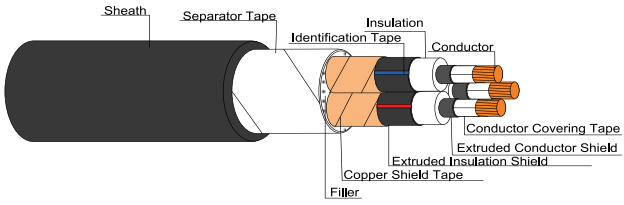
D : Packing in drum

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm^2)												
1	35	0.6683	0.6683	0.6683	0.6493	0.5107	0.4645	0.2040	0.1604	0.1459	0.6987	0.6873	0.6840
	50	0.4936	0.4937	0.4937	0.6155	0.4769	0.4307	0.1934	0.1498	0.1353	0.5302	0.5159	0.5119
	70	0.3420	0.3420	0.3420	0.5918	0.4531	0.4069	0.1859	0.1424	0.1278	0.3892	0.3705	0.3652
	95	0.2464	0.2465	0.2466	0.5718	0.4332	0.3870	0.1796	0.1361	0.1216	0.3050	0.2816	0.2749
	120	0.1955	0.1956	0.1957	0.5565	0.4179	0.3716	0.1748	0.1313	0.1168	0.2623	0.2356	0.2279
	150	0.1587	0.1588	0.1589	0.5448	0.4061	0.3599	0.1711	0.1276	0.1131	0.2334	0.2037	0.1950
	185	0.1271	0.1272	0.1274	0.5353	0.3967	0.3505	0.1682	0.1246	0.1101	0.2108	0.1781	0.1684
	240	0.0971	0.0973	0.0975	0.5204	0.3818	0.3355	0.1635	0.1199	0.1054	0.1901	0.1545	0.1436
	300	0.0778	0.0782	0.0785	0.5101	0.3715	0.3253	0.1603	0.1167	0.1022	0.1781	0.1405	0.1288
	400	0.0614	0.0619	0.0623	0.4998	0.3612	0.3150	0.1570	0.1135	0.0989	0.1686	0.1293	0.1169
	500	0.0486	0.0493	0.0498	0.4908	0.3522	0.3060	0.1542	0.1107	0.0961	0.1617	0.1211	0.1083
	630	0.0386	0.0395	0.0402	0.4809	0.3422	0.2960	0.1511	0.1075	0.0930	0.1559	0.1145	0.1013
	800	0.0313	0.0324	0.0333	0.4722	0.3335	0.2873	0.1483	0.1048	0.0903	0.1516	0.1097	0.0962
	1000	0.0261	0.0276	0.0287	0.4626	0.3240	0.2778	0.1453	0.1018	0.0873	0.1477	0.1055	0.0919

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	35	6	5.5	2.7	53	0.524	3,460	169	161	3,000	500/D
	50	6	5.5	2.8	55	0.387	3,130	204	191	3,500	500/D
	70	12	5.5	2.9	59	0.268	2,790	254	234	4,300	500/D
	95	15	5.5	3.0	63	0.193	2,500	311	281	5,000	500/D
	120	18	5.5	3.1	67	0.153	2,290	358	319	6,000	500/D
	150	18	5.5	3.2	70	0.124	2,130	405	358	7,000	300/D
	185	30	5.5	3.3	74	0.0991	1,970	463	404	8,500	300/D
	240	34	5.5	3.5	80	0.0754	1,770	546	468	10,500	300/D
	300	34	5.5	3.7	85	0.0601	1,620	622	526	12,500	300/D
	400	53	5.5	3.9	91	0.0470	1,480	715	595	15,000	200/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

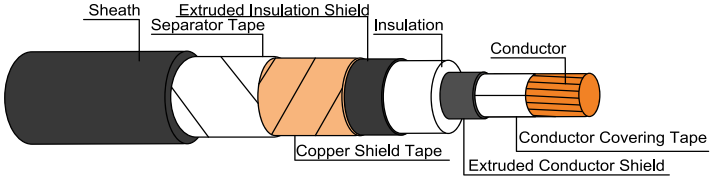
D : Packing in drum

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	35	0.6683	0.4254	0.1336	0.6815
	50	0.4937	0.3935	0.1236	0.5089
	70	0.3421	0.3720	0.1169	0.3615
	95	0.2466	0.3530	0.1109	0.2704
	120	0.1958	0.3375	0.1060	0.2227
	150	0.1590	0.3273	0.1028	0.1894
	185	0.1275	0.3187	0.1001	0.1621
	240	0.0977	0.3059	0.0961	0.1371
	300	0.0787	0.2964	0.0931	0.1219
	400	0.0627	0.2870	0.0902	0.1098

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
Single-core : Natural (Translucent)

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(A)	(kg/km)	(m)
1	35	6	8.9	2.0	33	0.524	4,680	213	190	186	166	1,200	500/D
	50	6	8.0	2.0	32	0.387	4,010	256	226	221	196	1,300	500/D
	70	12	8.0	2.0	34	0.267	3,620	319	281	275	240	1,500	500/D
	95	15	8.0	2.1	36	0.193	3,260	390	343	335	287	1,900	500/D
	120	18	8.0	2.1	37	0.153	3,020	450	395	385	327	2,200	500/D
	150	18	8.0	2.2	39	0.124	2,820	510	448	437	366	2,500	500/D
	185	30	8.0	2.2	41	0.0991	2,620	586	514	501	414	2,900	500/D
	240	34	8.0	2.3	43	0.0754	2,370	693	607	591	480	3,500	500/D
	300	34	8.0	2.4	46	0.0601	2,190	796	696	678	541	4,200	500/D
	400	53	8.0	2.5	48	0.0470	2,000	923	807	784	615	5,000	500/D
	500	53	8.0	2.6	52	0.0366	1,800	1076	939	910	698	6,500	500/D
	630	53	8.0	2.7	56	0.0283	1,630	1251	1088	1051	788	7,500	500/D
	800	53	8.0	2.8	60	0.0221	1,480	1437	1243	1195	877	9,500	300/D
	1000	53	8.0	3	66	0.0176	1,300	1640	1411	1348	962	12,000	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

D : Packing in drum

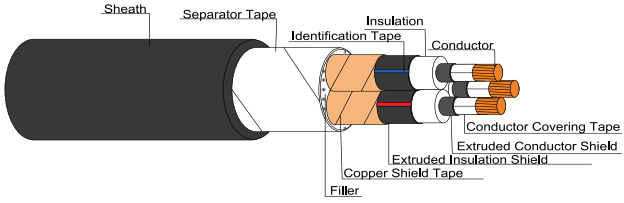
Deep of laying (For cable laid direct in ground) 0.8 m

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm^2)												
1	35	0.6683	0.6683	0.6683	0.6990	0.5604	0.5142	0.2196	0.1760	0.1615	0.7034	0.6911	0.6875
	50	0.4936	0.4936	0.4937	0.6525	0.5139	0.4676	0.2050	0.1614	0.1469	0.5345	0.5194	0.5151
	70	0.3420	0.3420	0.3420	0.6268	0.4882	0.4420	0.1969	0.1534	0.1388	0.3946	0.3748	0.3691
	95	0.2464	0.2465	0.2465	0.6048	0.4661	0.4199	0.1900	0.1464	0.1319	0.3112	0.2867	0.2796
	120	0.1955	0.1956	0.1957	0.5862	0.4475	0.4013	0.1842	0.1406	0.1261	0.2686	0.2409	0.2328
	150	0.1587	0.1588	0.1588	0.5743	0.4357	0.3895	0.1804	0.1369	0.1224	0.2403	0.2096	0.2005
	185	0.1271	0.1272	0.1273	0.5622	0.4236	0.3774	0.1766	0.1331	0.1186	0.2176	0.1841	0.1739
	240	0.0971	0.0973	0.0974	0.5466	0.4080	0.3618	0.1717	0.1282	0.1137	0.1973	0.1609	0.1497
	300	0.0778	0.0781	0.0783	0.5349	0.3963	0.3501	0.1680	0.1245	0.1100	0.1852	0.1469	0.1350
	400	0.0614	0.0618	0.0621	0.5231	0.3845	0.3383	0.1643	0.1208	0.1063	0.1754	0.1357	0.1231
	500	0.0486	0.0491	0.0495	0.5124	0.3738	0.3275	0.1610	0.1174	0.1029	0.1681	0.1273	0.1142
	630	0.0385	0.0392	0.0398	0.5009	0.3622	0.3160	0.1574	0.1138	0.0993	0.1620	0.1204	0.1070
	800	0.0312	0.0321	0.0329	0.4908	0.3522	0.3059	0.1542	0.1106	0.0961	0.1573	0.1152	0.1016
	1000	0.0261	0.0272	0.0282	0.4802	0.3415	0.2953	0.1508	0.1073	0.0928	0.1531	0.1107	0.0970

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification
3 Cores : White, Red, Blue

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

Remark : Special protection can be produced

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	35	6	8.9	3.1	68	0.524	4,680	141	139	4,300	500/D
	50	6	8.0	3.2	67	0.387	4,010	205	190	4,500	500/D
	70	12	8.0	3.3	71	0.267	3,620	262	236	5,500	300/D
	95	15	8.0	3.4	75	0.193	3,260	320	284	6,500	300/D
	120	18	8.0	3.5	79	0.153	3,020	368	323	7,500	300/D
	150	18	8.0	3.6	82	0.124	2,820	417	362	8,500	300/D
	185	30	8.0	3.7	86	0.0991	2,620	477	409	10,000	300/D
	240	34	8.0	3.9	91	0.0754	2,370	561	473	12,000	300/D
	300	34	8.0	4.0	97	0.0601	2,190	640	533	14,000	300/D
	400	53	8.0	4.3	103	0.0470	2,000	734	603	17,000	200/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

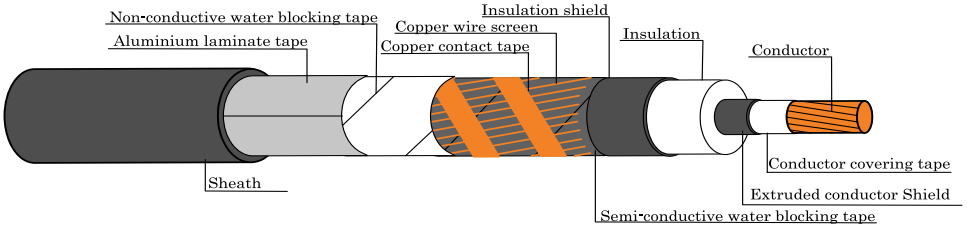
D : Packing in drum

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	35	0.6683	0.4808	0.1510	0.6852
	50	0.4937	0.4336	0.1362	0.5121
	70	0.3420	0.4097	0.1287	0.3655
	95	0.2466	0.3883	0.1220	0.2751
	120	0.1957	0.3710	0.1166	0.2278
	150	0.1589	0.3593	0.1129	0.1949
	185	0.1274	0.3488	0.1096	0.1680
	240	0.0976	0.3340	0.1049	0.1433
	300	0.0785	0.3228	0.1014	0.1282
	400	0.0624	0.3117	0.0979	0.1161

69KV-CE

69 kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATH POWER CABLE

TIS 2202-2547 (IEC 60840)



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi conductive tape with extruded Semi-conductive cross-linked polyethylene compound

Insulation : Cross-linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape cross-linked polyethylene compound

Water blocking tape : Semi-conductive waler blocking tape

Metallic screen : Copper wire screen with copper contact tape

Synthetic water blocking and cushioning tape : Non-conductive water blocking tape

Radial water barrier : Aluminium laminate tape

Sheath : Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C

Testing voltage : 90,000 Volts

Reference standard : TIS 2202, TIS 2427 (IEC 60840,IEC60228)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area	Number of wires minimum	Conductor diameter approx.	Conductor shield thickness nominal	Insulation thickness nominal	Insulation shield thickness nominal	Copper wire area nominal	sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Cable weight approx.	Standard Length
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(mm)	(mm^2)	(mm)	(mm)	(Ω/km)	(kg/km)	(m)
1	400/95	53	23.5	1.5	11.0	1.5	95	3.1	66.0	0.0470	7,000	300/D
	500/95	53	26.7	1.5	11.0	1.5	95	3.2	69.0	0.0366	8,000	300/D
	630/120	53	30.3	1.5	11.0	1.5	120	3.4	74.0	0.0283	10,000	300/D
	800/120	53	34.1	1.5	11.0	1.5	120	3.5	78.0	0.0221	11,500	300/D

D : Packing in drum

Number of core	Nominal cross sectional area	Continuous current rating in ground at 30°C maximum			A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Spaced	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
		2D														
1	400/95	873	871	611	0.0613	0.0616	0.0617	0.5835	0.4449	0.3987	0.1833	0.1398	0.1252	0.1933	0.1527	0.1396
	500/95	1001	997	695	0.0485	0.0488	0.0490	0.5679	0.4293	0.3831	0.1784	0.1349	0.1203	0.1849	0.1434	0.1300
	630/120	1145	1138	788	0.0384	0.0388	0.0392	0.5543	0.4156	0.3694	0.1741	0.1306	0.1161	0.1783	0.1362	0.1225
	800/120	1295	1282	881	0.0311	0.0316	0.0321	0.5411	0.4025	0.3563	0.1700	0.1264	0.1119	0.1728	0.1303	0.1164

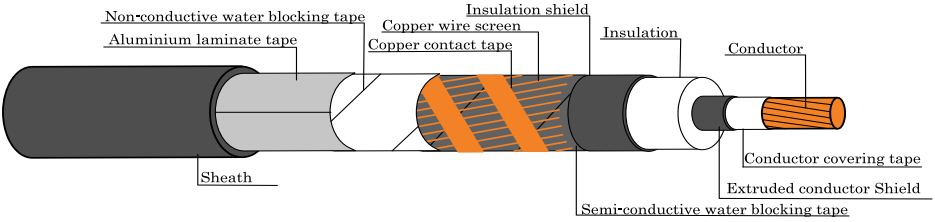
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

115KV-CE

115 kV 90°C CROSS LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATH POWER CABLE

TIS 2202-2547 (IEC 60840)



CABLE STRUCTURE

Conductor : Compacted round stranded annealed copper

Conductor shield : Semi conductive tape with extruded Semi-conductive cross-linked polyethylene compound

Insulation : Cross-linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape cross-linked polyethylene compound

Water blocking tape : Semi-conductive waler blocking tape

Metallic screen : Copper wire screen with copper contact tape

Synthetic water blocking and cushioning tape : Non-conductive water blocking tape

Radial water barrier : Aluminium laminate tape

Sheath : Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C

Testing voltage : 160,000 Volts

Reference standard : TIS 2202, TIS 2427 (IEC 60840,IEC60228)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Conductor diameter approx. (mm)	Conductor shield thickness nominal (mm)	Insulation thickness nominal (mm)	Insulation shield thickness nominal (mm)	Copper wire area nominal (mm^2)	sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length (m)
1	400/95	53	23.5	1.5	16.0	1.5	95	3.5	76	0.0470	8,000	300/D
	500/95	53	26.7	1.5	16.0	1.5	95	3.6	80	0.0366	9,000	300/D
	630/120	53	30.3	1.5	16.0	1.5	120	3.7	84	0.0283	11,000	300/D
	800/120	53	34.1	1.5	16.0	1.5	120	3.9	88	0.0221	13,000	300/D

D : Packing in drum

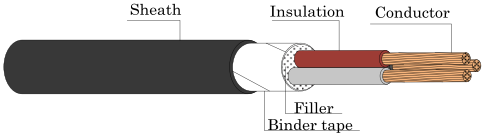
Number of core	Nominal cross sectional area	Continuous current rating in ground at 30°C maximum			A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Spaced	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	400/95	850	849	607	0.0613	0.0615	0.0616	0.6128	0.4741	0.4279	0.1925	0.1490	0.1344	0.2020	0.1611	0.1479
	500/95	975	972	691	0.0485	0.0487	0.0489	0.5958	0.4572	0.4110	0.1872	0.1436	0.1291	0.1934	0.1517	0.1381
	630/120	1117	1112	785	0.0384	0.0387	0.0390	0.5805	0.4418	0.3956	0.1824	0.1388	0.1243	0.1864	0.1441	0.1302
	800/120	1264	1254	879	0.0310	0.0315	0.0318	0.5665	0.4279	0.3817	0.1780	0.1344	0.1199	0.1807	0.1381	0.1241

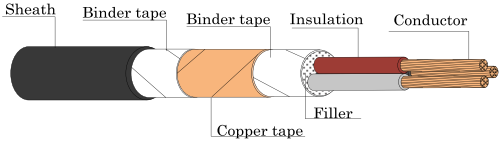
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

Deep of laying (For cable laid direct in ground) 0.8 m

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE





CABLE STRUCTURE

Conductor : Flexible annealed copper

Insulation : Polyvinyl chloride (PVC)

Core identification

2 Cores : Blue and Brown
3 Cores : Brown, Black, Grey
4 Cores : Blue, Brown, Black, Grey
More than 4 Cores :
Black with marking numbers, colored white, printed continuously throungout the whole length of insulated wires for the porpose of core identification.

Filler : polypropylene (non-hygroscopic materail)

Binder tape and Separator tape : Spunbond tape

Shield : Copper tape

Sheath : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 600 Volts

Testing voltage : 2,000 Volts

Reference standard : THAI YAZAKI STANDARD

B

APPLICATION

For supervisory electrical equipment, station control circuits, outdoor, suitable installation in the dry or wet cable trenches.

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
2	0.5	Flexible	0.6	0.9	7.5	39.0	0.0130	49	300/D
	0.75	Flexible	0.6	1.2	8.5	26.0	0.0114	65	300/D
	1	Flexible	0.6	1.2	8.7	19.5	0.0104	75	300/D
	1.5	Flexible	0.6	1.2	9.3	13.3	0.0089	90	300/D
	2.5	Flexible	0.7	1.2	10.5	7.98	0.0081	130	300/D
	4	Flexible	0.8	1.2	12.0	4.95	0.0076	170	300/D
	6	Flexible	0.8	1.4	14.0	3.30	0.0061	250	300/D
3	0.5	Flexible	0.6	1.2	8.5	39.0	0.0130	65	300/D
	0.75	Flexible	0.6	1.2	8.9	26.0	0.0114	80	300/D
	1	Flexible	0.6	1.2	9.1	19.5	0.0104	90	300/D
	1.5	Flexible	0.6	1.2	9.8	13.3	0.0089	110	300/D
	2.5	Flexible	0.7	1.2	11.0	7.98	0.0081	160	300/D
	4	Flexible	0.8	1.2	13.0	4.95	0.0076	230	300/D
	6	Flexible	0.8	1.4	15.0	3.30	0.0061	330	300/D
4	0.5	Flexible	0.6	1.2	9.1	39.0	0.0130	80	300/D
	0.75	Flexible	0.6	1.2	9.6	26.0	0.0114	95	300/D
	1	Flexible	0.6	1.2	9.8	19.5	0.0104	110	300/D
	1.5	Flexible	0.6	1.2	10.5	13.3	0.0089	140	300/D
	2.5	Flexible	0.7	1.2	12.0	7.98	0.0081	200	300/D
	4	Flexible	0.8	1.4	14.5	4.95	0.0076	300	300/D
	6	Flexible	0.8	1.4	16.5	3.30	0.0061	410	300/D
5	0.5	Flexible	0.6	1.2	9.8	39.0	0.0130	90	300/D
	0.75	Flexible	0.6	1.2	10.0	26.0	0.0114	110	300/D
	1	Flexible	0.6	1.2	10.5	19.5	0.0104	130	300/D
	1.5	Flexible	0.6	1.2	11.5	13.3	0.0089	160	300/D
	2.5	Flexible	0.7	1.4	13.5	7.98	0.0081	250	300/D
	4	Flexible	0.8	1.4	15.5	4.95	0.0076	350	300/D
	6	Flexible	0.8	1.4	18.0	3.30	0.0061	500	300/D

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.2	10.5	39.0	0.0130	110	300/D
	0.75	Flexible	0.6	1.2	11.0	26.0	0.0114	130	300/D
	1	Flexible	0.6	1.2	11.5	19.5	0.0104	150	300/D
6	1.5	Flexible	0.6	1.2	12.0	13.3	0.0089	190	300/D
	2.5	Flexible	0.7	1.4	14.5	7.98	0.0081	290	300/D
	4	Flexible	0.8	1.4	17.0	4.95	0.0076	420	300/D
	6	Flexible	0.8	1.4	19.5	3.30	0.0061	600	300/D
	0.5	Flexible	0.6	1.2	10.5	39.0	0.0130	110	300/D
	0.75	Flexible	0.6	1.2	11.0	26.0	0.0114	140	300/D
	1	Flexible	0.6	1.2	11.5	19.5	0.0104	160	300/D
7	1.5	Flexible	0.6	1.2	12.0	13.3	0.0089	210	300/D
	2.5	Flexible	0.7	1.4	14.5	7.98	0.0081	320	300/D
	4	Flexible	0.8	1.4	17.0	4.95	0.0076	460	300/D
	6	Flexible	0.8	1.4	19.5	3.30	0.0061	650	300/D
	0.5	Flexible	0.6	1.2	11.0	39.0	0.0130	130	300/D
	0.75	Flexible	0.6	1.2	11.5	26.0	0.0114	160	300/D
	1	Flexible	0.6	1.2	12.0	19.5	0.0104	180	300/D
8	1.5	Flexible	0.6	1.4	13.5	13.3	0.0089	240	300/D
	2.5	Flexible	0.7	1.4	16.0	7.98	0.0081	360	300/D
	4	Flexible	0.8	1.4	18.5	4.95	0.0076	550	300/D
	6	Flexible	0.8	1.4	21.0	3.30	0.0061	750	300/D
	0.5	Flexible	0.6	1.2	12.0	39.0	0.0130	150	300/D
	0.75	Flexible	0.6	1.2	12.5	26.0	0.0114	180	300/D
	1	Flexible	0.6	1.4	13.5	19.5	0.0104	220	300/D
9	1.5	Flexible	0.6	1.4	14.5	13.3	0.0089	270	300/D
	2.5	Flexible	0.7	1.4	17.0	7.98	0.0081	410	300/D
	4	Flexible	0.8	1.4	20.0	4.95	0.0076	600	300/D
	6	Flexible	0.8	1.4	23.0	3.30	0.0061	850	300/D
	0.5	Flexible	0.6	1.2	12.5	39.0	0.0130	150	300/D
	0.75	Flexible	0.6	1.4	14.0	26.0	0.0114	210	300/D
	1	Flexible	0.6	1.4	14.5	19.5	0.0104	240	300/D
10	1.5	Flexible	0.6	1.4	15.5	13.3	0.0089	310	300/D
	2.5	Flexible	0.7	1.4	18.0	7.98	0.0081	460	300/D
	4	Flexible	0.8	1.4	21.0	4.95	0.0076	650	300/D
	6	Flexible	0.8	1.8	25.0	3.30	0.0061	1,000	300/D
	0.5	Flexible	0.6	1.2	12.5	39.0	0.0130	170	300/D
	0.75	Flexible	0.6	1.4	14.0	26.0	0.0114	210	300/D
	1	Flexible	0.6	1.4	14.5	19.5	0.0104	250	300/D
11	1.5	Flexible	0.6	1.4	15.5	13.3	0.0089	320	300/D
	2.5	Flexible	0.7	1.4	18.0	7.98	0.0081	480	300/D
	4	Flexible	0.8	1.4	21.0	4.95	0.0076	700	300/D
	6	Flexible	0.8	1.8	25.0	3.30	0.0061	1,100	300/D
	0.5	Flexible	0.6	1.2	13.0	39.0	0.0130	180	300/D
	0.75	Flexible	0.6	1.4	14.5	26.0	0.0114	220	300/D
	1	Flexible	0.6	1.4	15.0	19.5	0.0104	280	300/D
12	1.5	Flexible	0.6	1.4	16.0	13.3	0.0089	350	300/D
	2.5	Flexible	0.7	1.4	19.0	7.98	0.0081	550	300/D
	4	Flexible	0.8	1.4	22.0	4.95	0.0076	750	300/D
	6	Flexible	0.8	1.8	26.0	3.30	0.0061	1,200	300/D
	0.5	Flexible	0.6	1.4	14.0	39.0	0.0130	200	300/D
	0.75	Flexible	0.6	1.4	15.0	26.0	0.0114	250	300/D
	1	Flexible	0.6	1.4	15.5	19.5	0.0104	290	300/D
13	1.5	Flexible	0.6	1.4	17.0	13.3	0.0089	370	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	550	300/D
	4	Flexible	0.8	1.4	23.0	4.95	0.0076	850	300/D
	6	Flexible	0.8	1.8	28.0	3.30	0.0061	1,200	300/D
	0.5	Flexible	0.6	1.4	14.0	39.0	0.0130	210	300/D
	0.75	Flexible	0.6	1.4	15.0	26.0	0.0114	250	300/D
	1	Flexible	0.6	1.4	15.5	19.5	0.0104	300	300/D
14	1.5	Flexible	0.6	1.4	17.0	13.3	0.0089	390	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	600	300/D
	4	Flexible	0.8	1.4	23.0	4.95	0.0076	850	300/D
	6	Flexible	0.8	1.8	28.0	3.30	0.0061	1,300	300/D

D = Packing in drum

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	14.5	39.0	0.0130	220	300/D
	0.75	Flexible	0.6	1.4	15.5	26.0	0.0114	270	300/D
	1	Flexible	0.6	1.4	16.0	19.5	0.0104	320	300/D
15	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	420	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	650	300/D
	4	Flexible	0.8	1.8	25.0	4.95	0.0076	950	300/D
	6	Flexible	0.8	1.8	29.0	3.30	0.0061	1,400	300/D
	0.5	Flexible	0.6	1.4	15.0	39.0	0.0130	230	300/D
	0.75	Flexible	0.6	1.4	15.5	26.0	0.0114	280	300/D
	1	Flexible	0.6	1.4	16.0	19.5	0.0104	340	300/D
16	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	430	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	650	300/D
	4	Flexible	0.8	1.8	25.0	4.95	0.0076	1,000	300/D
	6	Flexible	0.8	1.8	29.0	3.30	0.0061	1,400	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	240	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	310	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	370	300/D
17	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	470	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	700	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	250	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	310	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	370	300/D
18	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	470	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	700	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	260	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	320	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	380	300/D
19	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	490	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	750	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	16.0	39.0	0.0130	270	300/D
	0.75	Flexible	0.6	1.4	17.0	26.0	0.0114	330	300/D
	1	Flexible	0.6	1.4	17.5	19.5	0.0104	400	300/D
20	1.5	Flexible	0.6	1.4	19.0	13.3	0.0089	500	300/D
	2.5	Flexible	0.7	1.4	23.0	7.98	0.0081	800	300/D
	4	Flexible	0.8	1.8	28.0	4.95	0.0076	1,200	300/D
	6	Flexible	0.8	1.8	32.0	3.30	0.0061	1,700	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	280	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	350	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	420	300/D
21	1.5	Flexible	0.6	1.4	19.5	13.3	0.0089	550	300/D
	2.5	Flexible	0.7	1.4	23.0	7.98	0.0081	800	300/D
	4	Flexible	0.8	1.8	28.0	4.95	0.0076	1,300	300/D
	6	Flexible	0.8	1.8	32.0	3.30	0.0061	1,800	300/D
	0.5	Flexible	0.6	1.4	17.0	39.0	0.0130	300	300/D
	0.75	Flexible	0.6	1.4	18.0	26.0	0.0114	370	300/D
	1	Flexible	0.6	1.4	18.5	19.5	0.0104	450	300/D
22	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	550	300/D
	2.5	Flexible	0.7	1.8	25.0	7.98	0.0081	900	300/D
	4	Flexible	0.8	1.8	30.0	4.95	0.0076	1,300	300/D
	6	Flexible	0.8	1.8	34.0	3.30	0.0061	1,900	300/D
	0.5	Flexible	0.6	1.4	17.0	39.0	0.0130	310	300/D
	0.75	Flexible	0.6	1.4	18.0	26.0	0.0114	380	300/D
	1	Flexible	0.6	1.4	18.5	19.5	0.0104	460	300/D
23	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	600	300/D
	2.5	Flexible	0.7	1.8	25.0	7.98	0.0081	950	300/D
	4	Flexible	0.8	1.8	30.0	4.95	0.0076	1,400	300/D
	6	Flexible	0.8	1.8	34.0	3.30	0.0061	2,000	300/D

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
24	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	320	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	400	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	500	300/D
	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	600	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,400	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,100	300/D
25	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	330	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	410	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	490	300/D
	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,500	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,200	300/D
26	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	340	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	420	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	500	300/D
	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,500	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,300	300/D
27	0.5	Flexible	0.6	1.4	18.5	39.0	0.0130	340	300/D
	0.75	Flexible	0.6	1.4	19.5	26.0	0.0114	430	300/D
	1	Flexible	0.6	1.4	20.0	19.5	0.0104	500	300/D
	1.5	Flexible	0.6	1.4	22.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	27.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	32.0	4.95	0.0076	1,600	300/D
	6	Flexible	0.8	2.2	38.0	3.30	0.0061	2,400	300/D
28	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	460	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	700	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,500	300/D
29	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	460	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	700	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,500	300/D
30	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	470	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	750	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,200	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,600	300/D
31	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,800	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,700	300/D
32	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,900	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,800	300/D

D = Packing in drum

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
33	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,900	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,800	300/D
34	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	430	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,000	300/D
35	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	430	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.3	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,000	300/D
36	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	440	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,100	300/D
37	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	450	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	950	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,200	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,100	300/D
38	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	460	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	950	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,200	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,300	300/D
39	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	470	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,300	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,300	300/D
40	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	480	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	750	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,300	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,400	300/D
41	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	800	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,400	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,500	300/D

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
42	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	800	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1100	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,500	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,600	300/D
43	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	850	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1100	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,500	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,600	300/D
44	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	850	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,700	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,600	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	3,800	300/D
45	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	850	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,700	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,600	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	3,900	300/D
46	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,700	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	4,000	300/D
47	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,200	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,700	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	4,000	300/D
48	0.5	Flexible	0.6	1.4	23.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.8	25.0	26.0	0.0114	750	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1,200	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	42.0	4.95	0.0076	2,800	300/D
	6	Flexible	0.8	2.6	49.0	3.30	0.0061	4,100	300/D

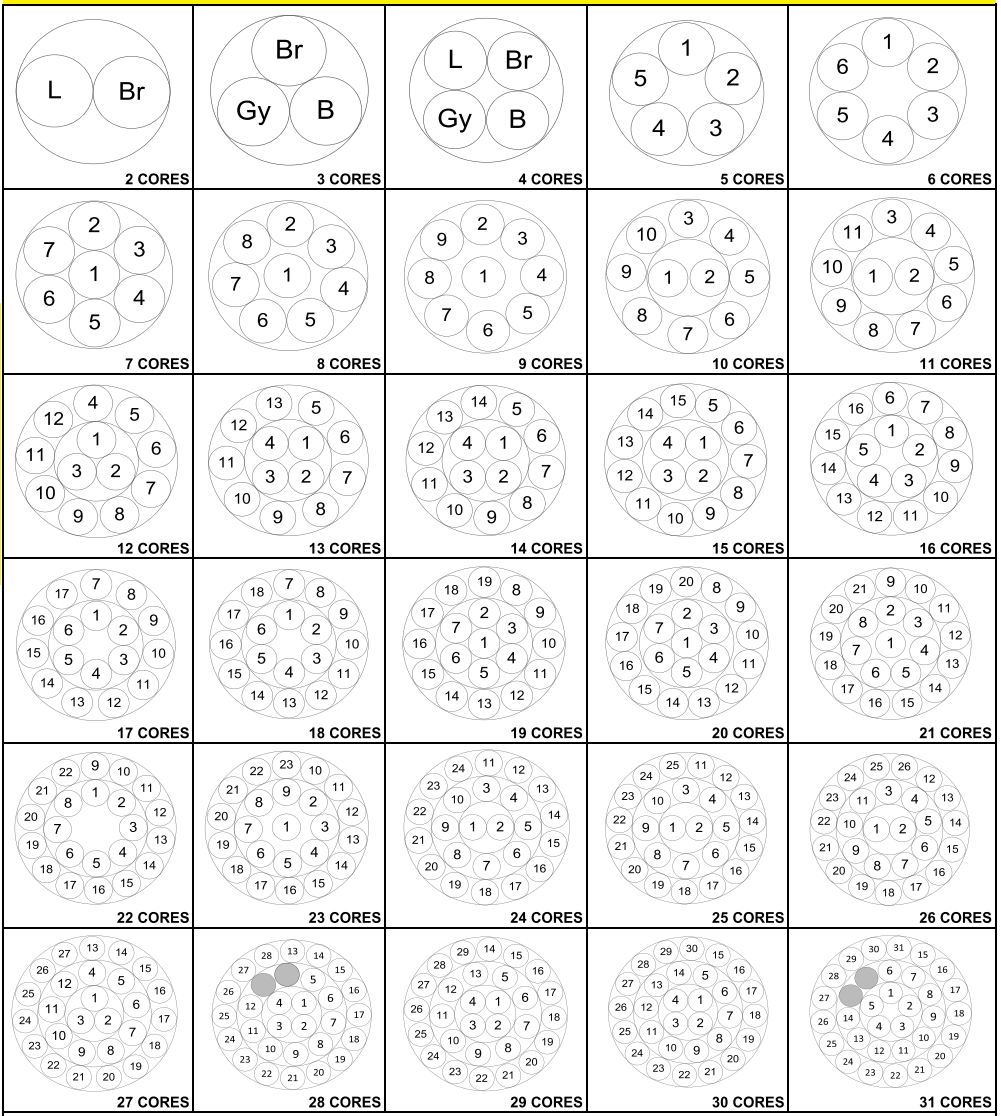
D = Packing in drum

This table show only flexible stranded condutor. If you want to have solid or concentric conductor type, please contact with our sales department for CVV-S : The overall diameter of cable and cable weight shall be change a little bit more.
*Remark : Special protection can be produce.

B

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CVV or CVV-S



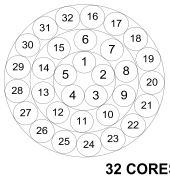
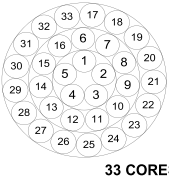
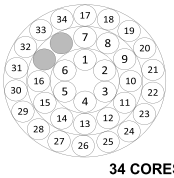
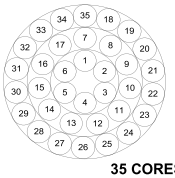
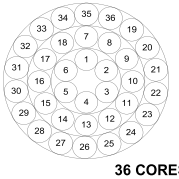
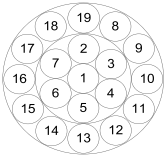
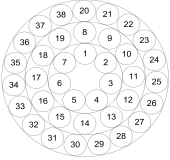
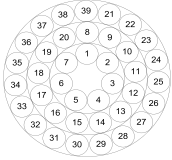
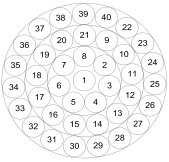
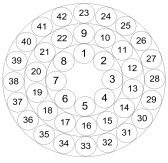
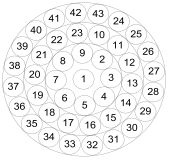
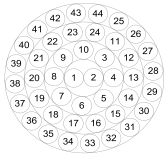
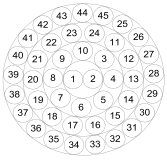
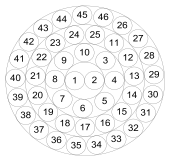
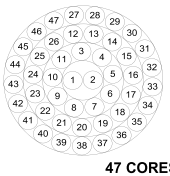
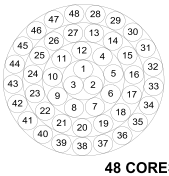
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CVV or CVV-S

 32 CORES	 33 CORES	 34 CORES	 35 CORES	 36 CORES
 37 CORES	 38 CORES	 39 CORES	 40 CORES	 41 CORES
 42 CORES	 43 CORES	 44 CORES	 45 CORES	 46 CORES
 47 CORES	 48 CORES			

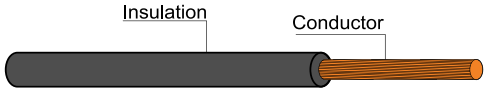
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

T-AV

60°C LOW VOLTAGE FLEXIBLE CONDUCTOR PVC INSULATED FOR AUTOMOBILE

TIS 118-2522



CABLE STRUCTURE

Conductor : Flexible annealed copper wire
Sizes 0.5 mm² up to 95 mm²

Insulation : Polyvinyl chloride (PVC)

Core identification
Single-cores : Any color

TECHNICAL DATA

Classification : Maximum conductor temperature 60°C

Testing voltage : 1,000 Volts
Reference standard : TIS 118-2522
Remark:
Nowadays the wires are produced according to two kinds of Standard. But such the Ministerial Regulations shall come into force upon their publication in Government Gazette, the production must be in the way of THAI INDUSTRIAL STANDARD.

APPLICATION

For Automobile

B

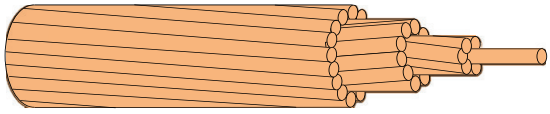
Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	16/0.20	0.95	0.6	2.2	37.1	11	9	100/C
0.5	7/0.30	0.95	0.6	2.2	37.1	11	9	100/C
0.75	24/0.20	1.15	0.6	2.4	24.7	14	11	100/C
0.85	12/0.30	1.20	0.6	2.4	22.0	15	12	100/C
1	32/0.20	1.30	0.6	2.6	18.5	16	14	100/C
1.25	40/0.20	1.50	0.6	2.7	14.8	19	17	100/C
1.25	18/0.30	1.50	0.6	2.7	14.7	19	17	100/C
1.5	30/0.25	1.60	0.6	2.8	12.7	20	19	100/C
2	28/0.30	1.90	0.6	3.1	9.42	25	24	100/C
2.5	50/0.25	2.10	0.7	3.5	7.60	28	30	100/C
3	44/0.30	2.30	0.7	3.7	6.00	32	37	100/C
4	56/0.30	2.60	0.8	4.2	4.71	38	47	100/C
5	70/0.30	3.0	0.8	4.6	3.77	44	57	100/C
6	84/0.30	3.2	0.9	5.0	3.14	49	69	100/C
8	63/0.40	3.7	0.9	5.5	2.31	59	88	100/C
10	84/0.40	4.2	1.1	6.4	1.82	69	114	100/C
16	126/0.40	5.8	1.1	8.0	1.16	95	173	100/C
25	196/0.60	7.0	1.4	9.8	0.770	123	261	100/C
35	280/0.40	8.5	1.4	11.3	0.524	158	366	100/C
50	399/0.40	10.9	1.6	14.1	0.357	207	537	500/D
70	361/0.50	12.6	2.0	16.6	0.268	250	727	500/D
95	475/0.50	14.1	2.0	18.1	0.193	305	971	500/D

C : Packing in Coil
D : Packing in Drum

FHC

HARD DRAWN COPPER STRANDED CONDUCTOR

TIS 64-2517



CABLE STRUCTURE

Conductor : Hard drawn copper wires, concentric stranded conductor
Size 10 mm² up to 500 mm²
Stranding direction the outermost layer Z

TECHNICAL DATA

Reference standard : TIS 64-2517

APPLICATION

For grounding wire

Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	7/1.35	4.05	1.80548	438	90	90	100/C
16	7/1.70	5.10	1.13857	694	125	140	100/C
25	7/2.14	6.42	0.71851	1,076	160	230	100/C
35	7/2.52	7.56	0.51815	1,459	200	320	100/C
50	7/3.02	9.06	0.35896	2,095	250	450	100/C
50	19/1.78	8.90	0.38252	2,021	250	430	100/C
70	19/2.14	10.70	0.26466	2,921	310	600	500/D
95	19/2.52	12.60	0.19183	3,961	380	850	500/D
120	19/2.85	14.25	0.14922	5,067	440	1100	500/D
150	37/2.25	15.75	0.12384	6,289	510	1300	500/D
185	37/2.52	17.64	0.09813	7,713	585	1700	500/D
240	61/2.25	20.25	0.07528	10,369	700	2200	500/D
300	61/2.52	22.68	0.06002	12,717	800	2800	500/D
400	61/2.85	25.65	0.04692	16,266	900	3600	500/D
500	61/3.20	28.80	0.03703	20,506	1110	4500	500/D

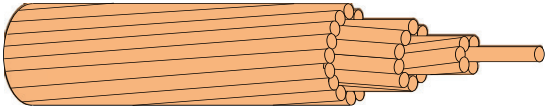
C : Packing in Coil
D : Packing in Drum

B

FAC

ANNEALED COPPER STRANDED CONDUCTOR

IEC 60228



CABLE STRUCTURE

Conductor : Annealed copper wires, concentric stranded conductor
Size 1 mm² up to 1000 mm²
Stranding direction the outermost layer S

TECHNICAL DATA

Reference standard : IEC 60228 (Same as TIS 2427-2552)

APPLICATION

Conductor for insulated cables and wires, grounded electrical system.

B

Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length (m)
1	7/0.43	1.29	18.1	9	2000/D
1.5	7/0.53	1.59	12.1	14	2000/D
2.5	7/0.67	2.01	7.41	22	2000/D
4	7/0.85	2.55	4.61	36	2000/D
6	7/1.04	3.12	3.08	55	2000/D
10	7/1.33	4.05	1.83	90	2000/D
16	7/1.70	5.10	1.15	140	2000/D
25	7/2.14	6.42	0.727	230	2000/D
35	19/1.53	7.65	0.524	320	2000/D
50	19/1.75	8.90	0.387	430	2000/D
70	19/2.14	10.70	0.268	600	2000/D
95	19/2.52	12.60	0.193	850	2000/D
120	37/2.03	14.21	0.153	1100	1000/D
150	37/2.25	15.75	0.124	1300	1000/D
185	37/2.52	17.64	0.0991	1700	1000/D
240	61/2.25	20.25	0.0754	2200	500/D
300	61/2.52	22.68	0.0601	2800	500/D
400	61/2.85	25.65	0.0470	3500	500/D
500	61/3.20	28.80	0.0366	4500	500/D
630	127/2.52	32.76	0.0283	6000	500/D
800	127/2.85	37.05	0.0221	7500	500/D
1000	127/3.20	41.6	0.0176	9500	300/D

D : Packing in drum

Aluminium Conductor Cables

Building Wires and Cables

THWA	750 V 70°C ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE (TIS 293-2541)	C1
THWA-C	750 V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE (TIS 293-2541)	C2

Low Voltage Power Cables

FD-0.6/1KV-AL-CV	0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANTPOWER CABLE	C3
FD-0.6/1KV-AL-CV-AWA	0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE	C8
FD-0.6/1KV-AL-CV-SWA	0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE	C9
FD-0.6/1KV-AL-CV-STA	0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE	C12

C

High Voltage Power Cables

24KV-OC	24kV 90°C PARTIAL INSULATED CABLE (ICEA S-66-524, ICEA S-93-639)	C15
33KV-OC	33kV 90°C PARTIAL INSULATED CABLE (ICEA S-66-524, ICEA S-93-639)	C16
15KV-CC	15kV 90°C SPACED AERIAL CABLE (ICEA S-66-524, ICEA S-93-639)	C17
25KV-CC	25kV 90°C SPACED AERIAL CABLE (ICEA S-66-524, ICEA S-93-639)	C18
35KV-CC	35kV 90°C SPACED AERIAL CABLE (ICEA S-66-524, ICEA S-93-639)	C19

Bare Conductor

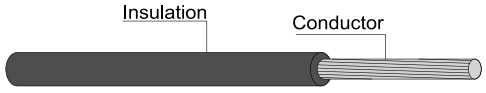
AAC	ALL ALUMINIUM STRANDED CONDUCTOR (TIS 85-2548)	C20
ACSR	ALUMINIUM CONDUCTOR STEEL REINFORCED (TIS 85-2548)	C21

C

THWA

750V 70°C ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541



CABLE STRUCTURE

Conductor : Solid and Stranded hard drawn aluminium wires
Sizes 10 mm² up to 500 mm²

Insulation : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 750 Volts

Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 1

APPLICATION

For low voltage overhead distribution line

Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	1/3.49	1.1	6.0	3.08	0.0078	1,562	52	50	500/C
10	7/1.32	1.1	6.5	3.08	0.0070	1,769	52	55	500/C
16	1/4.43	1.1	7.0	1.91	0.0064	2,445	70	70	500/C
16	7/1.68	1.1	7.6	1.91	0.0058	2,781	70	80	500/C
25	7/2.12	1.3	9.3	1.20	0.0055	4,241	95	120	300/C
35	7/2.49	1.3	10.5	0.868	0.0048	5,703	117	160	200/C
50	7/2.90	1.5	12.0	0.641	0.0047	7,423	143	210	200/C
50	19/1.76	1.5	12.5	0.641	0.0047	8,114	143	210	200/C
70	19/2.12	1.5	14.0	0.443	0.0040	11,487	185	280	100/C
95	19/2.49	1.7	16.5	0.320	0.0038	15,470	226	390	100/C
120	19/2.80	1.7	18.0	0.253	0.0035	18,810	264	470	500/D
120	37/2.01	1.7	18.0	0.253	0.0034	20,114	264	470	500/D
150	37/2.23	1.9	20.0	0.206	0.0035	24,704	302	600	500/D
185	37/2.50	2.1	22.0	0.164	0.0034	30,187	352	700	500/D
240	61/2.23	2.3	25.0	0.125	0.0033	38,568	421	900	500/D
300	61/2.49	2.5	28.0	0.100	0.0032	46,901	487	1,100	500/D
400	61/2.82	2.7	32.0	0.0778	0.0031	57,948	574	1,400	500/D
500	61/3.20	3.1	36.0	0.0605	0.0031	73,194	675	1,900	500/D

C : Packing in coil
D : Packing in drum

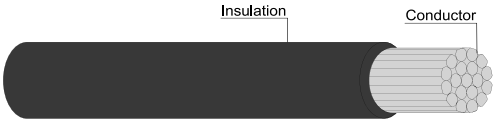
Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	1/3.49	3.7006	0.4819	0.1514	3.7037
10	7/1.32	3.7006	0.4868	0.1529	3.7038
16	1/4.43	2.2949	0.4650	0.1461	2.2996
16	7/1.68	2.2949	0.4698	0.1476	2.2996
25	7/2.12	1.4419	0.4637	0.1457	1.4492
35	7/2.49	1.0430	0.4539	0.1426	1.0527
50	7/2.90	0.7703	0.4553	0.1430	0.7835
50	19/1.76	0.7703	0.4459	0.1401	0.7829
70	19/2.12	0.5325	0.4359	0.1370	0.5498
95	19/2.49	0.3847	0.4340	0.1363	0.4082
120	19/2.80	0.3043	0.4280	0.1345	0.3327
120	37/2.01	0.3043	0.4255	0.1337	0.3324
150	37/2.23	0.2479	0.4258	0.1338	0.2817
185	37/2.50	0.1976	0.4248	0.1334	0.2384
240	61/2.23	0.1509	0.4150	0.1304	0.1994
300	61/2.49	0.1210	0.4201	0.1320	0.1791
400	61/2.82	0.0946	0.4175	0.1311	0.1617
500	61/3.20	0.0741	0.4184	0.1314	0.1509

C

THWA-C

750V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541



CABLE STRUCTURE

Conductor : Compact stranded hard drawn aluminium wires
Sizes 10 mm² up to 500 mm²

Insulation : Black Polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 750 Volts

Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 2

APPLICATION

For low voltage overhead distribution line

Nominal cross sectional area (mm²)	Actual cross sectional area (mm²)	Minimum number of wires (No.)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	9.64	6	3.72	1.1	6.3	3.08	0.0084	1,768	52	50	500/C
16	15.55	6	4.69	1.1	7.2	1.91	0.0068	2,734	69	75	500/C
25	24.75	6	5.90	1.3	8.8	1.20	0.0064	4,120	93	110	300/C
35	34.21	6	6.95	1.3	9.9	0.868	0.0056	5,591	115	150	300/C
50	46.32	6	8.01	1.5	11.5	0.641	0.0059	7,313	141	200	200/C
70	67.03	12	9.73	1.5	13.5	0.443	0.0050	10,420	178	270	100/C
95	92.79	15	11.40	1.7	15.5	0.320	0.0047	14,098	220	370	100/C
120	117.37	15	12.95	1.7	17.0	0.253	0.0042	18,518	258	450	100/C
150	144.15	15	14.27	1.9	18.5	0.206	0.0042	22,457	294	550	500/D
185	181.06	30	15.98	2.1	21.0	0.164	0.0042	28,974	342	700	500/D
240	237.55	30	18.47	2.3	24.0	0.125	0.0040	37,506	410	900	500/D
300	296.94	30	20.68	2.5	26.0	0.100	0.0038	45,642	475	1,100	500/D
400	381.67	53	23.39	2.7	30.0	0.0778	0.0036	56,992	560	1,400	500/D
500	490.81	53	26.67	3.1	34.0	0.0605	0.0037	72,195	659	1,800	500/D

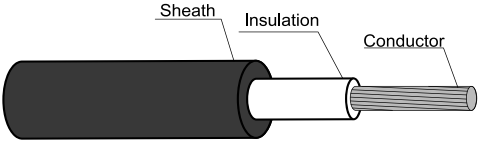
C : Packing in Coil
D : Packing in Drum

Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	3.7006	0.4930	0.1549	3.7039
16	2.2949	0.4734	0.1487	2.2997
25	1.4419	0.4676	0.1469	1.4493
35	1.0430	0.4584	0.1440	1.0529
50	0.7703	0.4617	0.1451	0.7838
70	0.5325	0.4414	0.1387	0.5502
95	0.3847	0.4377	0.1375	0.4086
120	0.3043	0.4321	0.1358	0.3332
150	0.2479	0.4319	0.1357	0.2826
185	0.1976	0.4290	0.1348	0.2392
240	0.1509	0.4261	0.1339	0.2017
300	0.1210	0.4244	0.1333	0.1801
400	0.0946	0.4206	0.1321	0.1625
500	0.0741	0.4217	0.1325	0.1518

FD-0.6/1KV-AL-CV

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Single-core : Sizes 10 mm² up to 500 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
Single-core : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced (2D)	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
1	10	6	0.7	1.4	8.5	3.08	1,250	72	55	54	64	96	500/D
	16	6	0.7	1.4	9.4	1.91	1,000	95	74	72	82	126	500/D
	25	6	0.9	1.4	11.0	1.20	1,050	128	100	97	107	163	500/D
	35	6	0.9	1.4	12.0	0.868	900	156	122	119	128	196	500/D
	50	6	1.0	1.4	13.5	0.641	850	189	149	145	151	232	500/D
	70	12	1.1	1.4	15.5	0.443	800	240	190	184	185	285	500/D
	95	15	1.1	1.5	17.0	0.320	650	295	236	228	221	342	500/D
	120	15	1.2	1.5	19.0	0.253	650	345	277	268	252	390	500/D
	150	15	1.4	1.6	21	0.206	700	393	317	308	282	436	500/D
	185	30	1.6	1.6	23	0.164	700	458	371	360	321	495	500/D
	240	30	1.7	1.7	26	0.125	650	548	446	432	373	575	500/D
	300	30	1.8	1.8	29	0.100	600	633	518	501	420	649	500/D
	400	53	2.0	1.9	32	0.0778	600	745	612	591	481	743	500/D
	500	53	2.2	2.0	36	0.0605	600	878	724	698	550	850	500/D

D : Packing in drum

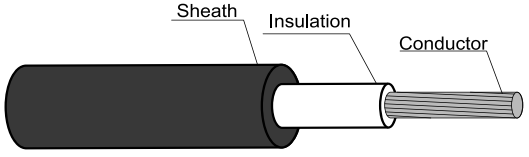
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

C

FD-0.6/1KV-AL-CV

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Single-core : Sizes 10 mm² up to 500 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
Single-core : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

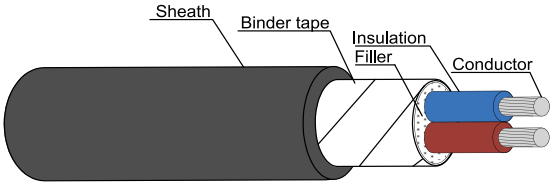
Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	10	3.9489	3.9489	3.9489	0.5529	0.4143	0.3681	0.1737	0.1302	0.1156	3.9527	3.9510	3.9506
	16	2.4488	2.4489	2.4489	0.5267	0.3881	0.3419	0.1655	0.1219	0.1074	2.4544	2.4519	2.4512
	25	1.5386	1.5386	1.5386	0.5141	0.3755	0.3292	0.1615	0.1180	0.1034	1.5470	1.5431	1.5421
	35	1.1129	1.1130	1.1130	0.5002	0.3616	0.3154	0.1571	0.1136	0.0991	1.1240	1.1188	1.1174
	50	0.8219	0.8220	0.8220	0.4921	0.3535	0.3072	0.1546	0.1110	0.0965	0.8364	0.8295	0.8277
	70	0.5681	0.5682	0.5683	0.4707	0.3321	0.2859	0.1479	0.1043	0.0898	0.5871	0.5777	0.5753
	95	0.4105	0.4106	0.4107	0.4635	0.3248	0.2786	0.1456	0.1020	0.0875	0.4356	0.4231	0.4199
	120	0.3247	0.3248	0.3250	0.4576	0.3190	0.2728	0.1438	0.1002	0.0857	0.3551	0.3399	0.3361
	150	0.2645	0.2647	0.2648	0.4571	0.3185	0.2723	0.1436	0.1001	0.0855	0.3010	0.2830	0.2783
	185	0.2107	0.2110	0.2112	0.4526	0.3139	0.2677	0.1422	0.0986	0.0841	0.2542	0.2329	0.2273
	240	0.1609	0.1612	0.1615	0.4470	0.3083	0.2621	0.1404	0.0969	0.0823	0.2135	0.1881	0.1813
	300	0.1290	0.1294	0.1298	0.4432	0.3046	0.2584	0.1392	0.0957	0.0812	0.1898	0.1610	0.1531
	400	0.1008	0.1013	0.1018	0.4394	0.3008	0.2546	0.1381	0.0945	0.0800	0.1709	0.1386	0.1295
	500	0.0789	0.0796	0.0802	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1582	0.1229	0.1126

C

FD-0.6/1KV-AL-CV

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
2 cores : Blue, Brown

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	10	6	0.7	1.8	15.5	3.08	1,250	61	77	220	500/D
	16	6	0.7	1.8	17.0	1.91	1,000	82	100	290	500/D
	25	6	0.9	1.8	21	1.20	1,050	110	130	400	500/D
	35	6	0.9	1.8	23	0.868	900	134	154	500	500/D
	50	6	1.0	1.8	25	0.641	850	164	180	600	500/D
	70	12	1.1	1.8	29	0.443	800	208	220	800	500/D
	95	15	1.1	2.0	33	0.320	650	254	365	1,100	500/D
	120	15	1.2	2.1	37	0.253	650	296	300	1,300	500/D
	150	15	1.4	2.2	40	0.206	700	338	335	1,600	500/D
	185	30	1.6	2.3	45	0.164	700	392	380	1,900	500/D
	240	30	1.7	2.5	51	0.125	650	464	440	2,500	500/D
	300	30	1.8	2.7	56	0.100	600	531	496	3,000	500/D
	400	53	2.0	2.9	63	0.0778	600	619	565	3,800	500/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

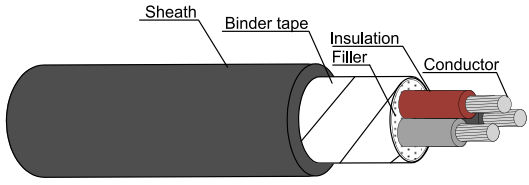
D : Packing in drum

C

FD-0.6/1KV-AL-CV

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
3 cores : Brown, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	10	6	0.7	1.8	16.0	3.08	1,250	51	65	260	500/D
	16	6	0.7	1.8	18.0	1.91	1,000	68	84	350	500/D
	25	6	0.9	1.8	22	1.20	1,050	91	110	490	500/D
	35	6	0.9	1.8	24	0.868	900	113	130	650	500/D
	50	6	1.0	1.8	27	0.641	850	136	154	750	500/D
	70	12	1.1	1.9	31	0.443	800	172	188	1100	500/D
	95	15	1.1	2.0	35	0.320	650	210	225	1400	500/D
	120	15	1.2	2.1	39	0.253	650	248	255	1700	500/D
	150	15	1.4	2.3	43	0.206	700	283	285	2100	500/D
	185	30	1.6	2.4	48	0.164	700	329	325	2600	500/D
	240	30	1.7	2.6	55	0.125	650	389	375	3300	500/D
	300	30	1.8	2.8	60	0.100	600	446	420	4000	500/D
	400	53	2.0	3.1	68	0.078	600	519	480	5000	500/D

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

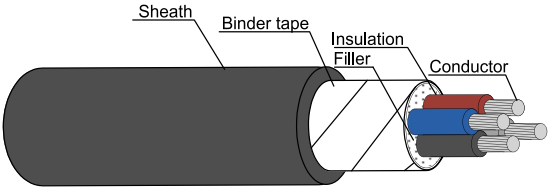
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

FD-0.6/1KV-AL-CV

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
4 cores : Blue, Brow, Black, Grey

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	10	6	0.7	1.8	17.5	3.08	1,250	51	65	310	500/D
	16	6	0.7	1.8	20	1.91	1,000	68	84	420	500/D
	25	6	0.9	1.8	24	1.20	1,050	91	110	600	500/D
	35	6	0.9	1.8	27	0.868	900	113	130	750	500/D
	50	6	1.0	1.9	30	0.641	850	136	154	1000	500/D
	70	12	1.1	2.0	35	0.443	800	172	188	1400	500/D
	95	15	1.1	2.1	39	0.320	650	210	225	1700	500/D
	120	15	1.2	2.3	44	0.253	650	248	255	2200	500/D
	150	15	1.4	2.4	48	0.206	700	283	285	2600	500/D
	185	30	1.6	2.6	54	0.164	700	329	325	3300	500/D
	240	30	1.7	2.8	61	0.125	650	389	375	4200	500/D
	300	30	1.8	3.0	67	0.100	600	446	420	5000	500/D
	400	53	2.0	3.3	76	0.0778	600	519	480	6500	300/D

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

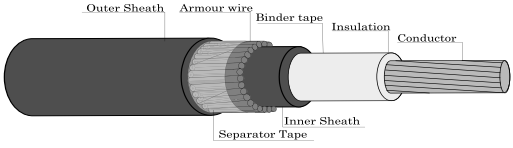
D : Packing in drum

C

FD-0.6/1KV-AL-CV-AWA

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 500 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
Single-core : Natural (Translucent)

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Aluminium wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Inner Sheath thickness approx.	Dia. Of inner sheath approx.	Diameter of steel wire armor nominal	Outer sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
											Spaced	Touching	Trefoil			
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
1	10	6	0.7	1.2	8.1	1.25	1.8	14.5	3.08	1,250	80	66	64	96	270	500/D
	16	6	0.7	1.2	9.0	1.25	1.8	15.5	1.91	1,000	105	86	84	125	310	500/D
	25	6	0.9	1.2	10.5	1.25	1.8	17.0	1.20	1,050	139	114	111	161	380	500/D
	35	6	0.9	1.2	11.5	1.25	1.8	18.5	0.868	900	169	139	135	194	440	500/D
	50	6	1.0	1.2	13.0	1.25	1.8	19.5	0.641	850	202	167	162	229	500	500/D
	70	12	1.1	1.2	15.0	1.25	1.8	22	0.443	800	253	209	203	281	600	500/D
	95	15	1.1	1.2	16.5	1.60	1.8	24	0.320	650	312	258	251	339	800	500/D
	120	15	1.2	1.2	18.5	1.60	1.8	26	0.253	650	362	300	291	387	900	500/D
	150	15	1.4	1.2	20	1.60	1.8	27	0.206	700	410	341	331	432	1,000	500/D
	185	30	1.6	1.2	22	2.00	1.9	31	0.164	700	479	400	388	492	1,300	500/D
	240	30	1.7	1.2	25	2.00	1.9	33	0.125	650	569	476	461	573	1,600	500/D
	300	30	1.8	1.2	28	2.00	2.0	36	0.100	600	655	550	532	648	1,900	500/D
	400	53	2.0	1.2	31	2.00	2.2	40	0.0778	600	766	644	624	741	2,300	500/D
	500	53	2.2	1.2	34	2.00	2.3	43	0.0605	600	897	756	731	848	2,800	500/D

C

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm^2)												
1	10	3.9489	3.9489	3.9489	0.6639	0.5252	0.4790	0.2086	0.1650	0.1505	3.9544	3.9523	3.9518
	16	2.4488	2.4488	2.4489	0.6293	0.4907	0.4445	0.1977	0.1542	0.1396	2.4568	2.4537	2.4528
	25	1.5386	1.5386	1.5386	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	1.5502	1.5455	1.5442
	35	1.1129	1.1130	1.1130	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	1.1279	1.1217	1.1200
	50	0.8219	0.8220	0.8220	0.5687	0.4301	0.3838	0.1787	0.1351	0.1206	0.8411	0.8330	0.8308
	70	0.5681	0.5682	0.5682	0.5393	0.4007	0.3544	0.1694	0.1259	0.1114	0.5929	0.5819	0.5790
	95	0.4105	0.4106	0.4106	0.5278	0.3891	0.3429	0.1658	0.1223	0.1077	0.4427	0.4284	0.4245
	120	0.3247	0.3247	0.3248	0.5167	0.3781	0.3319	0.1623	0.1188	0.1043	0.3630	0.3458	0.3411
	150	0.2645	0.2646	0.2647	0.5101	0.3715	0.3252	0.1602	0.1167	0.1022	0.3092	0.2892	0.2837
	185	0.2107	0.2108	0.2110	0.5082	0.3695	0.3233	0.1596	0.1161	0.1016	0.2644	0.2407	0.2341
	240	0.1608	0.1610	0.1612	0.4960	0.3573	0.3111	0.1558	0.1123	0.0977	0.2239	0.1963	0.1885
	300	0.1289	0.1292	0.1294	0.4894	0.3507	0.3045	0.1537	0.1102	0.0957	0.2007	0.1698	0.1609
	400	0.1007	0.1011	0.1014	0.4836	0.3450	0.2987	0.1519	0.1084	0.0939	0.1823	0.1482	0.1381
	500	0.0788	0.0793	0.0797	0.4760	0.3373	0.2911	0.1495	0.1060	0.0915	0.1690	0.1324	0.1213

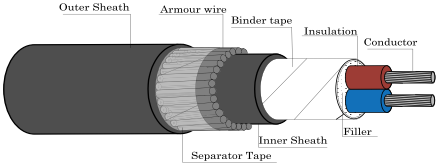
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

FD-0.6/1KV-AL-CV-SWA

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
2 cores : Blue, Brown

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	10	6	0.7	1.2	14.0	1.25	1.8	20	3.08	1,250	64	72	700	500/D
	16	6	0.7	1.2	16.0	1.60	1.8	23	1.91	1,000	86	94	950	500/D
	25	6	0.9	1.2	19.0	1.60	1.8	26	1.20	1,050	114	121	1200	500/D
	35	6	0.9	1.2	22	2.00	1.8	29	0.868	900	141	146	1600	500/D
	50	6	1.0	1.2	24	2.00	1.9	32	0.641	850	169	172	1800	500/D
	70	12	1.1	1.2	28	2.00	2.0	37	0.443	800	213	211	2,200	500/D
	95	15	1.1	1.2	31	2.00	2.1	40	0.320	650	260	252	2,600	500/D
	120	15	1.2	1.2	35	2.00	2.3	44	0.253	650	302	286	3,100	500/D
	150	15	1.4	1.3	38	2.50	2.4	49	0.206	700	344	320	3,900	500/D
	185	30	1.6	1.3	43	2.50	2.6	54	0.164	700	396	362	4,600	500/D
	240	30	1.7	1.4	49	2.50	2.7	60	0.125	650	469	419	5,500	500/D
	300	30	1.8	1.5	54	2.50	2.9	65	0.100	600	537	472	6,500	500/D
	400	53	2.0	1.7	61	2.50	3.2	73	0.0778	600	622	536	7,500	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

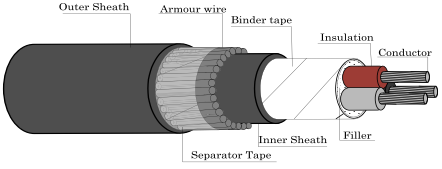
D : Packing in drum

C

FD-0.6/1KV-AL-CV-SWA

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
3 cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of Inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	10	6	0.7	1.2	15.0	1.25	1.8	21	3.08	1,250	55	61	750	500/D
	16	6	0.7	1.2	17.0	1.60	1.8	24	1.91	1,000	73	79	1050	500/D
	25	6	0.9	1.2	21	1.60	1.8	28	1.20	1,050	97	102	1350	500/D
	35	6	0.9	1.2	23	2.00	1.8	31	0.868	900	120	123	1750	500/D
	50	6	1.0	1.2	26	2.00	2.0	34	0.641	850	144	145	2100	500/D
	70	12	1.1	1.2	30	2.00	2.1	39	0.443	800	181	177	2,600	500/D
	95	15	1.1	1.2	33	2.00	2.2	42	0.320	650	221	212	3,000	500/D
	120	15	1.2	1.2	37	2.50	2.3	48	0.253	650	258	242	4,000	500/D
	150	15	1.4	1.3	41	2.50	2.5	52	0.206	700	292	269	4,600	500/D
	185	30	1.6	1.4	46	2.50	2.7	58	0.164	700	336	304	5,500	500/D
	240	30	1.7	1.5	52	2.50	2.9	64	0.125	650	397	351	6,500	500/D
	300	30	1.8	1.6	58	2.50	3.0	70	0.100	600	454	394	7,500	300/D
	400	53	2.0	1.8	65	3.15	3.4	80	0.0778	600	524	444	10,000	300/D

Number of cores	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

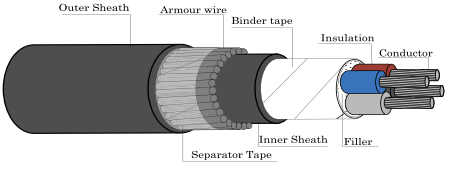
Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

FD-0.6/1KV-AL-CV-SWA

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
4 cores : Blue, Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of Inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	10	6	0.7	1.2	16.0	1.60	1.8	23	3.08	1,250	55	61	1,000	500/D
	16	6	0.7	1.2	18.5	1.60	1.8	26	1.91	1,000	73	79	1,200	500/D
	25	6	0.9	1.2	22	2.00	1.8	31	1.20	1,050	97	102	1,700	500/D
	35	6	0.9	1.2	25	2.00	1.9	34	0.868	900	120	123	2,000	500/D
	50	6	1.0	1.2	28	2.00	2.1	37	0.641	850	144	145	2,400	500/D
	70	12	1.1	1.2	33	2.00	2.2	42	0.443	800	181	177	3,000	500/D
	95	15	1.1	1.2	37	2.50	2.3	47	0.320	650	221	212	4,000	500/D
	120	15	1.2	1.3	42	2.50	2.5	52	0.253	650	258	242	4,700	500/D
	150	15	1.4	1.4	46	2.50	2.7	57	0.206	700	292	269	5,500	500/D
	185	30	1.6	1.5	52	2.50	2.8	63	0.164	700	336	304	6,500	500/D
	240	30	1.7	1.6	58	2.50	3.1	71	0.125	650	397	351	8,000	300/D
	300	30	1.8	1.7	65	3.15	3.3	79	0.100	600	454	394	10,000	300/D
	400	53	2.0	1.9	73	3.15	3.4	87	0.0778	600	524	444	12,000	200/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

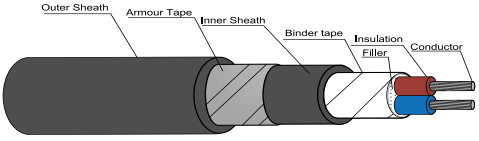
D : Packing in drum

C

FD-0.6/1KV-AL-CV-STA

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
2 cores : Blue, Brown

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. of Inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	10	6	0.7	1.2	14.0	0.2	1.8	19.0	3.08	1,250	63	71	500	500/D
	16	6	0.7	1.2	16.0	0.2	1.8	21	1.91	1,000	84	93	600	500/D
	25	6	0.9	1.2	19.0	0.2	1.8	24	1.20	1,050	111	120	750	500/D
	35	6	0.9	1.2	21	0.2	1.8	27	0.868	900	136	144	900	500/D
	50	6	1.0	1.2	24	0.2	1.9	29	0.641	850	164	170	1,100	500/D
	70	12	1.1	1.2	28	0.2	2.0	33	0.443	800	207	208	1,400	500/D
	95	15	1.1	1.2	31	0.5	2.1	38	0.320	650	256	250	1,900	500/D
	120	15	1.2	1.2	35	0.5	2.3	42	0.253	650	297	285	2,300	500/D
	150	15	1.4	1.3	39	0.5	2.4	46	0.206	700	337	318	2,700	500/D
	185	30	1.6	1.3	43	0.5	2.6	51	0.164	700	388	359	3,200	500/D
	240	30	1.7	1.4	49	0.5	2.8	57	0.125	650	461	417	3,900	500/D
	300	30	1.8	1.5	54	0.5	2.9	62	0.100	600	530	470	4,600	500/D
	400	53	2.0	1.7	61	0.5	3.2	70	0.0778	600	615	535	5,500	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

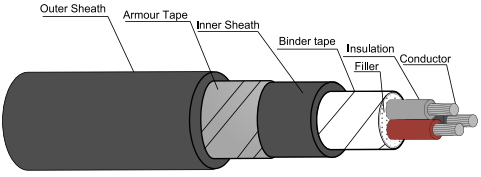
D : Packing in drum

C

FD-0.6/1KV-AL-CV-STA

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
3 cores : Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. of Inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
3	10	6	0.7	1.2	15.0	0.2	1.8	20	3.08	1,250	53	60	550	500/D
	16	6	0.7	1.2	17.0	0.2	1.8	22	1.91	1,000	71	78	700	500/D
	25	6	0.9	1.2	21	0.2	1.8	26	1.20	1,050	95	101	800	500/D
	35	6	0.9	1.2	23	0.2	1.8	28	0.868	900	116	121	1,100	500/D
	50	6	1.0	1.2	26	0.2	1.9	31	0.641	850	140	143	1,300	500/D
	70	12	1.1	1.2	30	0.2	2.1	36	0.443	800	176	176	1,700	500/D
	95	15	1.1	1.2	33	0.5	2.2	40	0.320	650	217	211	2,300	500/D
	120	15	1.2	1.2	37	0.5	2.4	44	0.253	650	252	240	2,700	500/D
	150	15	1.4	1.3	41	0.5	2.5	49	0.206	700	287	268	3,200	500/D
	185	30	1.6	1.4	46	0.5	2.7	54	0.164	700	331	304	3,900	500/D
	240	30	1.7	1.5	52	0.5	2.9	61	0.125	650	393	352	4,900	500/D
	300	30	1.8	1.6	58	0.5	3.1	67	0.100	600	451	397	6,000	500/D
	400	53	2.0	1.8	65	0.5	3.3	75	0.0778	600	525	453	7,000	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

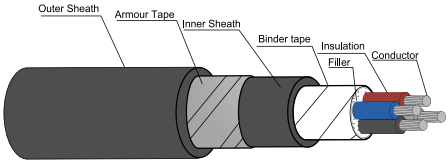
D : Packing in drum

C

FD-0.6/1KV-AL-CV-STA

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium
Multi-core : Sizes 10 mm² up to 400 mm²

Insulation : Cross-Linked polyethylene (XLPE)

Core identification
4 cores : Blue, Brown, Black, Grey

Inner Sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. of Inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	10	6	0.7	1.2	16.0	0.2	1.8	21	3.08	1,250	53	60	650	500/D
	16	6	0.7	1.2	18.5	0.2	1.8	24	1.91	1,000	71	78	800	500/D
	25	6	0.9	1.2	23	0.2	1.8	28	1.20	1,050	95	101	1,050	500/D
	35	6	0.9	1.2	25	0.2	1.9	31	0.868	900	116	121	1,250	500/D
	50	6	1.0	1.2	28	0.2	2.0	34.0	0.641	850	140	143	1,600	500/D
	70	12	1.1	1.2	33	0.5	2.2	40	0.443	800	176	176	2,300	500/D
	95	15	1.1	1.2	37	0.5	2.3	44	0.320	650	217	211	2,800	500/D
	120	15	1.2	1.3	42	0.5	2.5	49	0.253	650	252	240	3,300	500/D
	150	15	1.4	1.4	46	0.5	2.7	54	0.206	700	287	268	3,400	500/D
	185	30	1.6	1.5	52	0.5	2.9	60	0.164	700	331	304	4,800	500/D
	240	30	1.7	1.6	58	0.5	3.1	67	0.125	650	393	352	6,000	500/D
	300	30	1.8	1.7	65	0.5	3.3	74	0.100	600	451	397	7,000	300/D
	400	53	2.0	1.9	73	0.5	3.6	83	0.0778	600	525	453	9,000	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

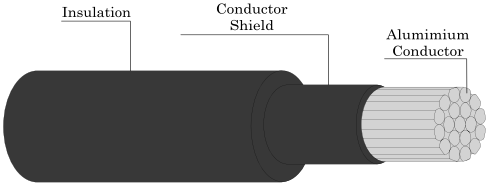
D : Packing in drum

C

24KV-OC

24KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires
Sizes 35 mm² up to 185mm²

Conductor Screen : Semi-Conductive Cross-linked polyethylene (XLPE) compundoss-linked

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 24,000 Volts

Testing voltage : 11,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line

Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of Conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
35	6	7.05	1.8	12.0	0.868	900	5,591	140	170	1000/D
50	6	8.11	2.2	14.0	0.641	880	7,313	170	220	1000/D
70	12	9.73	2.1	15.0	0.443	800	10,420	215	290	1000/D
95	15	11.43	2.5	18.0	0.320	750	14,098	270	400	1000/D
120	15	13.05	2.6	19.5	0.253	700	18,518	310	490	1000/D
150	15	14.37	2.6	21.0	0.206	650	22,457	355	550	1000/D
185	30	16.08	2.55	23.0	0.164	600	28,974	410	700	1000/D

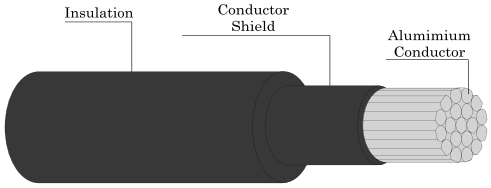
D : Packing in Drum

C

33KV-OC

33KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor Screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 33,000 Volts

Testing voltage : 17,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line

Nominal cross sectional area (mm^2)	Number of wire minimum (No.)	Diameter of Conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
35	6	7.05	3.0	14.5	0.868	1,350	5,591	145	220	1000/D
50	6	8.11	3.2	16.5	0.641	1,300	7,313	175	280	1000/D
70	12	9.73	3.2	18.0	0.443	1,200	10,420	220	350	1000/D
95	15	11.43	3.5	20.0	0.320	1,100	14,098	270	460	1000/D
120	15	13.05	3.6	22.0	0.253	1,000	18,518	315	550	1000/D
150	15	14.37	3.6	23.0	0.206	950	22,457	360	650	1000/D
185	30	16.08	3.9	26.0	0.164	900	28,974	415	800	1000/D

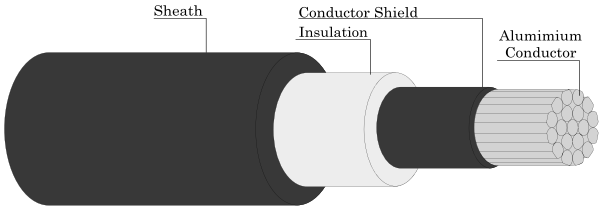
D : Packing in Drum

C

15KV-CC

15KV 90°C SPACED AERIAL CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor Screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 15,000 Volts

Testing voltage : 27,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line

Nominal cross sectional area (mm^2)	Number of wire minimum (No.)	Diameter of Conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
35	6	7.05	1.91	1.91	16.5	0.868	1,750	5,591	164	260	500/D
50	6	8.11	1.91	1.91	18.0	0.641	1,550	7,313	198	320	500/D
70	12	9.73	1.91	1.91	19.5	0.443	1,400	10,420	250	390	500/D
95	15	11.43	1.91	1.91	21.0	0.320	1,250	14,098	306	490	500/D
120	15	13.05	1.91	1.91	23.0	0.253	1,150	18,518	355	600	500/D
150	15	14.37	1.91	1.91	24.0	0.206	1,050	22,457	405	650	500/D
185	30	16.08	1.91	1.91	26.0	0.164	980	28,974	468	800	500/D
240	30	18.57	1.91	1.91	28.0	0.125	850	37,506	560	1000	500/D

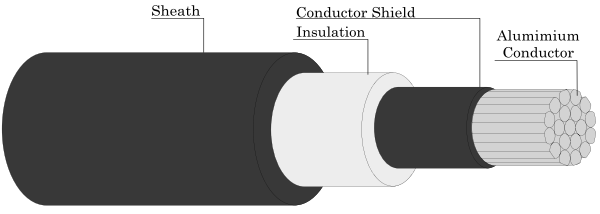
D : Packing in Drum

C

25KV-CC

25KV 90°C SPACED AERIAL CABLE

ICEA S-66-524
ICEA S-93-639
TIS 2341-2555



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor Screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 25,000 Volts

Testing voltage : 38,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line

Nominal cross sectional area (mm^2)	Number of wire minimum (No.)	Diameter of Conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
35	6	7.05	3.175	3.175	22	0.868	2,500	5,591	165	400	500/D
50	6	8.11	3.175	3.175	23	0.641	2,250	7,313	199	460	500/D
70	12	9.73	3.175	3.175	25	0.443	2,050	10,420	250	550	500/D
95	15	11.43	3.175	3.175	26	0.320	1,850	14,098	305	650	500/D
120	15	13.05	3.175	3.175	28	0.253	1,700	18,518	353	750	500/D
150	15	14.37	3.175	3.175	29	0.206	1,600	22,457	402	850	500/D
185	30	16.08	3.175	3.175	31	0.164	1,450	28,974	464	1,000	500/D
240	30	18.57	3.175	3.175	33	0.125	1,300	37,506	553	1,200	500/D

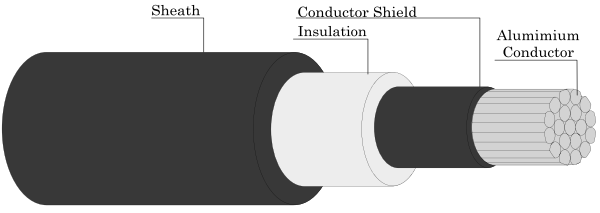
D : Packing in Drum

C

35KV-CC

35KV 90°C SPACED AERIAL CABLE

ICEA S-66-524
ICEA S-93-639
TIS 2341-2555



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor Screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90 °C
: Circuit voltage not exceeding 35,000 Volts

Testing voltage : 49,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line

Nominal cross sectional area (mm^2)	Number of wire minimum (No.)	Diameter of Conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
50	6	8.11	4.445	3.175	26	0.641	2,500	7,313	200	550	500/D
70	12	9.73	4.445	3.175	27	0.443	2,300	10,420	251	650	500/D
95	15	11.43	4.445	3.175	29	0.320	2,100	14,098	306	750	500/D
120	15	13.05	4.445	3.175	31	0.253	1,950	18,518	355	900	500/D
150	15	14.37	4.445	3.175	32	0.206	1,800	22,457	403	1,000	500/D
185	30	16.08	4.445	3.175	34	0.164	1,690	28,974	464	1,100	500/D
240	30	18.57	4.445	3.175	36	0.125	1,500	37,506	552	1,400	500/D

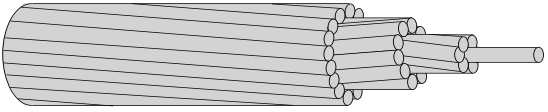
D : Packing in Drum

C

AAC

ALL ALUMINIUM STRANDED CONDUCTOR

TIS 85-2548



CABLE STRUCTURE

Conductor : Hard drawn copper wires, concentric stranded conductor
Size 16 mm² up to 1,000 mm²

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line

Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous currunt rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
16	7/1.70	5.10	1.802	290	110	44	3000/D
25	7/2.14	6.42	1.138	440	145	70	3000/D
35	7/2.52	7.56	0.820	585	180	95	3000/D
50	7/3.02	9.06	0.571	805	225	140	2500/D
50	19/1.83	9.15	0.5758	890	225	140	2500/D
70	19/2.15	10.75	0.4171	1,205	270	190	2500/D
95	19/2.52	12.60	0.3036	1,585	340	260	2500/D
120	19/2.85	14.25	0.2374	1,980	390	330	2000/D
150	37/2.25	15.75	0.1960	2,570	455	400	2000/D
185	37/2.52	17.64	0.1563	3,085	550	500	2000/D
240	61/2.25	20.25	0.1192	4,015	625	650	1500/D
300	91/2.52	22.68	0.0950	4,820	710	850	1500/D
400	61/2.85	25.65	0.0743	6,025	855	1100	1000/D
500	61/3.25	29.25	0.0571	7,695	990	1400	1000/D
625	91/2.96	32.6	0.0463	9,694	1140	1700	500/D
800	91/3.35	36.85	0.0361	12,055	1340	2200	500/D
1000	91/3.74	41.14	0.0290	14,845	1540	2800	500/D

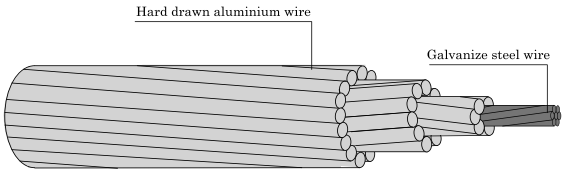
D : Packing in Drum

C

ACSR

ALL ALUMINIUM CONDUCTOR STEEL REINFORCED

TIS 85-2548



CABLE STRUCTURE

Conductor : Hard drawn copper wires, concentric stranded conductor
Size 16 mm² up to 680 mm²

Steel Core : Galvanized steel (Zinc coated), solid and concentric stranded
Size 2.5 mm² up to 85 mm²

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line

Nominal cross sectional area	Aluminium		Steel wire		Overall conductor diameter approx.	Conductor resistance at 20°C maximum	Breaking strength	Continuous currunt rating in free air at 40°C maximum	Cable weight approx.	Standard length
	Number and approx. diameter of wires	cross sectional area	Number and approx. diameter of wires	cross sectional area						
(mm^2)	(No./mm)	(mm^2)	(No./mm)	(mm^2)	(mm)	(Ω/km)	(kgf)	(A)	(kg/km)	(m)
16/2.5	6/1.80	15.3	1/1.80	2.54	5.40	1.880	592	90	60	4000/D
25/4	6/2.25	23.9	1/2.25	3.98	6.75	1.203	916	125	95	4000/D
35/6	6/2.70	34.4	1/2.70	5.73	8.10	0.8353	1,265	145	140	3000/D
50/8	6/3.20	48.3	1/3.20	8.04	9.60	0.5947	1,716	170	200	3000/D
50/30	12/2.33	51.2	7/2.33	29.85	11.50	0.5644	4,380	170	380	3000/D
70/12	26/1.85	69.9	7/1.44	11.40	11.50	0.4131	2,676	290	280	3000/D
95/15	26/2.15	94.4	7/1.67	15.33	13.50	0.3058	3,565	350	380	3000/D
95/55	12/3.20	96.5	7/3.20	56.30	16.00	0.2993	7,965	350	700	3000/D
120/20	26/2.44	121.6	7/1.90	19.85	15.50	0.2375	4,555	410	490	2000/D
120/70	12/3.60	122.1	7/3.60	71.25	18.00	0.2365	10,034	410	900	2000/D
125/30	30/2.33	127.9	7/2.33	29.85	16.00	0.2259	5,759	425	600	2000/D
150/25	26/2.70	148.9	7/2.10	24.25	17.00	0.1939	5,513	470	600	2000/D
170/40	30/2.70	171.8	7/2.70	40.08	18.50	0.1683	7,675	520	800	2000/D
185/30	26/3.00	183.8	7/2.33	29.85	18.50	0.1571	6,618	535	750	2000/D
210/35	26/3.20	209.1	7/2.49	34.09	20.00	0.1381	7,489	590	850	1500/D
210/50	30/3.00	212.1	7/3.00	49.48	21.00	0.1363	9,390	610	1,000	1500/D
230/10	24/3.50	230.9	7/2.33	29.85	21.00	0.1250	7,313	630	900	1500/D
240/40	26/3.45	243.1	7/2.68	39.49	21.00	0.1188	8,640	645	1,000	1500/D
265/35	24/3.74	263.7	7/2.49	34.10	22.00	0.1095	8,307	680	1,000	1000/D
300/50	26/3.86	304.3	7/3.00	49.50	24.00	0.0949	10,702	740	1,200	1000/D
305/40	54/2.68	304.6	7/2.68	39.50	24.00	0.0949	9,942	740	1,200	1000/D
380/50	54/3.00	381.7	7/3.00	49.50	27.00	0.0758	12,312	840	1,500	1000/D
435/55	54/3.20	434.3	7/3.20	56.30	28.00	0.0666	13,673	900	1,700	1000/D
490/65	54/3.40	490.3	7/3.40	63.60	30.00	0.0590	15,343	960	1,900	1000/D
550/70	54/3.60	549.7	7/3.60	71.30	32.00	0.0526	17,096	1,020	2,100	500/D
680/85	54/4.00	678.6	19/2.40	86.00	36.00	0.0426	12,040	1,150	2,600	500/D

D : Packing in Drum

C

Electrical Insulation Tape

VTA	RoHS PVC PLASTIC ELECTRICAL INSULATION TAPE	D1

D

VTA

TIS 386-2531

RoHS PVC PLASTIC ELECTRICAL INSULATION TAPE



SCOPE :

This specification covers RoHS PVC plastic electrical insulation tape to be used in electrical service at temperature 0 ~ 80° C.

The tape shall be used for insulation of jointed splices of cables and wires. The tape must have good insulation properties, heat, weather, flame retardant and RoHS materials for environment, suitable for tropical country.

STANDARD :

The RoHS PVC plastic electrical insulation tape shall be manufactured and tested in accordance with TIS 386-2531

Dimension

1) Thickness (mm) 0.125 ± 0.025, 0.18 ± 0.025
2) Width (mm) 19 ± 1.0
3) Length (m) 10 + 1.0 - 0

PROPERTY AND REQUIREMENTS		PACKING	
1) Electrolytic corrosion after 24h		The RoHS PVC plastic electrical insulation tape	
at 27 ± 2° Cand 93 ± 2% relative humidity	(Ω) ≥ 10^{11}	shall be packing in paper core Cellophane and	
2) Penetration at elevated temperature	(°C) ≥ 50	shrinkage wrapped.	
3) Flammability	non-ignitable or		
	self-extinguishing	1) Dimension of each roll	
4) Thermal endurance	no-crack	: Diameter (cm)	5.8
5) Tensile strength (N/10 mm width/mm thick.)	≥ 150	Width (cm)	1.9
6) Adhesion to steel (N/10 mm width/mm thick.)	≥ 1.8	2) Weight of each roll (approx.)	
7) Adhesion to backing (N/10 mm width/mm thick.)	≥ 1.8	: Net (kg)	0.036
8) Shear adhesion after immersion in water	(N) ≥ 18.0	Gross(kg)	0.037
9) Electric strength		3) Number of roll in each package (Rolls)	10
- after 24 hour at 27 ± 2° C		4) Number of package in one case (Package)	10
and 65 ± 5% relative humidity	(kV/mm) ≥ 40	5) Dimension of each case : WxLxH (cm)	12.5x30x19.5
- after 24 hour at 27 ± 2° C		6) Gross weight of each case (approx.) (kg)	4
and 93 ± 2% relative humidity	(kV/mm) ≥ 35		

D

Thai-Yazaki Electric Wire Co., Ltd

Head Office/Sale Office:

21st Floor, O-NES Tower, 6 Sukhumvit Soi 6, Klongtoey Sub-District,
Klongtoey District, Bangkok, 10110 Thailand
Tel : 0-26532550 Fax : 0-26532613, 0-26532614
Tax Identification No.0105505001539

Factory:
283 Moo 1, Suksawad Road, Bangplakot, Prasamut Chedi, Samuthprakarn, THAILAND
Tel: +66(0) 2463-0058

Website: www.thaiyazaki-electricwire.co.th
https://www.facebook.com/ThaiYazakiElectricWire

Website

Facebook