



SPECIFICATION

For Electric Wires and Cables



TIS 11-2531
TIS 293-2541
TIS 85-2548



TIS 64-2517
TIS 85-2522
TIS 86-2522
TIS 2143-2546



ISO 9001
QMS09006/1200



QMS 002



FUHRER WIRE AND CABLE CO., LTD.

**Technical Data
For Electric Wires and Cables**

COPPER CONDUCTOR CABLES

Page 4-46

ALUMINIUM CONDUCTOR CABLES

Page 47-67

TECHNICAL DATA AND GENERAL INFORMATION

Page 68-77

INDEX

COPPER CONDUCTOR CABLES

Building Wires and Cables	PAGE
IV	
300 V 70°C PVC INSULATED, SINGLE CORE	5
THW, MEA TYPE A	
750 V 70°C PVC INSULATED, SINGLE CORE	7
VAF	
300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE	9
VAF-GRD	
300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE	11
Low Voltage Power Cables	
VVR	
300 V 70°C PVC INSULATED AND SHEATHED ROUND TYPE	14
NYY, MEA TYPE C	
750 V 70°C PVC INSULATED AND DOUBLE SHEATHED ROUND TYPE	16
0.6/1 KV-CV	
600V/1000V 90°C CROSS-LINKED POLYETHYLENE INSULATED, PVC SHEATHED POWER CABLE	20
Control Cables	
CVV	
600 V 70°C PVC INSULATED AND SHEATHED CONTROL CABLE	24
Flexible Wires And Cables	
VCT	
750 V 70 °C PVC INSULATED AND SHEATHED FLEXIBLE CABLE	33
VFF	
300 V 70 °C PVC INSULATED FLAT TYPE, FLEXIBLE CONDUCTOR	35
VKF	
300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE, FLEXIBLE CONDUCTOR	37
VSF	
300 V 70 °C PVC INSULATED FLEXIBLE CONDUCTOR, SINGLE CORE	39

Automobile Wires And Cables

AV

60°C LOW VOLTAGE FLEXIBLE CONDUCTOR FOR AUTOMOBILE 42

Bare Conductor

FHC

HARD DRAWN COPPER STRANDED CONDUCTOR 45

ALUMINIUM CONDUCTOR CABLES

Building Wires And Cables

NAY

750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE 48

THW-A

750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE 50

THWA-C

750 V 70°C PVC INSULATED ALUMINIUM COMPACTED CONDUCTOR, SINGLE CORE 52

High Voltage Power Cables

PIC 25 KV

CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE 55

PIC 35 KV

CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE 57

SAC 25 KV

ALUMINUM STRANDED CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED AND SHEATHED SPACED AERIAL CABLE 59

SAC 35 KV

ALUMINUM STRANDED CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED AND SHEATHED SPACED AERIAL CABLE 61

Bare Conductor

AAC

ALL ALUMINIUM STRANDED CONDUCTOR 64

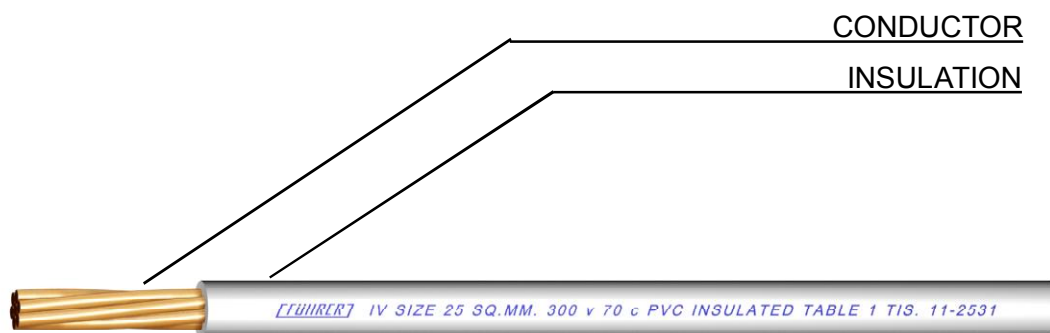
ACSR

ALL ALUMINIUM STRANDED CONDUCTOR 66

COPPER CONDUCTOR CABLES

Building Wires and Cables

	PAGE
IV	
300 V 70°C PVC INSULATED, SINGLE CORE	5-6
THW, MEA TYPE A	
750 V 70°C PVC INSULATED, SINGLE CORE	7-8
VAF	
300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE	9-10
VAF-GRD	
300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE	11-12

300 V 70°C PVC INSULATED, SINGLE CORE**CABLE STRUCTURE**

CONDUCTOR	: Solid and stranded annealed copper, Sizes. 0.5 mm ² up to 150 mm ²
INSULATION	: PVC Colour : Any color
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit Voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 1



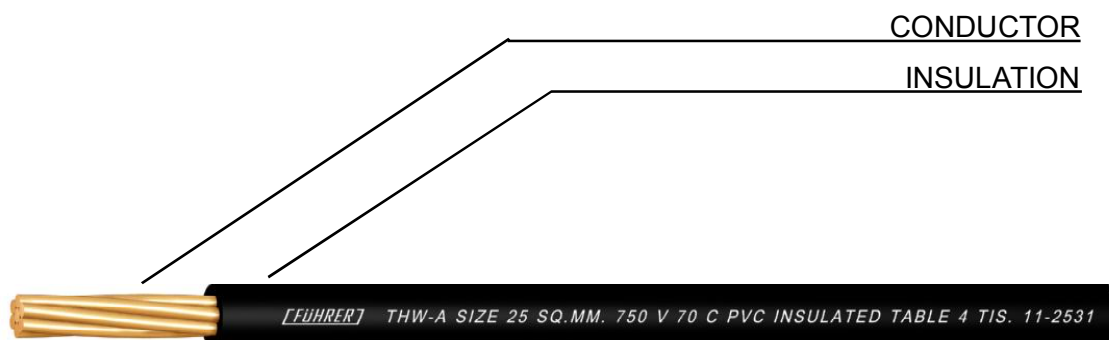
IV

Nominal Cross Section area	Number and diameter of wire	Insulation Thickness	Max. Overall diameter	Minimum insulation resistance at 70°C	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
(mm ²)	(No./mm)	(mm)	(mm)	(MΩ-Km)	(Ampere)	(Kg/Km)	(m)
0.5	1/0.80	0.6	2.6	0.0146	8	9	100/C
1	1/1.13	0.6	2.9	0.0115	12	14	100/C
1	7/0.40	0.6	3.1	0.0110	12	15	100/C
1.5	1/1.38	0.6	3.2	0.0100	16	19	100/C
1.5	7/0.50	0.6	3.4	0.0094	16	21	100/C
2.5	1/1.78	0.7	3.8	0.0092	23	31	100/C
2.5	7/0.67	0.7	4.1	0.0084	23	32	100/C
4	1/2.25	0.8	4.5	0.0086	31	47	100/C
4	7/0.85	0.8	4.9	0.0078	31	50	100/C
6	7/1.04	0.8	5.6	0.0066	42	70	100/C
10	7/1.35	1.0	7.0	0.0064	61	120	100/C
16	7/1.70	1.0	8.2	0.0053	83	180	100/C
25	7/2.14	1.2	10.0	0.0051	113	280	100/C
35	19/1.53	1.2	11.5	0.0043	141	370	100/C
50	19/1.78	1.4	13.0	0.0044	175	500	500/D
70	19/2.14	1.4	15.0	0.0037	221	700	500/D
95	19/2.52	1.6	17.5	0.0036	275	1,000	500/D
120	37/2.03	1.6	19.0	0.0032	321	1,200	500/D
150	37/2.25	1.8	21.5	0.0033	368	1,500	500/D

C: Packing in coil.

D: Packing in drum.

750 V 70°C PVC INSULATED, SINGLE CORE



CABLE STRUCTURE

CONDUCTOR	: Solid and stranded annealed copper, Sizes 0.5 mm ² up to 500 mm ²
INSULATION	: PVC - Any colour
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 volts
REFERENCE	: TIS 11-2531, Table 4



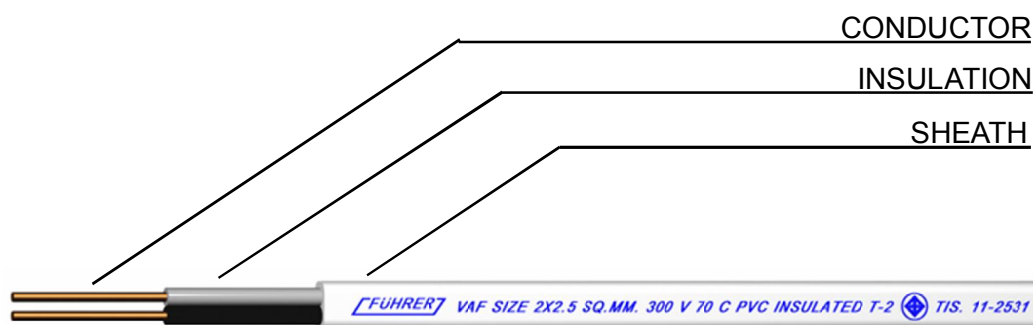
THW, MEA TYPE A

Nominal Cross Section area (mm ²)	Number and diameter of wire (No./mm)	Insulation Thickness (mm)	Max. Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
0.5	1 / 0.80	0.8	3.0	0.0175	9	11	100/C
1	1 / 1.13	0.8	3.3	0.0141	13	17	100/C
1	7 / 0.40	0.8	3.5	0.0135	13	18	100/C
1.5	1 / 1.38	0.8	3.6	0.0123	17	22	100/C
1.5	7 / 0.50	0.8	3.8	0.0116	17	24	100/C
2.5	1 / 1.78	0.8	4.0	0.0102	23	32	100/C
2.5	7 / 0.67	0.8	4.3	0.0093	23	35	100/C
4	1 / 2.25	0.9	4.8	0.0094	32	49	100/C
4	7 / 0.85	0.9	5.2	0.0085	32	50	100/C
6	7 / 1.04	0.9	5.8	0.0073	43	75	100/C
10	7 / 1.35	1.1	7.2	0.0069	60	120	100/C
16	7 / 1.70	1.1	8.4	0.0057	83	180	100/C
25	7 / 2.14	1.3	10.5	0.0054	114	280	100/C
35	19 / 1.53	1.3	11.5	0.0047	141	380	100/C
50	19 / 1.78	1.5	13.5	0.0046	175	500	500/D
70	19 / 2.14	1.5	15.5	0.0039	221	700	500/D
95	19 / 2.52	1.7	18.0	0.0038	275	1,000	500/D
120	37 / 2.03	1.7	19.5	0.0034	321	1,200	500/D
150	37 / 2.25	1.9	21.5	0.0034	367	1,500	500/D
185	37 / 2.52	2.1	24.0	0.0034	424	1,900	500/D
240	61 / 2.25	2.3	27.0	0.0033	505	2,500	500/D
300	61 / 2.52	2.5	30.0	0.0032	581	3,100	500/D
400	61 / 2.85	2.7	33.5	0.0030	675	3,900	500/D
500	61 / 3.20	3.1	38.5	0.0031	781	5,000	500/D

C: Packing in coil.

D: Packing in drum.

300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE



CABLE STRUCTURE

NUMBER OF CORE	: 2 cores
CONDUCTOR	: Solid and stranded annealed copper, Sizes 0.5 mm ² up to 16 mm ²
INSULATION	: PVC Colour : 2 cores – Light gray and Black
SHEATH	: PVC Colour : White
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 2



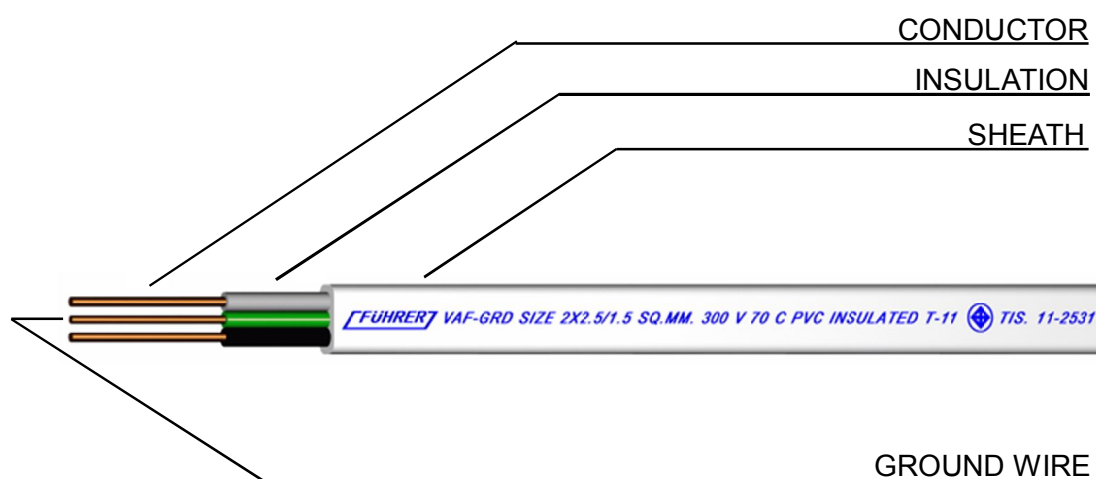
VAF

Number of core	Nominal cross section area	Number and diameter of wire	Insulation Thickness	Sheath Thickness	Approx. overall Diameter (mm)		Minimum insulation resistance at 70 °C	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
	(mm ²)				Lower limit	Upper limit				
2	0.5	1 / 0.80	0.6	0.9	3.6X5.6	4.4X6.8	0.0146	7	38	100/C
	1	1 / 1.13	0.6	0.9	4.0X6.2	4.8X7.4	0.0115	11	50	100/C
	1	7 / 0.43	0.6	0.9	4.0X6.4	5.0X7.8	0.0110	11	55	100/C
	1.5	1 / 1.38	0.6	1.2	4.8X7.2	5.8X8.6	0.0100	15	70	100/C
	1.5	7 / 0.53	0.6	1.2	4.9X7.4	6.0X9.2	0.0094	15	80	100/C
	2.5	1 / 1.78	0.7	1.2	5.4X8.4	6.4X10.0	0.0092	20	100	100/C
	2.5	7 / 0.67	0.7	1.2	5.6X8.8	6.8X10.5	0.0084	20	110	100/C
	4	1 / 2.25	0.8	1.2	6.0X9.8	7.2X11.5	0.0086	27	140	100/C
	4	7 / 0.85	0.8	1.2	6.2X10.0	7.6X12.0	0.0078	27	140	100/C
	6	7 / 1.04	0.8	1.2	6.8X11.0	8.2X13.5	0.0066	35	200	100/C
	10	7 / 1.35	0.9	1.2	8.0X13.0	9.4X16.0	0.0059	49	300	100/C
	16	7 / 1.70	1.0	1.2	9.2X16.0	11.0X18.5	0.0053	65	440	100/C

C: Packing in coil.

D: Packing in drum.

300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE



CABLE STRUCTURE

NUMBER OF CORE	: 2 cores with safety-ground
CONDUCTOR	: Solid and stranded annealed copper, sizes 1 mm ² up to 16 mm ²
GROUND WIRE	: Ground conductor size 1 mm ² up 6 mm ²
INSULATION	: PVC Colour : 2 core-Light grey and Black Ground core-Green/Yellow
SHEATH	: PVC Colour : White
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 volts
REFERENCE	: TIS 11-2531, Table 11

**VAF-GRD**

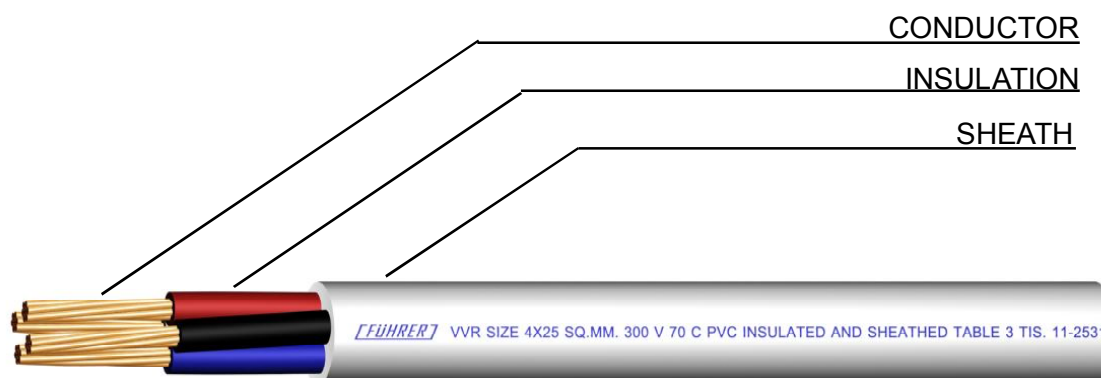
Number of core	Nominal cross sectional area	Number and diameter of wire	Insulation thickness	Nominal cross sectional area of ground conductor	Ground Insulation thickness	Sheath thickness	Overall diameter (mm)		Minimum insulation resistance at 70°C	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
	(mm ²)						Lower Limit	Upper Limit				
2	1	7/ 1.13	0.6	1	0.6	0.9	4.0X8.4	4.8X10.0	0.0115	11	75	100/C
	1	1/ 0.43	0.6	1	0.6	0.9	4.0X8.6	5.0X10.5	0.0110	11	80	100/C
	1.5	1/ 1.38	0.6	1	0.6	1.2	4.8X9.4	5.8X11.5	0.0100	15	100	100/C
	1.5	7/ 0.53	0.6	1	0.6	1.2	4.9X9.8	6.0X12.0	0.0094	15	110	100/C
	2.5	1/ 1.78	0.7	1.5	0.6	1.2	5.4X10.5	6.4X13.0	0.0092	20	140	100/C
	2.5	7/ 0.67	0.7	1.5	0.6	1.2	5.6X11.5	6.8X14.0	0.0084	20	140	100/C
	4	1/ 2.25	0.8	2.5	0.6	1.2	6.0X12.5	7.2X15.0	0.0086	27	190	100/C
	4	7/ 0.85	0.8	2.5	0.6	1.2	6.2X13.0	7.6X16.0	0.0078	27	210	100/C
	6	7/ 1.04	0.8	4	0.6	1.2	6.8X15.0	8.2X17.5	0.0066	35	270	100/C
	10	7/ 1.35	1.0	4	0.6	1.2	8.0X17.0	9.4X20.0	0.0059	49	380	100/C
	16	7/ 1.70	1.0	6	0.6	1.2	9.2X20.0	11.0X23	0.0053	65	550	100/C

C: Packing in coil.

COPPER CONDUCTOR CABLES

Low Voltage Power Cables

	PAGE
VVR 300 V 70°C PVC INSULATED AND SHEATHED ROUND TYPE	14-15
NY Y, MEA TYPE C 750 V 70°C PVC INSULATED AND DOUBLE SHEATHED ROUND TYPE	16-19
0.6/1 KV-CV 600V/1000V 90°C CROSS-LINKED POLYETHYLENE INSULATED, PVC SHEATHED POWER CABLE	20-22

300 V 70°C PVC INSULATED AND SHEATHED ROUND TYPE**CABLE STRUCTURE**

NUMBER OF CORE	: 2-4 cores
CONDUCTOR	: Solid and stranded annealed copper, Sizes. 0.5 mm ² up to 25 mm ²
INSULATION	: PVC Colour : 2 cores – Light gray and Black 3 cores – Light gray, Black and Red 4 cores – Light gray, Black, Red and Blue
SHEATH	: PVC Colour : White
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 3

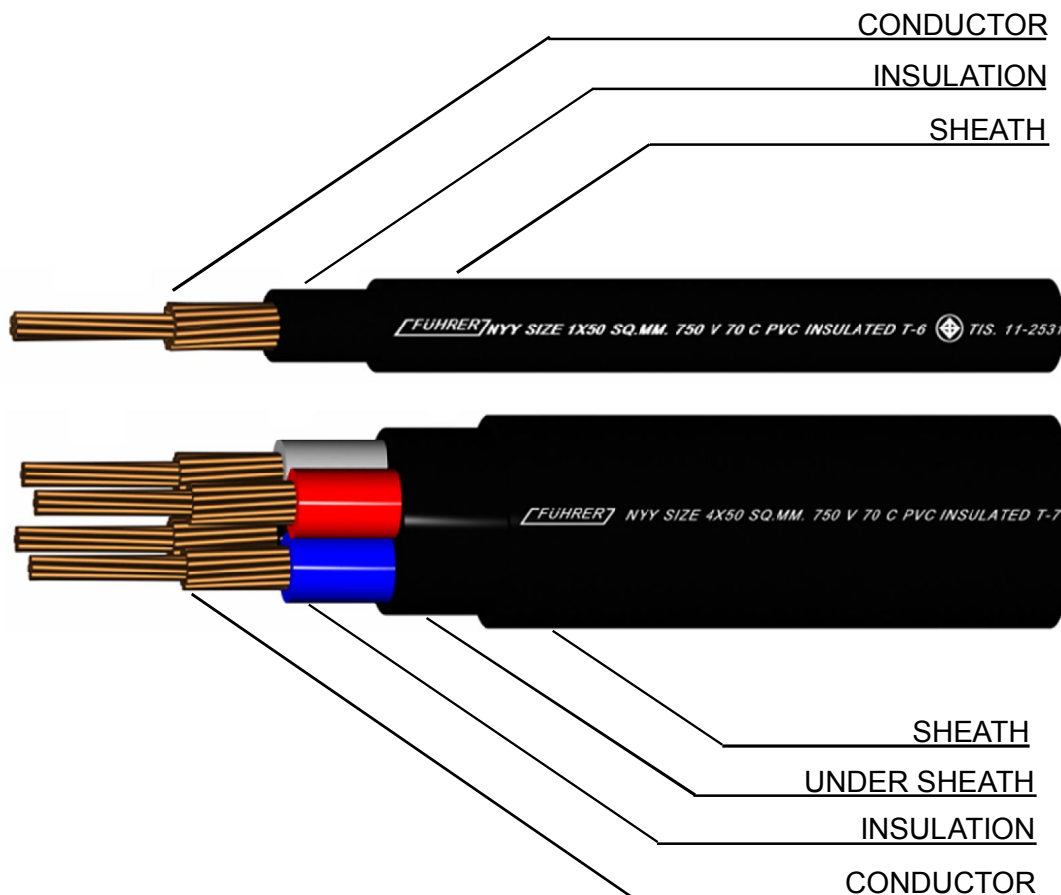
**VVR**

Number of core	Nominal cross section area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Max. Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
2	0.5	1 / 0.80	0.6	0.9	6.8	0.0146	9	50	500/D
	1	1 / 1.13	0.6	0.9	7.6	0.0115	14	65	500/D
	1	7 / 0.40	0.6	0.9	8.0	0.0110	14	70	500/D
	1.5	1 / 1.38	0.6	1.2	8.8	0.0100	18	90	500/D
	1.5	7 / 0.50	0.6	1.2	9.2	0.0094	18	100	500/D
	2.5	1 / 1.78	0.7	1.2	10.0	0.0092	24	130	500/D
	2.5	7 / 0.67	0.7	1.2	11.0	0.0084	24	140	500/D
	4	1 / 2.25	0.8	1.2	11.5	0.0086	32	180	500/D
	4	7 / 0.85	0.8	1.2	12.5	0.0078	32	200	500/D
	6	7 / 1.04	0.8	1.2	13.5	0.0066	43	260	500/D
	10	7 / 1.35	0.9	1.2	16.0	0.0059	60	380	500/D
	16	7 / 1.70	1.0	1.4	19.0	0.0053	80	550	500/D
	25	7 / 2.14	1.2	1.4	22.5	0.0051	107	850	500/D
3	0.5	1 / 0.80	0.6	0.9	7.2	0.0146	7	55	500/D
	1	1 / 1.13	0.6	0.9	8.0	0.0115	11	75	500/D
	1	7 / 0.40	0.6	0.9	8.4	0.0110	11	85	500/D
	1.5	1 / 1.38	0.6	1.2	9.2	0.0100	15	110	500/D
	1.5	7 / 0.50	0.6	1.2	9.6	0.0094	15	120	500/D
	2.5	1 / 1.78	0.7	1.2	10.5	0.0092	20	160	500/D
	2.5	7 / 0.67	0.7	1.2	11.5	0.0084	20	170	500/D
	4	1 / 2.25	0.8	1.2	12.5	0.0086	27	230	500/D
	4	7 / 0.85	0.8	1.2	13.0	0.0078	27	240	500/D
	6	7 / 1.04	0.8	1.2	14.5	0.0066	36	320	500/D
	10	7 / 1.35	0.9	1.2	17.0	0.0059	50	490	500/D
	16	7 / 1.70	1.0	1.4	20.0	0.0053	67	750	500/D
	25	7 / 2.14	1.2	1.8	25.0	0.0051	90	1,200	500/D
4	0.5	1 / 0.80	0.6	0.9	7.8	0.0146	7	65	500/D
	1	1 / 1.13	0.6	0.9	8.6	0.0115	10	90	500/D
	1	7 / 0.40	0.6	0.9	9.0	0.0110	10	100	500/D
	1.5	1 / 1.38	0.6	1.2	10.0	0.0100	13	130	500/D
	1.5	7 / 0.50	0.6	1.2	10.5	0.0094	13	140	500/D
	2.5	1 / 1.78	0.7	1.2	11.5	0.0092	18	190	500/D
	2.5	7 / 0.67	0.7	1.2	12.5	0.0084	18	200	500/D
	4	1 / 2.25	0.8	1.2	13.5	0.0086	25	280	500/D
	4	7 / 0.85	0.8	1.2	14.0	0.0078	25	300	500/D
	6	7 / 1.04	0.8	1.2	15.5	0.0066	33	400	500/D
	10	7 / 1.35	0.9	1.4	19.0	0.0059	45	650	500/D
	16	7 / 1.70	1.0	1.4	22.0	0.0053	60	950	500/D
	25	7 / 2.14	1.2	1.8	27.5	0.0051	81	1,500	500/D

C: Packing in coil.

D: Packing in drum.

750 V 70°C PVC INSULATED AND DOUBLE SHEATHED ROUND TYPE



CABLE STRUCTURE

NUMBER OF CORE	: Up to 4 cores
CONDUCTOR	: Solid and stranded annealed copper Sizes, Single core 1 mm ² up to 500 mm ² Multi core 1 mm ² up 240 mm ²
INSULATION	: PVC Colour: Single core – Black 2 cores – Light gray and Black 3 cores – Light gray, Black and Red 4 cores – Light gray, Black, Red and Blue
SHEATH AND UNDER SHEATH	: PVC Colour: Black
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 volts
REFERENCE	: TIS 11-2531 Table 6 (Single core) TIS 11-2531 Table 7 (Multi core)

**NYY, MEA TYPE C (SINGLE CORE)**

Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Max. Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)		Cable weight (approx.) (Kg/Km)	Standard length (m)
						Free air	Under ground		
1	1 / 1.13	1.5	1.8	8.6	0.0207	17	22	80	100/C
1	7 / 0.40	1.5	1.8	8.8	0.0200	17	22	80	100/C
1.5	1 / 1.38	1.5	1.8	9.0	0.0184	21	27	85	100/C
1.5	7 / 0.50	1.5	1.8	9.2	0.0175	21	27	90	100/C
2.5	1 / 1.78	1.5	1.8	9.4	0.0157	28	36	100	100/C
2.5	7 / 0.67	1.5	1.8	9.8	0.0146	28	36	110	100/C
4	1 / 2.25	1.5	1.8	10.0	0.0135	38	47	120	100/C
4	7 / 0.85	1.5	1.8	10.5	0.0124	38	47	130	100/C
6	7 / 1.04	1.5	1.8	11.0	0.0107	49	60	160	100/C
10	7 / 1.35	1.5	1.8	12.0	0.0088	67	81	210	500/D
16	7 / 1.70	1.5	1.8	13.0	0.0074	89	105	280	500/D
25	7 / 2.14	1.5	1.8	14.5	0.0061	118	136	390	500/D
35	19 / 1.53	1.5	1.8	16.0	0.0053	146	165	490	500/D
50	19 / 1.78	1.5	1.8	17.0	0.0046	177	196	600	500/D
70	19 / 2.14	1.5	1.8	19.0	0.0039	222	241	850	500/D
95	19 / 2.52	1.7	1.8	21.5	0.0038	274	289	1,100	500/D
120	37 / 2.03	1.7	1.8	23.0	0.0034	318	330	1,400	500/D
150	37 / 2.25	1.9	2.0	26.0	0.0034	362	370	1,700	500/D
185	37 / 2.52	2.1	2.0	28.0	0.0034	416	419	2,100	500/D
240	61 / 2.25	2.3	2.2	31.5	0.0033	492	486	2,700	500/D
300	61 / 2.52	2.5	2.2	35.0	0.0032	565	551	3,400	500/D
400	61 / 2.85	2.7	2.2	38.5	0.0030	655	629	4,300	500/D
500	61 / 3.20	3.1	2.4	43.0	0.0031	757	717	5,400	500/D

C: Packing in coil.

D: Packing in drum.

**NYY, MEA TYPE C (MULTI CORE)**

Number of core	Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Under sheath thickness (mm)	Sheath thickness (mm)	Max. overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)		Cable weight (approx.) (Kg/Km)	Standard length (m)
								Free air	Under ground		
2	1	1 / 1.13	0.8	0.8	1.8	12.0	0.0141	15	21	160	100/C
	1	7 / 0.40	0.8	0.8	1.8	12.5	0.0135	15	21	160	100/C
	1.5	1 / 1.38	0.8	0.8	1.8	12.5	0.0123	19	27	170	100/C
	1.5	7 / 0.50	0.8	0.8	1.8	13.0	0.0116	19	27	190	100/C
	2.5	1 / 1.78	0.8	0.8	1.8	13.5	0.0102	25	35	210	100/C
	2.5	7 / 0.67	0.8	0.8	1.8	14.0	0.0093	25	35	230	100/C
	4	1 / 2.25	0.9	0.8	1.8	15.0	0.0094	33	47	270	100/C
	4	7 / 0.85	0.9	0.8	1.8	15.5	0.0085	33	47	290	100/C
	6	7 / 1.04	0.9	0.8	1.8	17.0	0.0073	43	60	360	100/C
	10	7 / 1.35	1.1	0.8	1.8	19.5	0.0069	60	81	550	500/D
	16	7 / 1.70	1.1	0.8	2.0	22.5	0.0057	80	105	700	500/D
	25	7 / 2.14	1.3	1.2	2.0	27.0	0.0054	106	136	1,100	500/D
	35	19 / 1.53	1.3	1.2	2.0	29.5	0.0047	130	165	1,400	500/D
	50	19 / 1.78	1.5	1.2	2.2	33.5	0.0046	157	196	1,800	500/D
	70	19 / 2.14	1.5	1.5	2.2	38.0	0.0039	195	240	2,400	500/D
	95	19 / 2.52	1.7	1.5	2.2	42.5	0.0038	239	290	3,200	500/D
	120	37 / 2.03	1.7	1.5	2.4	46.5	0.0034	280	332	3,900	500/D
	150	37 / 2.25	1.9	1.8	2.6	52.0	0.0034	320	370	4,800	500/D
	185	37 / 2.52	2.1	1.8	2.8	57.0	0.0034	370	419	6,000	500/D
	240	61 / 2.25	2.3	2.0	3.0	64.0	0.0033	440	484	7,500	500/D
3	1	1 / 1.13	0.8	0.8	1.8	12.5	0.0141	12	18	180	100/C
	1	7 / 0.40	0.8	0.8	1.8	13.0	0.0135	12	18	180	100/C
	1.5	1 / 1.38	0.8	0.8	1.8	13.0	0.0123	16	22	200	100/C
	1.5	7 / 0.50	0.8	0.8	1.8	13.5	0.0116	16	22	210	100/C
	2.5	1 / 1.78	0.8	0.8	1.8	14.0	0.0102	21	30	240	100/C
	2.5	7 / 0.67	0.8	0.8	1.8	15.0	0.0093	21	30	260	100/C
	4	1 / 2.25	0.9	0.8	1.8	15.5	0.0094	28	39	320	100/C
	4	7 / 0.85	0.9	0.8	1.8	16.5	0.0085	28	39	350	100/C
	6	7 / 1.04	0.9	0.8	1.8	18.0	0.0073	37	50	440	100/C
	10	7 / 1.35	1.1	0.8	1.8	20.5	0.0069	50	68	650	500/D
	16	7 / 1.70	1.1	1.2	2.0	24.5	0.0057	67	87	950	500/D
	25	7 / 2.14	1.3	1.2	2.0	28.5	0.0054	89	113	1,400	500/D
	35	19 / 1.53	1.3	1.2	2.0	31.5	0.0047	109	137	1,700	500/D
	50	19 / 1.78	1.5	1.5	2.2	36.0	0.0046	131	162	2,300	500/D
	70	19 / 2.14	1.5	1.5	2.2	40.5	0.0039	163	200	3,100	500/D
	95	19 / 2.52	1.7	1.5	2.4	46.0	0.0038	202	240	4,200	500/D
	120	37 / 2.03	1.7	1.8	2.6	50.5	0.0034	235	273	5,000	500/D
	150	37 / 2.25	1.9	1.8	2.8	56.0	0.0034	269	306	6,500	500/D
	185	37 / 2.52	2.1	2.0	3.0	61.5	0.0034	311	346	8,000	500/D
	240	61 / 2.25	2.3	2.0	3.2	69.0	0.0033	371	402	10,000	500/D

C: Packing in coil.

D: Packing in drum.



NYY, MEA TYPE C (MULTI CORE)

Number of core	Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Under sheath thickness (mm)	Sheath thickness (mm)	Max. overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)		Cable weight (approx.) (Kg/Km)	Standard length (m)
								Free air	Under ground		
4	1	1 / 1.13	0.8	0.8	1.8	13.5	0.0141	11	16	200	100/C
	1	7 / 0.40	0.8	0.8	1.8	14.0	0.0135	11	16	210	100/C
	1.5	1 / 1.38	0.8	0.8	1.8	14.0	0.0123	14	20	230	100/C
	1.5	7 / 0.50	0.8	0.8	1.8	14.5	0.0116	14	20	240	100/C
	2.5	1 / 1.78	0.8	0.8	1.8	15.0	0.0102	19	27	290	100/C
	2.5	7 / 0.67	0.8	0.8	1.8	16.0	0.0093	19	27	310	100/C
	4	1 / 2.25	0.9	0.8	1.8	17.0	0.0094	25	35	390	100/C
	4	7 / 0.85	0.9	0.8	1.8	17.5	0.0085	25	35	410	100/C
	6	7 / 1.04	0.9	0.8	1.8	19.0	0.0073	33	45	550	500/D
	10	7 / 1.35	1.1	0.8	2.0	23.0	0.0069	45	60	800	500/D
	16	7 / 1.70	1.1	1.2	2.0	26.5	0.0057	60	77	1,100	500/D
	25	7 / 2.14	1.3	1.2	2.0	31.0	0.0054	79	100	1,700	500/D
	35	19 / 1.53	1.3	1.5	2.2	35.0	0.0047	97	120	2,200	500/D
	50	19 / 1.78	1.5	1.5	2.2	39.5	0.0046	117	144	2,900	500/D
	70	19 / 2.14	1.5	1.5	2.4	44.5	0.0039	147	176	4,000	500/D
	95	19 / 2.52	1.7	1.8	2.6	51.5	0.0038	182	211	5,500	500/D
	120	37 / 2.03	1.7	1.8	2.8	56.0	0.0034	213	241	6,500	500/D
	150	37 / 2.25	1.9	2.0	3.0	62.0	0.0034	243	270	8,000	500/D
	185	37 / 2.52	2.1	2.0	3.2	68.0	0.0034	282	306	10,000	500/D
	240	61 / 2.25	2.3	2.2	3.4	76.5	0.0033	335	354	13,000	500/D

C: Packing in coil.

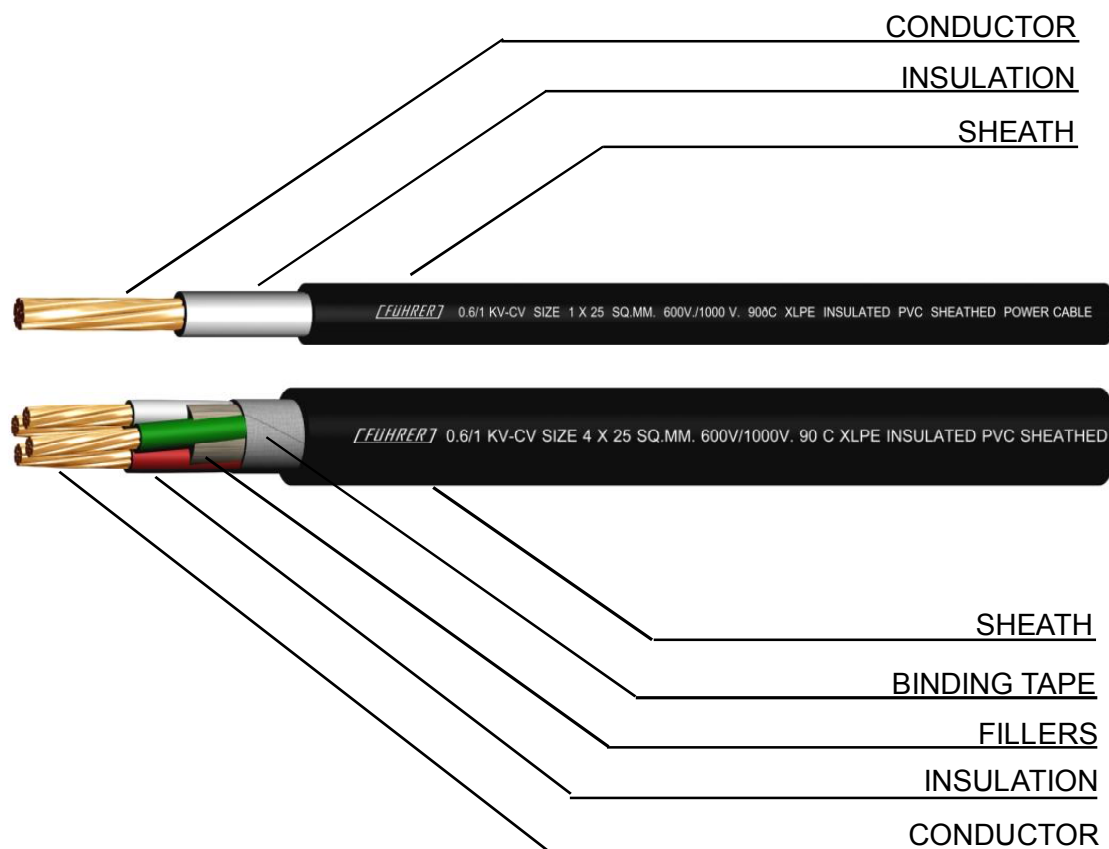
D: Packing in drum.

0.6/1 KV-CV



TIS 2143-2546
IEC 60502-1

600V/1000V 90°C CROSS-LINKED POLYETHYLENE INSULATED, PVC SHEATHED POWER CABLE



CABLE STRUCTURE

NUMBER OF CORE	Up to 4 cores
CONDUCTOR	: Concentric stranded and compact round stranded annealed copper, Sizes. 1.5 mm ² up to 630 mm ²
INSULATION	: Cross-linked polyethylene Colour : Natural (Translucent) Core identification: Compound color Black, White, Red, green or color tape
SHEATH	: PVC Colour : Black
CLASSIFICATION	: Maximum conductor temperature 90°C Circuit voltage not exceeding 1,200 volts
TESTING VOLTAGE	: 3,500 Volts
REFERENCE	: TIS 2143-2546 , IEC 60502-1



0.6/1KV-CV

Number of cores	Nominal cross sectional area (mm ²)	Number of stranded	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20°C (Ω/Km)	Minimum insulation resistance at 20°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
1	1.5	7/0.53	0.7	1.4	6.3	12.1	2,500	27	50	500/D
	2.5	7/0.67	0.7	1.4	6.5	7.41	2,100	36	60	500/D
	4	7/0.85	0.7	1.4	7.0	4.61	1,700	48	80	500/D
	6	7/1.04	0.7	1.4	7.5	3.08	1,450	61	100	500/D
	10	6	0.7	1.4	8.1	1.83	1,250	82	140	500/D
	16	6	0.7	1.4	9.1	1.15	1,000	110	200	500/D
	25	6	0.9	1.4	11.0	0.727	1,050	145	300	500/D
	35	6	0.9	1.4	12.0	0.524	900	180	400	500/D
	50	6	1.0	1.4	13.5	0.387	850	220	500	500/D
	70	12	1.1	1.4	15.2	0.268	800	280	750	500/D
	95	15	1.1	1.5	17.5	0.193	650	345	1,000	500/D
	120	18	1.2	1.5	19	0.153	650	400	1,200	500/D
	150	18	1.4	1.6	21	0.124	700	460	1,500	500/D
	185	30	1.6	1.6	23	0.0991	700	530	1,900	500/D
	240	34	1.7	1.7	26	0.0754	650	630	2,500	500/D
	300	34	1.8	1.8	29	0.0601	600	725	3,100	500/D
	400	53	2.0	1.9	32	0.0470	600	840	3,900	500/D
	500	53	2.2	2.0	36	0.0366	600	975	5,000	500/D
	630	53	2.4	2.2	40	0.0283	550	1,125	6,500	500/D
2	1.5	7/0.53	0.7	1.8	11	12.1	2,500	25	130	500/D
	2.5	7/0.67	0.7	1.8	12	7.41	2,100	34	160	500/D
	4	7/0.85	0.7	1.8	13	4.61	1,700	44	200	500/D
	6	7/1.04	0.7	1.8	14	3.08	1,450	57	260	500/D
	10	6	0.7	1.8	15	1.83	1,250	77	340	500/D
	16	6	0.7	1.8	17	1.15	1,000	100	480	500/D
	25	6	0.9	1.8	20	0.727	1,050	135	700	500/D
	35	6	0.9	1.8	23	0.524	900	165	900	500/D
	50	6	1.0	1.8	25	0.387	850	205	1,200	500/D
	70	12	1.1	1.8	29	0.268	800	255	1,700	500/D
	95	15	1.1	2.0	33	0.193	650	315	2,300	500/D
	120	18	1.2	2.1	37	0.153	650	365	2,800	500/D
	150	18	1.4	2.2	41	0.124	700	415	3,500	500/D
	185	30	1.6	2.3	45	0.0991	700	485	4,300	500/D
	240	34	1.7	2.5	51	0.0754	650	580	5,500	500/D

D: Packing in drum.

**0.6/1KV-CV**

Number of cores	Nominal cross sectional area (mm ²)	Number of stranded	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20°C (MΩ-Km)	Minimum insulation resistance at 20°C (MΩ-Km)	Maximum continuous current rating in free air (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard length (m)
3	1.5	7/0.53	0.7	1.8	11.5	12.1	2,500	21	150	500/D
	2.5	7/0.67	0.7	1.8	12.5	7.41	2,100	28	190	500/D
	4	7/0.85	0.7	1.8	13.5	4.61	1,700	37	240	500/D
	6	7/1.04	0.7	1.8	15	3.08	1,450	48	320	500/D
	10	6	0.7	1.8	16	1.83	1,250	64	440	500/D
	16	6	0.7	1.8	18	1.15	1,000	86	650	500/D
	25	6	0.9	1.8	22	0.727	1,050	115	950	500/D
	35	6	0.9	1.8	24	0.524	900	140	1,300	500/D
	50	6	1.0	1.8	27	0.387	850	170	1,600	500/D
	70	12	1.1	1.9	31	0.268	800	215	2,300	500/D
	95	15	1.1	2.0	36	0.193	650	260	3,100	500/D
	120	18	1.2	2.1	39	0.153	650	305	4,000	500/D
	150	18	1.4	2.3	44	0.124	700	350	4,900	500/D
	185	30	1.6	2.4	49	0.0991	700	405	6,000	500/D
	240	34	1.7	2.6	55	0.0754	650	490	8,000	300/D
4	1.5	7/0.53	0.7	1.8	12	12.1	2,500	21	180	500/D
	2.5	7/0.67	0.7	1.8	13.5	7.41	2,100	28	230	500/D
	4	7/0.85	0.7	1.8	14.5	4.61	1,700	37	300	500/D
	6	7/1.04	0.7	1.8	16	3.08	1,450	48	400	500/D
	10	6	0.7	1.8	17.5	1.83	1,250	64	550	500/D
	16	6	0.7	1.8	20	1.15	1,000	86	800	500/D
	25	6	0.9	1.8	24	0.727	1,050	115	1,200	500/D
	35	6	0.9	1.8	27	0.524	900	140	1,600	500/D
	50	6	1.0	1.9	30	0.387	850	170	2,200	500/D
	70	12	1.1	2.0	35	0.268	800	215	3,000	500/D
	95	15	1.1	2.1	39	0.193	650	260	4,100	500/D
	120	18	1.2	2.3	44	0.153	650	305	5,000	500/D
	150	18	1.4	2.4	49	0.124	700	350	6,500	500/D
	185	30	1.6	2.6	54	0.0991	700	405	8,000	300/D
	240	34	1.7	2.8	61	0.0754	650	490	10,500	300/D

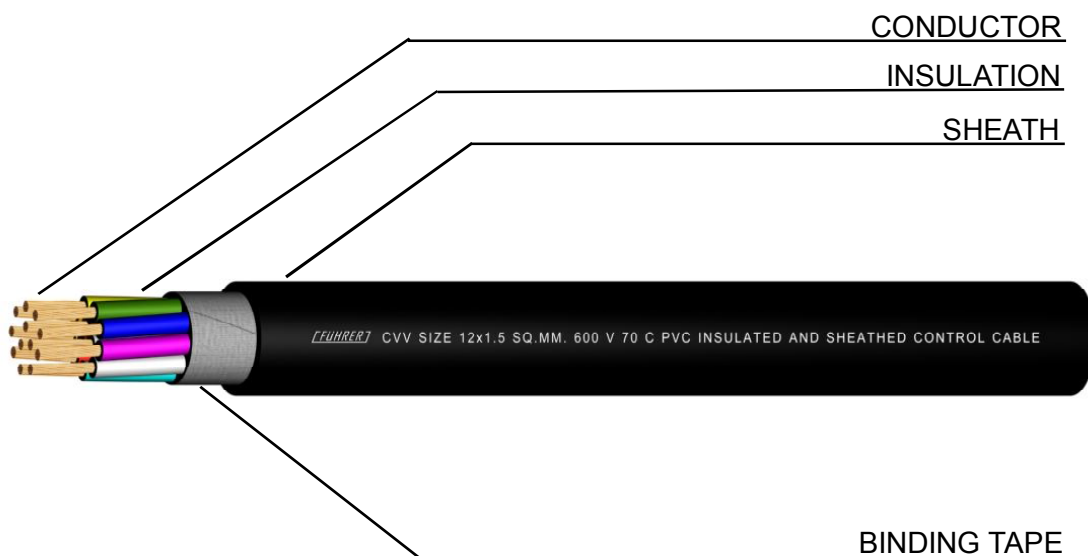
C: Packing in coil.

D: Packing in drum.

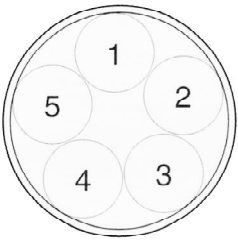
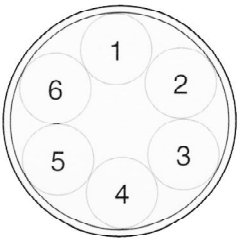
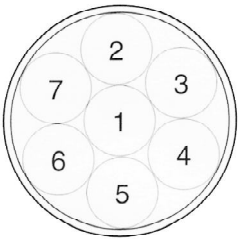
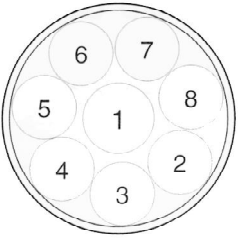
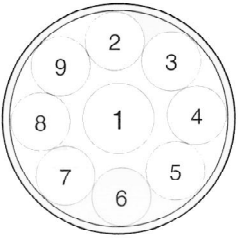
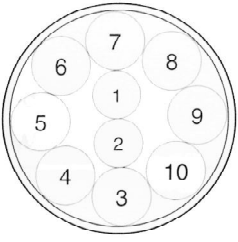
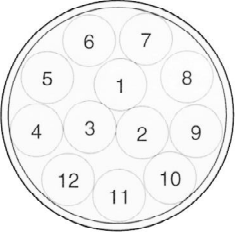
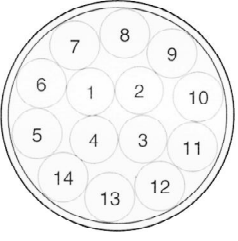
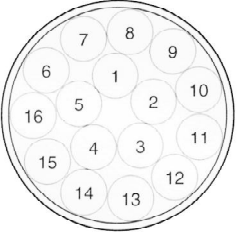
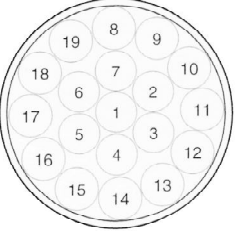
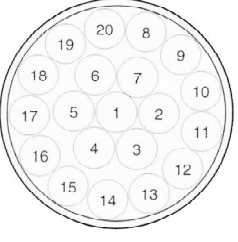
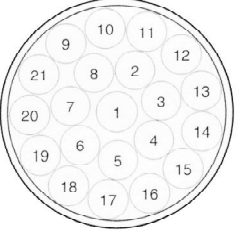
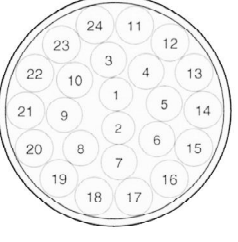
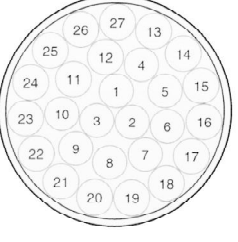
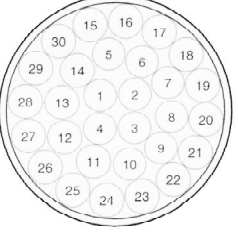
COPPER CONDUCTOR CABLES

Control Cables

	PAGE
CVV	
600 V 70°C PVC INSULATED AND SHEATHED CONTROL CABLE	24-31

600 V 70°C PVC INSULATED AND SHEATHED CONTROL CABLE**CABLE STRUCTURE**

NUMBER OF CORE	: 2 up to 48 cores
CONDUCTOR	: Flexible stranded annealed copper wires, Sizes. 0.5 mm ² up to 6 mm ²
INSULATION	: PVC Colour : 2-4 cores : Black, White, Red and Green More than 4 cores: Any color
SHEATH	: PVC Colour : Black
SHIELD	: Binding tape
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 600 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: FUHRER WIRE AND CABLE STANDARD

 5 CORES	 6 CORES	 7 CORES
 8 CORES	 9 CORES	 10 CORES
 12 CORES	 14 CORES	 16 CORES
 19 CORES	 20 CORES	 21 CORES
 24 CORES	 27 CORES	 30 CORES

Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ·Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
2	0.50	16/0.20	0.95	0.6	0.9	7.5	39.0	0.0130	49	500/D
	0.75	24/0.20	1.15	0.6	1.2	8.5	26.0	0.0114	65	500/D
	1.0	32/0.20	1.30	0.6	1.2	8.7	19.5	0.0104	75	500/D
	1.5	30/0.25	1.60	0.6	1.2	9.3	13.3	0.0089	90	500/D
	2.5	50/0.25	2.10	0.7	1.2	10.5	7.98	0.0081	130	500/D
	4.0	56/0.30	2.60	0.8	1.2	12.0	4.95	0.0076	170	500/D
	6.0	84/0.30	3.40	0.8	1.4	14.0	3.30	0.0061	250	500/D
3	0.50	16/0.20	0.95	0.6	1.2	8.5	39.0	0.0130	65	500/D
	0.75	24/0.20	1.15	0.6	1.2	8.9	26.0	0.0114	80	500/D
	1.0	32/0.20	1.30	0.6	1.2	9.1	19.5	0.0104	90	500/D
	1.5	30/0.25	1.60	0.6	1.2	9.8	13.3	0.0089	110	500/D
	2.5	50/0.25	2.10	0.7	1.2	11.0	7.98	0.0081	160	500/D
	4.0	56/0.30	2.60	0.8	1.2	13.0	4.95	0.0076	230	500/D
	6.0	84/0.30	3.40	0.8	1.4	15.0	3.30	0.0061	330	500/D
4	0.50	16/0.20	0.95	0.6	1.2	9.1	39.0	0.0130	80	500/D
	0.75	24/0.20	1.15	0.6	1.2	9.6	26.0	0.0114	95	500/D
	1.0	32/0.20	1.30	0.6	1.2	9.8	19.5	0.0104	110	500/D
	1.5	30/0.25	1.60	0.6	1.2	10.5	13.3	0.0089	140	500/D
	2.5	50/0.25	2.10	0.7	1.2	12.0	7.98	0.0081	200	500/D
	4.0	56/0.30	2.60	0.8	1.4	14.5	4.95	0.0076	300	500/D
	6.0	84/0.30	3.40	0.8	1.4	16.5	3.30	0.0061	410	500/D
5	0.50	16/0.20	0.95	0.6	1.2	9.8	39.0	0.0130	90	500/D
	0.75	24/0.20	1.15	0.6	1.2	10.0	26.0	0.0114	110	500/D
	1.0	32/0.20	1.30	0.6	1.2	10.5	19.5	0.0104	130	500/D
	1.5	30/0.25	1.60	0.6	1.2	11.5	13.3	0.0089	160	500/D
	2.5	50/0.25	2.10	0.7	1.4	13.5	7.98	0.0081	250	500/D
	4.0	56/0.30	2.60	0.8	1.4	15.5	4.95	0.0076	350	500/D
	6.0	84/0.30	3.40	0.8	1.4	18.0	3.30	0.0061	500	500/D
6	0.50	16/0.20	0.95	0.6	1.2	10.5	39.0	0.0130	110	500/D
	0.75	24/0.20	1.15	0.6	1.2	11.0	26.0	0.0114	130	500/D
	1.0	32/0.20	1.30	0.6	1.2	11.5	19.5	0.0104	150	500/D
	1.5	30/0.25	1.60	0.6	1.2	12.0	13.3	0.0089	190	500/D
	2.5	50/0.25	2.10	0.7	1.4	14.5	7.98	0.0081	290	500/D
	4.0	56/0.30	2.60	0.8	1.4	17.0	4.95	0.0076	420	500/D
	6.0	84/0.30	3.40	0.8	1.4	19.5	3.30	0.0061	600	500/D
7	0.50	16/0.20	0.95	0.6	1.2	10.5	39.0	0.0130	110	500/D
	0.75	24/0.20	1.15	0.6	1.2	11.0	26.0	0.0114	140	500/D
	1.0	32/0.20	1.30	0.6	1.2	11.5	19.5	0.0104	160	500/D
	1.5	30/0.25	1.60	0.6	1.2	12.0	13.3	0.0089	210	500/D
	2.5	50/0.25	2.10	0.7	1.4	14.5	7.98	0.0081	320	500/D
	4.0	56/0.30	2.60	0.8	1.4	17.0	4.95	0.0076	460	500/D
	6.0	84/0.30	3.40	0.8	1.4	19.5	3.30	0.0061	650	500/D
8	0.50	16/0.20	0.95	0.6	1.2	11.0	39.0	0.0130	130	500/D
	0.75	24/0.20	1.15	0.6	1.2	11.5	26.0	0.0114	160	500/D
	1.0	32/0.20	1.30	0.6	1.2	12.0	19.5	0.0104	180	500/D
	1.5	30/0.25	1.60	0.6	1.4	13.5	13.3	0.0089	240	500/D
	2.5	50/0.25	2.10	0.7	1.4	16.0	7.98	0.0081	360	500/D
	4.0	56/0.30	2.60	0.8	1.4	18.5	4.95	0.0076	550	500/D
	6.0	84/0.30	3.40	0.8	1.4	21.0	3.30	0.0061	750	500/D
9	0.50	16/0.20	0.95	0.6	1.2	12.0	39.0	0.0130	150	500/D
	0.75	24/0.20	1.15	0.6	1.2	12.5	26.0	0.0114	180	500/D
	1.0	32/0.20	1.30	0.6	1.4	13.5	19.5	0.0104	220	500/D
	1.5	30/0.25	1.60	0.6	1.4	14.5	13.3	0.0089	270	500/D
	2.5	50/0.25	2.10	0.7	1.4	17.0	7.98	0.0081	410	500/D
	4.0	56/0.30	2.60	0.8	1.4	20.0	4.95	0.0076	600	500/D
	6.0	84/0.30	3.40	0.8	1.4	23.0	3.30	0.0061	850	500/D

Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
10	0.50	16/0.20	0.95	0.6	1.2	12.5	39.0	0.0130	150	500/D
	0.75	24/0.20	1.15	0.6	1.4	14.0	26.0	0.0114	210	500/D
	1.0	32/0.20	1.30	0.6	1.4	14.5	19.5	0.0104	240	500/D
	1.5	30/0.25	1.60	0.6	1.4	15.5	13.3	0.0089	310	500/D
	2.5	50/0.25	2.10	0.7	1.4	18.0	7.98	0.0081	460	500/D
	4.0	56/0.30	2.60	0.8	1.4	21.0	4.95	0.0076	650	500/D
	6.0	84/0.30	3.40	0.8	1.8	25.0	3.30	0.0061	1,000	500/D
11	0.50	16/0.20	0.95	0.6	1.2	12.5	39.0	0.0130	170	500/D
	0.75	24/0.20	1.15	0.6	1.4	14.0	26.0	0.0114	210	500/D
	1.0	32/0.20	1.30	0.6	1.4	14.5	19.5	0.0104	250	500/D
	1.5	30/0.25	1.60	0.6	1.4	15.5	13.3	0.0089	320	500/D
	2.5	50/0.25	2.10	0.7	1.4	18.0	7.98	0.0081	480	500/D
	4.0	56/0.30	2.60	0.8	1.4	21.0	4.95	0.0076	700	500/D
	6.0	84/0.30	3.40	0.8	1.8	25.0	3.30	0.0061	1,100	500/D
12	0.50	16/0.20	0.95	0.6	1.2	13.0	39.0	0.0130	180	500/D
	0.75	24/0.20	1.15	0.6	1.4	14.5	26.0	0.0114	220	500/D
	1.0	32/0.20	1.30	0.6	1.4	15.0	19.5	0.0104	280	500/D
	1.5	30/0.25	1.60	0.6	1.4	16.0	13.3	0.0089	350	500/D
	2.5	50/0.25	2.10	0.7	1.4	19.0	7.98	0.0081	550	500/D
	4.0	56/0.30	2.60	0.8	1.4	22.0	4.95	0.0076	750	500/D
	6.0	84/0.30	3.40	0.8	1.8	26.0	3.30	0.0061	1,200	500/D
13	0.50	16/0.20	0.95	0.6	1.4	14.0	39.0	0.0130	200	500/D
	0.75	24/0.20	1.15	0.6	1.4	15.0	26.0	0.0114	250	500/D
	1.0	32/0.20	1.30	0.6	1.4	15.5	19.5	0.0104	290	500/D
	1.5	30/0.25	1.60	0.6	1.4	17.0	13.3	0.0089	370	500/D
	2.5	50/0.25	2.10	0.7	1.4	20.0	7.98	0.0081	550	500/D
	4.0	56/0.30	2.60	0.8	1.4	23.0	4.95	0.0076	850	500/D
	6.0	84/0.30	3.40	0.8	1.8	28.0	3.30	0.0061	1,200	500/D
14	0.50	16/0.20	0.95	0.6	1.4	14.0	39.0	0.0130	210	500/D
	0.75	24/0.20	1.15	0.6	1.4	15.0	26.0	0.0114	250	500/D
	1.0	32/0.20	1.30	0.6	1.4	15.5	19.5	0.0104	300	500/D
	1.5	30/0.25	1.60	0.6	1.4	17.0	13.3	0.0089	390	500/D
	2.5	50/0.25	2.10	0.7	1.4	20.0	7.98	0.0081	600	500/D
	4.0	56/0.30	2.60	0.8	1.4	23.0	4.95	0.0076	850	500/D
	6.0	84/0.30	3.40	0.8	1.8	28.0	3.30	0.0061	1,300	500/D
15	0.50	16/0.20	0.95	0.6	1.4	14.5	39.0	0.0130	220	500/D
	0.75	24/0.20	1.15	0.6	1.4	15.5	26.0	0.0114	270	500/D
	1.0	32/0.20	1.30	0.6	1.4	16.0	19.5	0.0104	320	500/D
	1.5	30/0.25	1.60	0.6	1.4	17.5	13.3	0.0089	420	500/D
	2.5	50/0.25	2.10	0.7	1.4	21.0	7.98	0.0081	650	500/D
	4.0	56/0.30	2.60	0.8	1.8	25.0	4.95	0.0076	950	500/D
	6.0	84/0.30	3.40	0.8	1.8	29.0	3.30	0.0061	1,400	500/D
16	0.50	16/0.20	0.95	0.6	1.4	15.0	39.0	0.0130	230	500/D
	0.75	24/0.20	1.15	0.6	1.4	15.5	26.0	0.0114	280	500/D
	1.0	32/0.20	1.30	0.6	1.4	16.0	19.5	0.0104	340	500/D
	1.5	30/0.25	1.60	0.6	1.4	17.5	13.3	0.0089	430	500/D
	2.5	50/0.25	2.10	0.7	1.4	21.0	7.98	0.0081	650	500/D
	4.0	56/0.30	2.60	0.8	1.8	25.0	4.95	0.0076	1,000	500/D
	6.0	84/0.30	3.40	0.8	1.8	29.0	3.30	0.0061	1,400	500/D
17	0.50	16/0.20	0.95	0.6	1.4	15.5	39.0	0.0130	240	500/D
	0.75	24/0.20	1.15	0.6	1.4	16.5	26.0	0.0114	310	500/D
	1.0	32/0.20	1.30	0.6	1.4	17.0	19.5	0.0104	370	500/D
	1.5	30/0.25	1.60	0.6	1.4	18.5	13.3	0.0089	470	500/D
	2.5	50/0.25	2.10	0.7	1.4	22.0	7.98	0.0081	700	500/D
	4.0	56/0.30	2.60	0.8	1.8	27.0	4.95	0.0076	1,100	500/D
	6.0	84/0.30	3.40	0.8	1.8	31.0	3.30	0.0061	1,600	500/D

Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
18	0.50	16/0.20	0.95	0.6	1.4	15.5	39.0	0.0130	250	500/D
	0.75	24/0.20	1.15	0.6	1.4	16.5	26.0	0.0114	310	500/D
	1.0	32/0.20	1.30	0.6	1.4	17.0	19.5	0.0104	370	500/D
	1.5	30/0.25	1.60	0.6	1.4	18.5	13.3	0.0089	470	500/D
	2.5	50/0.25	2.10	0.7	1.4	22.0	7.98	0.0081	700	500/D
	4.0	56/0.30	2.60	0.8	1.8	27.0	4.95	0.0076	1,100	500/D
	6.0	84/0.30	3.40	0.8	1.8	31.0	3.30	0.0061	1,600	500/D
19	0.50	16/0.20	0.95	0.6	1.4	15.5	39.0	0.0130	260	500/D
	0.75	24/0.20	1.15	0.6	1.4	16.5	26.0	0.0114	320	500/D
	1.0	32/0.20	1.30	0.6	1.4	17.0	19.5	0.0104	380	500/D
	1.5	30/0.25	1.60	0.6	1.4	18.5	13.3	0.0089	490	500/D
	2.5	50/0.25	2.10	0.7	1.4	22.0	7.98	0.0081	750	500/D
	4.0	56/0.30	2.60	0.8	1.8	27.0	4.95	0.0076	1,100	500/D
	6.0	84/0.30	3.40	0.8	1.8	31.0	3.30	0.0061	1,600	500/D
20	0.50	16/0.20	0.95	0.6	1.4	16.0	39.0	0.0130	270	500/D
	0.75	24/0.20	1.15	0.6	1.4	17.0	26.0	0.0114	330	500/D
	1.0	32/0.20	1.30	0.6	1.4	17.5	19.5	0.0104	400	500/D
	1.5	30/0.25	1.60	0.6	1.4	19.0	13.3	0.0089	500	500/D
	2.5	50/0.25	2.10	0.7	1.4	23.0	7.98	0.0081	800	500/D
	4.0	56/0.30	2.60	0.8	1.8	28.0	4.95	0.0076	1,200	500/D
	6.0	84/0.30	3.40	0.8	1.8	32.0	3.30	0.0061	1,700	500/D
21	0.50	16/0.20	0.95	0.6	1.4	16.5	39.0	0.0130	280	500/D
	0.75	24/0.20	1.15	0.6	1.4	17.5	26.0	0.0114	350	500/D
	1.0	32/0.20	1.30	0.6	1.4	18.0	19.5	0.0104	420	500/D
	1.5	30/0.25	1.60	0.6	1.4	19.5	13.3	0.0089	550	500/D
	2.5	50/0.25	2.10	0.7	1.4	23.0	7.98	0.0081	800	500/D
	4.0	56/0.30	2.60	0.8	1.8	28.0	4.95	0.0076	1,300	500/D
	6.0	84/0.30	3.40	0.8	1.8	32.0	3.30	0.0061	1,800	500/D
22	0.50	16/0.20	0.95	0.6	1.4	17.0	39.0	0.0130	300	500/D
	0.75	24/0.20	1.15	0.6	1.4	18.0	26.0	0.0114	370	500/D
	1.0	32/0.20	1.30	0.6	1.4	18.5	19.5	0.0104	450	500/D
	1.5	30/0.25	1.60	0.6	1.4	20.0	13.3	0.0089	550	500/D
	2.5	50/0.25	2.10	0.7	1.8	25.0	7.98	0.0081	900	500/D
	4.0	56/0.30	2.60	0.8	1.8	30.0	4.95	0.0076	1,300	500/D
	6.0	84/0.30	3.40	0.8	1.8	34.0	3.30	0.0061	1,900	500/D
23	0.50	16/0.20	0.95	0.6	1.4	17.0	39.0	0.0130	310	500/D
	0.75	24/0.20	1.15	0.6	1.4	18.0	26.0	0.0114	380	500/D
	1.0	32/0.20	1.30	0.6	1.4	18.5	19.5	0.0104	460	500/D
	1.5	30/0.25	1.60	0.6	1.4	20.0	13.3	0.0089	600	500/D
	2.5	50/0.25	2.10	0.7	1.8	25.0	7.98	0.0081	950	500/D
	4.0	56/0.30	2.60	0.8	1.8	30.0	4.95	0.0076	1,400	500/D
	6.0	84/0.30	3.40	0.8	1.8	34.0	3.30	0.0061	2,000	500/D
24	0.50	16/0.20	0.95	0.6	1.4	18.0	39.0	0.0130	320	500/D
	0.75	24/0.20	1.15	0.6	1.4	19.0	26.0	0.0114	400	500/D
	1.0	32/0.20	1.30	0.6	1.4	19.5	19.5	0.0104	500	500/D
	1.5	30/0.25	1.60	0.6	1.4	21.0	13.3	0.0089	600	500/D
	2.5	50/0.25	2.10	0.7	1.8	26.0	7.98	0.0081	1,000	500/D
	4.0	56/0.30	2.60	0.8	1.8	31.0	4.95	0.0076	1,400	500/D
	6.0	84/0.30	3.40	0.8	2.2	37.0	3.30	0.0061	2,100	500/D
25	0.50	16/0.20	0.95	0.6	1.4	18.0	39.0	0.0130	330	500/D
	0.75	24/0.20	1.15	0.6	1.4	19.0	26.0	0.0114	410	500/D
	1.0	32/0.20	1.30	0.6	1.4	19.5	19.5	0.0104	490	500/D
	1.5	30/0.25	1.60	0.6	1.4	21.0	13.3	0.0089	650	500/D
	2.5	50/0.25	2.10	0.7	1.8	26.0	7.98	0.0081	1,000	500/D
	4.0	56/0.30	2.60	0.8	1.8	31.0	4.95	0.0076	1,500	500/D
	6.0	84/0.30	3.40	0.8	2.2	37.0	3.30	0.0061	2,200	500/D

Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
26	0.50	16/0.20	0.95	0.6	1.4	18.0	39.0	0.0130	340	500/D
	0.75	24/0.20	1.15	0.6	1.4	19.0	26.0	0.0114	420	500/D
	1.0	32/0.20	1.30	0.6	1.4	19.5	19.5	0.0104	500	500/D
	1.5	30/0.25	1.60	0.6	1.4	21.0	13.3	0.0089	650	500/D
	2.5	50/0.25	2.10	0.7	1.8	26.0	7.98	0.0081	1,000	500/D
	4.0	56/0.30	2.60	0.8	1.8	31.0	4.95	0.0076	1,500	500/D
	6.0	84/0.30	3.40	0.8	2.2	37.0	3.30	0.0061	2,300	500/D
27	0.50	16/0.20	0.95	0.6	1.4	18.5	39.0	0.0130	340	500/D
	0.75	24/0.20	1.15	0.6	1.4	19.5	26.0	0.0114	430	500/D
	1.0	32/0.20	1.30	0.6	1.4	20.0	19.5	0.0104	500	500/D
	1.5	30/0.25	1.60	0.6	1.4	22.0	13.3	0.0089	650	500/D
	2.5	50/0.25	2.10	0.7	1.8	27.0	7.98	0.0081	1,100	500/D
	4.0	56/0.30	2.60	0.8	1.8	32.0	4.95	0.0076	1,600	500/D
	6.0	84/0.30	3.40	0.8	2.2	38.0	3.30	0.0061	2,400	500/D
28	0.50	16/0.20	0.95	0.6	1.4	19.0	39.0	0.0130	370	500/D
	0.75	24/0.20	1.15	0.6	1.4	20.0	26.0	0.0114	460	500/D
	1.0	32/0.20	1.30	0.6	1.4	21.0	19.5	0.0104	550	500/D
	1.5	30/0.25	1.60	0.6	1.4	23.0	13.3	0.0089	700	500/D
	2.5	50/0.25	2.10	0.7	1.8	28.0	7.98	0.0081	1,100	500/D
	4.0	56/0.30	2.60	0.8	1.8	33.0	4.95	0.0076	1,700	500/D
	6.0	84/0.30	3.40	0.8	2.2	39.0	3.30	0.0061	2,500	500/D
29	0.50	16/0.20	0.95	0.6	1.4	19.0	39.0	0.0130	370	500/D
	0.75	24/0.20	1.15	0.6	1.4	20.0	26.0	0.0114	460	500/D
	1.0	32/0.20	1.30	0.6	1.4	21.0	19.5	0.0104	550	500/D
	1.5	30/0.25	1.60	0.6	1.4	23.0	13.3	0.0089	700	500/D
	2.5	50/0.25	2.10	0.7	1.8	28.0	7.98	0.0081	1,100	500/D
	4.0	56/0.30	2.60	0.8	1.8	33.0	4.95	0.0076	1,700	500/D
	6.0	84/0.30	3.40	0.8	2.2	39.0	3.30	0.0061	2,500	500/D
30	0.50	16/0.20	0.95	0.6	1.4	19.0	39.0	0.0130	370	500/D
	0.75	24/0.20	1.15	0.6	1.4	20.0	26.0	0.0114	470	500/D
	1.0	32/0.20	1.30	0.6	1.4	21.0	19.5	0.0104	550	500/D
	1.5	30/0.25	1.60	0.6	1.4	23.0	13.3	0.0089	750	500/D
	2.5	50/0.25	2.10	0.7	1.8	28.0	7.98	0.0081	1,200	500/D
	4.0	56/0.30	2.60	0.8	1.8	33.0	4.95	0.0076	1,700	500/D
	6.0	84/0.30	3.40	0.8	2.2	39.0	3.30	0.0061	2,600	500/D
31	0.50	16/0.20	0.95	0.6	1.4	19.5	39.0	0.0130	400	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	500	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	600	500/D
	1.5	30/0.25	1.60	0.6	1.8	24.0	13.3	0.0089	850	500/D
	2.5	50/0.25	2.10	0.7	1.8	29.0	7.98	0.0081	1,300	500/D
	4.0	56/0.30	2.60	0.8	1.8	34.0	4.95	0.0076	1,800	500/D
	6.0	84/0.30	3.40	0.8	2.2	41.0	3.30	0.0061	2,700	500/D
32	0.50	16/0.20	0.95	0.6	1.4	19.5	39.0	0.0130	400	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	500	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	600	500/D
	1.5	30/0.25	1.60	0.6	1.8	24.0	13.3	0.0089	850	500/D
	2.5	50/0.25	2.10	0.7	1.8	29.0	7.98	0.0081	1,300	500/D
	4.0	56/0.30	2.60	0.8	1.8	34.0	4.95	0.0076	1,900	500/D
	6.0	84/0.30	3.40	0.8	2.2	41.0	3.30	0.0061	2,800	500/D
33	0.50	16/0.20	0.95	0.6	1.4	19.5	39.0	0.0130	400	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	500	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	600	500/D
	1.5	30/0.25	1.60	0.6	1.8	24.0	13.3	0.0089	850	500/D
	2.5	50/0.25	2.10	0.7	1.8	29.0	7.98	0.0081	1,300	500/D
	4.0	56/0.30	2.60	0.8	1.8	34.0	4.95	0.0076	1,900	500/D
	6.0	84/0.30	3.40	0.8	2.2	41.0	3.30	0.0061	2,800	500/D

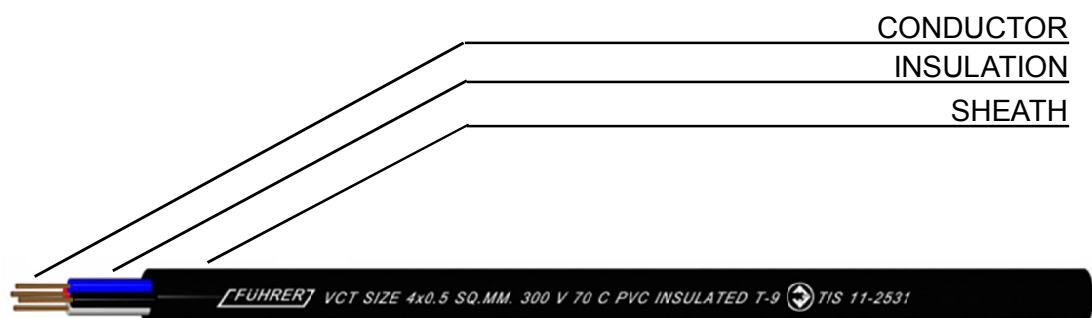
Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
34	0.50	16/0.20	0.95	0.6	1.4	20.0	39.0	0.0130	430	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	550	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	650	500/D
	1.5	30/0.25	1.60	0.6	1.8	25.0	13.3	0.0089	900	500/D
	2.5	50/0.25	2.10	0.7	1.8	30.0	7.98	0.0081	1,400	500/D
	4.0	56/0.30	2.60	0.8	2.2	37.0	4.95	0.0076	2,100	500/D
	6.0	84/0.30	3.40	0.8	2.2	42.0	3.30	0.0061	3,000	500/D
35	0.50	16/0.20	0.95	0.6	1.4	20.0	39.0	0.0130	430	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	550	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	650	500/D
	1.5	30/0.25	1.60	0.6	1.8	25.0	13.3	0.0089	900	500/D
	2.5	50/0.25	2.10	0.7	1.8	30.0	7.98	0.0081	1,400	500/D
	4.0	56/0.30	2.60	0.8	2.2	37.0	4.95	0.0076	2,100	500/D
	6.0	84/0.30	3.40	0.8	2.2	42.0	3.30	0.0061	3,000	500/D
36	0.50	16/0.20	0.95	0.6	1.4	20.0	39.0	0.0130	440	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	550	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	650	500/D
	1.5	30/0.25	1.60	0.6	1.8	25.0	13.3	0.0089	900	500/D
	2.5	50/0.25	2.10	0.7	1.8	30.0	7.98	0.0081	1,400	500/D
	4.0	56/0.30	2.60	0.8	2.2	37.0	4.95	0.0076	2,100	500/D
	6.0	84/0.30	3.40	0.8	2.2	42.0	3.30	0.0061	3,100	500/D
37	0.50	16/0.20	0.95	0.6	1.4	20.0	39.0	0.0130	450	500/D
	0.75	24/0.20	1.15	0.6	1.4	21.0	26.0	0.0114	550	500/D
	1.0	32/0.20	1.30	0.6	1.4	22.0	19.5	0.0104	700	500/D
	1.5	30/0.25	1.60	0.6	1.8	25.0	13.3	0.0089	950	500/D
	2.5	50/0.25	2.10	0.7	1.8	30.0	7.98	0.0081	1,400	500/D
	4.0	56/0.30	2.60	0.8	2.2	37.0	4.95	0.0076	2,200	500/D
	6.0	84/0.30	3.40	0.8	2.2	42.0	3.30	0.0061	3,100	500/D
38	0.50	16/0.20	0.95	0.6	1.4	21.0	39.0	0.0130	460	500/D
	0.75	24/0.20	1.15	0.6	1.4	22.0	26.0	0.0114	600	500/D
	1.0	32/0.20	1.30	0.6	1.4	23.0	19.5	0.0104	700	500/D
	1.5	30/0.25	1.60	0.6	1.8	26.0	13.3	0.0089	950	500/D
	2.5	50/0.25	2.10	0.7	1.8	31.0	7.98	0.0081	1,500	500/D
	4.0	56/0.30	2.60	0.8	2.2	38.0	4.95	0.0076	2,200	500/D
	6.0	84/0.30	3.40	0.8	2.2	44.0	3.30	0.0061	3,300	500/D
39	0.50	16/0.20	0.95	0.6	1.4	21.0	39.0	0.0130	470	500/D
	0.75	24/0.20	1.15	0.6	1.4	22.0	26.0	0.0114	600	500/D
	1.0	32/0.20	1.30	0.6	1.4	23.0	19.5	0.0104	700	500/D
	1.5	30/0.25	1.60	0.6	1.8	26.0	13.3	0.0089	1,000	500/D
	2.5	50/0.25	2.10	0.7	1.8	31.0	7.98	0.0081	1,500	500/D
	4.0	56/0.30	2.60	0.8	2.2	38.0	4.95	0.0076	2,300	500/D
	6.0	84/0.30	3.40	0.8	2.2	44.0	3.30	0.0061	3,300	500/D
40	0.50	16/0.20	0.95	0.6	1.4	21.0	39.0	0.0130	480	500/D
	0.75	24/0.20	1.15	0.6	1.4	22.0	26.0	0.0114	600	500/D
	1.0	32/0.20	1.30	0.6	1.4	23.0	19.5	0.0104	750	500/D
	1.5	30/0.25	1.60	0.6	1.8	26.0	13.3	0.0089	1,000	500/D
	2.5	50/0.25	2.10	0.7	1.8	31.0	7.98	0.0081	1,500	500/D
	4.0	56/0.30	2.60	0.8	2.2	38.0	4.95	0.0076	2,300	500/D
	6.0	84/0.30	3.40	0.8	2.2	44.0	3.30	0.0061	3,400	500/D
41	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	500	500/D
	0.75	24/0.20	1.15	0.6	1.4	23.0	26.0	0.0114	650	500/D
	1.0	32/0.20	1.30	0.6	1.8	25.0	19.5	0.0104	800	500/D
	1.5	30/0.25	1.60	0.6	1.8	27.0	13.3	0.0089	1,000	500/D
	2.5	50/0.25	2.10	0.7	1.8	33.0	7.98	0.0081	1,600	500/D
	4.0	56/0.30	2.60	0.8	2.2	40.0	4.95	0.0076	2,400	500/D
	6.0	84/0.30	3.40	0.8	2.2	46.0	3.30	0.0061	3,500	500/D

Number of Core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Diameter of Conductor (approx.)	Insulation thickness (mm)	Sheath thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20° C (Ω/Km)	Minimum insulation resistance at 70° C (MΩ-Km)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
42	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	500	500/D
	0.75	24/0.20	1.15	0.6	1.4	23.0	26.0	0.0114	650	500/D
	1.0	32/0.20	1.30	0.6	1.8	25.0	19.5	0.0104	800	500/D
	1.5	30/0.25	1.60	0.6	1.8	27.0	13.3	0.0089	1,100	500/D
	2.5	50/0.25	2.10	0.7	1.8	33.0	7.98	0.0081	1,600	500/D
	4.0	56/0.30	2.60	0.8	2.2	40.0	4.95	0.0076	2,500	500/D
	6.0	84/0.30	3.40	0.8	2.2	46.0	3.30	0.0061	3,600	500/D
43	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	500	500/D
	0.75	24/0.20	1.15	0.6	1.4	23.0	26.0	0.0114	650	500/D
	1.0	32/0.20	1.30	0.6	1.8	25.0	19.5	0.0104	850	500/D
	1.5	30/0.25	1.60	0.6	1.8	27.0	13.3	0.0089	1,100	500/D
	2.5	50/0.25	2.10	0.7	1.8	33.0	7.98	0.0081	1,600	500/D
	4.0	56/0.30	2.60	0.8	2.2	40.0	4.95	0.0076	2,500	500/D
	6.0	84/0.30	3.40	0.8	2.2	46.0	3.30	0.0061	3,600	500/D
44	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	550	500/D
	0.75	24/0.20	1.15	0.6	1.4	24.0	26.0	0.0114	650	500/D
	1.0	32/0.20	1.30	0.6	1.8	26.0	19.5	0.0104	850	500/D
	1.5	30/0.25	1.60	0.6	1.8	28.0	13.3	0.0089	1,100	500/D
	2.5	50/0.25	2.10	0.7	1.8	34.0	7.98	0.0081	1,700	500/D
	4.0	56/0.30	2.60	0.8	2.2	41.0	4.95	0.0076	2,600	500/D
	6.0	84/0.30	3.40	0.8	2.6	48.0	3.30	0.0061	3,800	500/D
45	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	550	500/D
	0.75	24/0.20	1.15	0.6	1.4	24.0	26.0	0.0114	700	500/D
	1.0	32/0.20	1.30	0.6	1.8	26.0	19.5	0.0104	850	500/D
	1.5	30/0.25	1.60	0.6	1.8	28.0	13.3	0.0089	1,100	500/D
	2.5	50/0.25	2.10	0.7	1.8	34.0	7.98	0.0081	1,700	500/D
	4.0	56/0.30	2.60	0.8	2.2	41.0	4.95	0.0076	2,600	500/D
	6.0	84/0.30	3.40	0.8	2.6	48.0	3.30	0.0061	3,900	500/D
46	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	550	500/D
	0.75	24/0.20	1.15	0.6	1.4	24.0	26.0	0.0114	700	500/D
	1.0	32/0.20	1.30	0.6	1.8	26.0	19.5	0.0104	900	500/D
	1.5	30/0.25	1.60	0.6	1.8	28.0	13.3	0.0089	1,100	500/D
	2.5	50/0.25	2.10	0.7	1.8	34.0	7.98	0.0081	1,800	500/D
	4.0	56/0.30	2.60	0.8	2.2	41.0	4.95	0.0076	2,700	500/D
	6.0	84/0.30	3.40	0.8	2.6	48.0	3.30	0.0061	4,000	500/D
47	0.50	16/0.20	0.95	0.6	1.4	22.0	39.0	0.0130	550	500/D
	0.75	24/0.20	1.15	0.6	1.4	24.0	26.0	0.0114	700	500/D
	1.0	32/0.20	1.30	0.6	1.8	26.0	19.5	0.0104	900	500/D
	1.5	30/0.25	1.60	0.6	1.8	28.0	13.3	0.0089	1,200	500/D
	2.5	50/0.25	2.10	0.7	1.8	34.0	7.98	0.0081	1,800	500/D
	4.0	56/0.30	2.60	0.8	2.2	41.0	4.95	0.0076	2,700	500/D
	6.0	84/0.30	3.40	0.8	2.6	48.0	3.30	0.0061	4,000	500/D
48	0.50	16/0.20	0.95	0.6	1.4	23.0	39.0	0.0130	550	500/D
	0.75	24/0.20	1.15	0.6	1.8	25.0	26.0	0.0114	750	500/D
	1.0	32/0.20	1.30	0.6	1.8	26.0	19.5	0.0104	900	500/D
	1.5	30/0.25	1.60	0.6	1.8	29.0	13.3	0.0089	1,200	500/D
	2.5	50/0.25	2.10	0.7	1.8	34.0	7.98	0.0081	1,800	500/D
	4.0	56/0.30	2.60	0.8	2.2	42.0	4.95	0.0076	2,800	500/D
	6.0	84/0.30	3.40	0.8	2.6	49.0	3.30	0.0061	4,100	500/D

COPPER CONDUCTOR CABLES

Flexible Wires And Cables

	PAGE
VCT 750 V 70 °C PVC INSULATED AND SHEATHED FLEXIBLE CABLE	33-34
VFF 300 V 70 °C PVC INSULATED FLAT TYPE, FLEXIBLE CONDUCTOR	35-36
VKF 300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE, FLEXIBLE CONDUCTOR	37-38
VSF 300 V 70 °C PVC INSULATED FLEXIBLE CONDUCTOR, SINGLE CORE	39-40

750 V 70 °C PVC INSULATED AND SHEATHED FLEXIBLE CABLE**CABLE STRUCTURE**

NUMBER OF CORE	: Up to 4 cores
CONDUCTOR	: Flexible annealed copper wires Sizes. 0.5 mm ² up to 35 mm ² for single core 0.5 mm ² up to 35 mm ² for multi core
INSULATION	: PVC Colour : Single core –Black 2 cores – Light gray and Black 3 cores – Light gray, Black and Red 4 cores – Light gray, Black, Red and Blue
SHEATH	: PVC Colour : Black
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 Volts
REFERENCE	: TIS 11-2531, Table 9

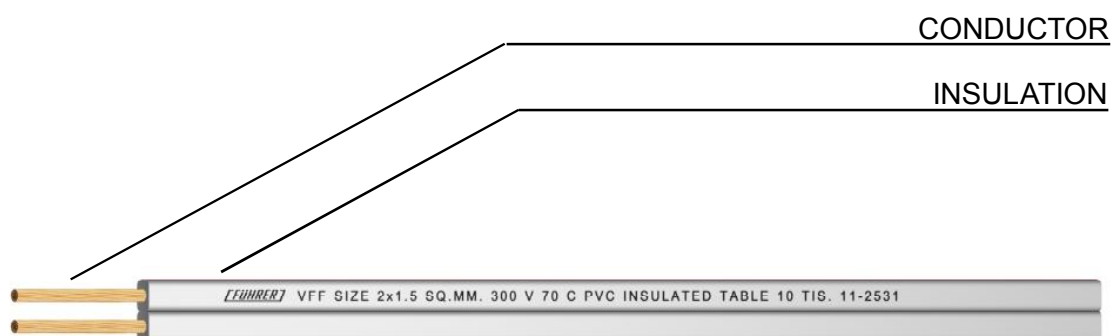


Number of core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Max. overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
1	0.5	16/0.20	0.8	1.0	5.4	0.0160	10	29	100/C
	0.75	24/0.20	0.8	1.0	5.6	0.0140	13	33	100/C
	1	32/0.25	0.8	1.2	6.2	0.0127	15	41	100/C
	1.5	30/0.25	0.8	1.2	6.6	0.0111	19	48	100/C
	2.5	50/0.25	0.8	1.2	7.4	0.0092	27	60	100/C
	4	56/0.30	0.9	1.4	8.6	0.0084	36	90	100/C
	6	84/0.30	0.9	1.4	9.4	0.0071	46	110	100/C
	10	80/0.40	1.1	1.8	12.0	0.0068	67	210	100/C
	16	126/0.40	1.1	1.8	13.5	0.0050	88	270	100/C
	25	196/0.40	1.3	2.2	16.0	0.0048	116	410	100/C
	35	276/0.40	1.3	2.2	17.5	0.0041	145	540	500/D
	50	396/0.40	1.5	2.6	21.0	0.0040	181	750	500/D
	70	360/0.50	1.5	2.6	23.0	0.0034	226	980	500/D
	95	475/0.50	1.7	3.0	26.5	0.0034	268	1,300	500/D
2	0.5	16 / 0.20	0.8	1.2	8.8	0.0160	9	80	100/C
	0.75	24 / 0.20	0.8	1.2	9.2	0.0140	12	90	100/C
	1	32/ 0.25	0.8	1.2	9.6	0.0127	14	95	100/C
	1.5	30/ 0.25	0.8	1.4	11.0	0.0111	18	120	100/C
	2.5	50/ 0.25	0.8	1.4	12.5	0.0092	24	160	100/C
	4	56/ 0.30	0.9	1.6	14.5	0.0084	33	230	100/C
	6	84/ 0.30	0.9	1.6	16.0	0.0071	42	290	100/C
	10	80/ 0.40	1.1	1.8	20.0	0.0068	60	510	500/D
	16	126/ 0.40	1.1	2.2	23.0	0.0050	80	710	500/D
	25	196 /0.40	1.3	2.4	27.5	0.0048	104	1,030	500/D
	35	276/ 0.40	1.3	2.6	31.0	0.0041	130	1,380	500/D
3	0.5	16 / 0.20	0.8	1.2	9.2	0.0160	8	90	500/D
	0.75	24 / 0.20	0.8	1.2	9.6	0.0140	10	100	500/D
	1	32/ 0.25	0.8	1.4	10.5	0.0127	12	120	500/D
	1.5	30/ 0.25	0.8	1.4	11.5	0.0111	15	140	500/D
	2.5	50/ 0.25	0.8	1.4	13.0	0.0092	20	190	500/D
	4	56/ 0.30	0.9	1.6	15.5	0.0084	27	280	500/D
	6	84/ 0.30	0.9	1.8	17.5	0.0071	35	370	500/D
	10	80/ 0.40	1.1	2.0	21.5	0.0068	51	650	500/D
	16	126/ 0.40	1.1	2.4	25.0	0.0050	67	900	500/D
	25	196 /0.40	1.3	2.6	30.0	0.0048	87	1,320	500/D
	35	276/ 0.40	1.3	2.8	33.5	0.0041	108	1,770	500/D
4	0.5	16 / 0.20	0.8	1.4	10.5	0.0160	7	110	500/D
	0.75	24 / 0.20	0.8	1.4	11.0	0.0140	9	130	500/D
	1	32/ 0.25	0.8	1.6	12.0	0.0127	11	150	500/D
	1.5	30/ 0.25	0.8	1.6	12.5	0.0111	13	180	500/D
	2.5	50/ 0.25	0.8	1.6	15.0	0.0092	18	240	500/D
	4	56/ 0.30	0.9	1.8	17.0	0.0084	25	350	500/D
	6	84/ 0.30	0.9	2.0	19.5	0.0071	32	480	500/D
	10	80/ 0.40	1.1	2.2	24.0	0.0068	46	820	500/D
	16	126/ 0.40	1.1	2.6	28.0	0.0050	60	1,150	500/D
	25	196 /0.40	1.3	2.8	33.0	0.0048	78	1,680	500/D
	35	276/ 0.40	1.3	3.1	37.0	0.0041	97	2,290	500/D

C: Packing in coil.

D: Packing in drum.



300 V 70 °C PVC INSULATED FLAT TYPE, FLEXIBLE CONDUCTOR**CABLE STRUCTURE**

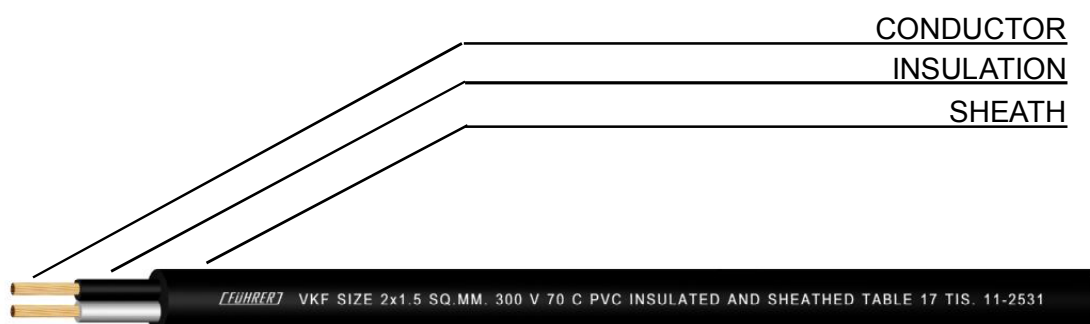
NUMBER OF CORE	: 2 conductors
CONDUCTOR	: Flexible annealed copper wire, Sizes. 0.5 mm ² up to 2.5 mm ²
INSULATION	: PVC Colour : Any color with one different color tracer on lateral side of wire, or color thread at one of conductors
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 10



VFF

Number of core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
				Lower limit	Upper limit				
2	0.5	16/0.20	0.8	2.4x4.9	3.2x6.2	0.0160	8	23	100/C
	0.5	28/0.15	0.8	2.4x4.8	3.2x6.2	0.0160	8	23	100/C
	0.75	24/0.20	0.8	2.6x5.2	3.4x6.6	0.0140	10	29	100/C
	0.75	42/0.15	0.8	2.6x5.2	3.4x6.6	0.0140	10	29	100/C
	1	32/0.20	0.8	2.8x5.6	3.6x7.0	0.0127	12	35	100/C
	1.5	30/0.25	0.8	3.0x6.0	3.9x7.6	0.0111	15	46	100/C
	2.5	50/0.25	0.8	3.5x7.0	4.8x9.4	0.0092	21	68	100/C

C: Packing in coil.

300 V 70 °C PVC INSULATED AND SHEATHED FLAT TYPE, FLEXIBLE CONDUCTOR**CABLE STRUCTURE**

NUMBER OF CORE	: 2 cores
CONDUCTOR	: Flexible annealed copper wires Sizes. 0.5 mm ² up to 2.5 mm ²
INSULATION	: PVC Colour : Light gray, Black
SHEATH	: PVC Colour : Black or White
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 17

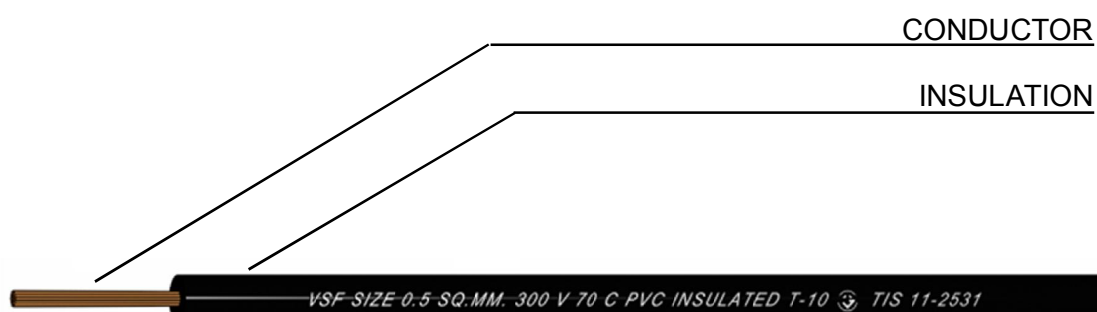


VKF

Number of core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No/mm)	Insulation thickness (mm)	Sheath Thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard Length (m)
					Lower limit	Upper limit				
2	0.5	16/0.20	0.6	0.9	3.8x5.8	4.7x7.2	0.0132	8	38	100/C
	0.5	28/0.15	0.6	0.9	3.8x5.8	4.7x7.2	0.0133	8	38	100/C
	1	32/0.20	0.6	0.9	4.1x6.6	5.2x8.0	0.0104	11	50	100/C
	1.5	30/0.25	0.6	1.2	5.0x7.6	6.2x9.4	0.0090	15	75	100/C
	2.5	50/0.25	0.7	1.2	5.6x9.0	7.2x11.5	0.0083	20	110	100/C

C: Packing in coil.

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



CABLE STRUCTURE

CONDUCTOR	: Flexible stranded annealed copper wire, Sizes. 0.5 mm ² up to 2.5 mm ²
INSULATION	: PVC- Any color
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 300 volts
TESTING VOLTAGE	: 2,000 Volts
REFERENCE	: TIS 11-2531, Table 10



VSF

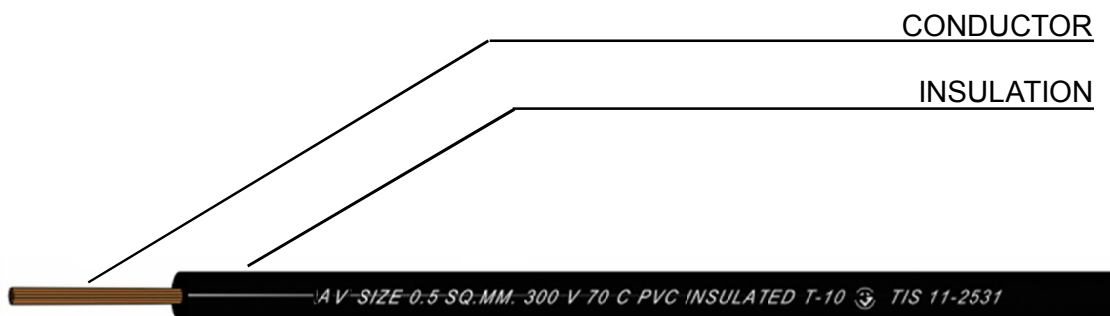
Number of core	Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation Thickness (mm)	Max. Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
1	0.5	16/0.20	0.8	3.2	0.0160	9	12	100/C
	0.5	28/0.15	0.8	3.2	0.0160	9	11	100/C
	0.75	24/0.20	0.8	3.4	0.0140	11	15	100/C
	0.75	42/0.15	0.8	3.4	0.0140	11	14	100/C
	1	32/0.20	0.8	3.6	0.0127	14	17	100/C
	1.5	30/0.25	0.8	3.9	0.0111	18	22	100/C
	2.5	50/0.25	0.8	4.8	0.0092	24	33	100/C

C: Packing in coil.

COPPER CONDUCTOR CABLES

Automobile Wires And Cables

	PAGE
AV	
60°C LOW VOLTAGE FLEXIBLE CONDUCTOR FOR AUTOMOBILE	42-43

60°C LOW VOLTAGE FLEXIBLE CONDUCTOR FOR AUTOMOBILE**CABLE STRUCTURE**

CONDUCTOR	: Flexible annealed copper wires Sizes. 0.5 mm ² up to 95 mm ²
INSULATION	: PVC Colour : Any color
CLASSIFICATION	: Maximum conductor temperature 60°C Low voltage circuit
TESTING VOLTAGE	: 5,000 Volts
REFERENCE	: TIS 118-2522

**AV**

Number of core	Nominal cross sectional area (mm ²)	Number and diameter of wire (No./mm)	Approx. conductor diameter (mm)	Mean value of insulation thickness (mm)	Approx. Overall diameter (mm)	Maximum conductor resistance at 20°C (Ω-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
1	0.5	16/0.20	0.95	0.6	2.2	37.1	8	9	100/C
	0.5	7/0.30	0.95	0.6	2.2	37.1	8	9	100/C
	0.75	24/0.20	1.15	0.6	2.4	24.7	11	11	100/C
	0.85	12/0.30	1.2	0.6	2.4	22.0	11	12	100/C
	1.0	32/0.20	1.3	0.6	2.6	18.5	13	14	100/C
	1.25	40/0.20	1.5	0.6	2.7	14.8	15	17	100/C
	1.25	18/0.30	1.5	0.6	2.7	14.7	15	17	100/C
	1.5	30/0.25	1.6	0.6	2.8	12.7	16	19	100/C
	2.0	28/0.30	1.9	0.6	3.1	9.42	20	24	100/C
	2.5	50/0.25	2.1	0.7	3.5	7.6	23	30	100/C
	3.0	44/0.30	2.3	0.7	3.7	6.00	26	37	100/C
	4.0	56/0.30	2.6	0.8	4.2	4.71	31	47	100/C
	5.0	70/0.30	3.0	0.8	4.6	3.77	36	57	100/C
	6.0	84/0.30	3.2	0.9	5.0	3.14	40	69	100/C
	8.0	63/0.40	3.7	0.9	5.5	2.31	48	88	100/C
	10	84/0.40	4.2	1.1	6.4	1.82	58	114	100/C
	16	126/0.40	5.8	1.1	8.0	1.16	75	173	100/C
	25	196/0.60	7.0	1.4	9.8	0.770	98	261	100/C
	35	280/0.40	8.5	1.4	11.3	0.524	124	366	100/C
	50	399/0.40	10.9	1.6	14.1	0.357	163	537	500/D
	70	361/0.50	12.6	2.0	16.6	0.268	200	727	500/D
	95	475/0.50	14.1	2.0	18.1	0.193	248	971	500/D

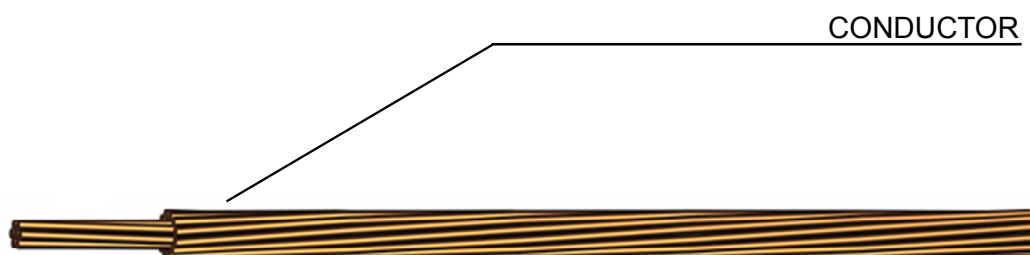
C: Packing in coil.

D: Packing in drum.

COPPER CONDUCTOR CABLES

Bare Conductor

	PAGE
FHC HARD DRAWN COPPER STRANDED CONDUCTOR	45-46

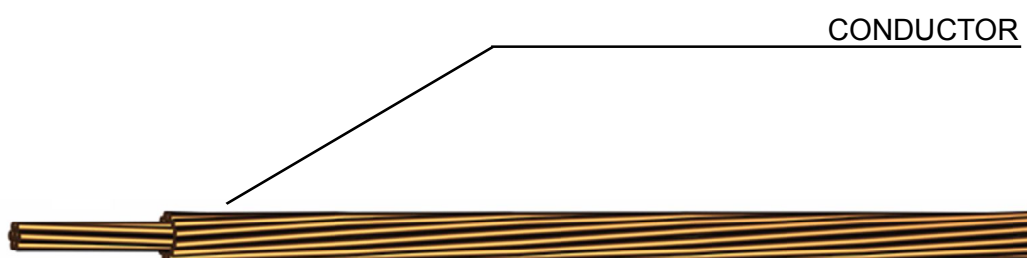
HARD DRAWN COPPER STRANDED CONDUCTOR**CABLE STRUCTURE**

CONDUCTOR	: Hard drawn copper wires, concentric stranded conductor Sizes. 10 mm ² up to 500 mm ² Direction of outermost layer Z
REFERENCE	: TIS 64-2517

**FHC**

Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Approx conductor diameter (mm)	Maximum conductor resistance at 20°C (Ω-Km)	Breaking Strength (Kgf)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
10	7/1.35	4.05	1.80548	438	90	90	1000/D
16	7/1.70	5.10	1.13857	694	125	140	1000/D
25	7/2.14	6.42	0.71851	1,076	160	230	1000/D
35	7/2.25	7.56	0.51815	1,459	200	320	1000/D
50	7/3.02	9.06	0.35896	2,095	250	450	1000/D
50	19/1.78	8.90	0.38252	2,021	250	430	1000/D
70	19/2.14	10.70	0.26466	2,921	310	600	1000/D
95	19/2.52	12.60	0.19183	3,961	380	850	1000/D
120	19/2.85	14.25	0.14922	5,067	440	1,100	500/D
150	37/2.25	15.75	0.12384	6,289	510	1,300	500/D
185	37/2.52	17.64	0.09813	7,713	585	1,700	500/D
240	61/2.25	20.25	0.07528	10,369	700	2,200	500/D
300	61/2.52	22.68	0.06002	12,717	800	2,800	500/D
400	61/2.85	25.65	0.04692	16,266	900	3,600	500/D
500	61/3.20	28.80	0.03703	20,506	1110	4,500	500/D

C: Packing in coil.

BARE ANNEALED COPPER STRANDED CONDUCTOR**CABLE STRUCTURE**

CONDUCTOR	: Soft drawn copper wires, concentric stranded conductor Sizes. 10 mm ² up to 500 mm ² Direction of outermost layer S
REFERENCE	: ASTM B3 & B8

**BCW**

Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Approx conduct or diameter (mm)	Maximum conductor resistance at 20°C (Ω-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
10	7/1.35	4.05	1.80548	90	90	1000/D
16	7/1.70	5.10	1.13857	125	140	1000/D
25	7/2.14	6.42	0.71851	160	230	1000/D
35	19/1.53	7.65	0.52400	200	320	1000/D
50	7/3.02	9.06	0.35896	250	450	1000/D
50	19/1.78	8.90	0.38252	250	430	1000/D
70	19/2.14	10.70	0.26466	310	600	1000/D
95	19/2.52	12.60	0.19183	380	850	1000/D
120	37/2.03	14.21	0.15222	440	1,100	500/D
150	37/2.25	15.75	0.12384	510	1,300	500/D
185	37/2.52	17.64	0.09813	585	1,700	500/D
240	61/2.25	20.25	0.07528	700	2,200	500/D
300	61/2.52	22.68	0.06002	800	2,800	500/D
400	61/2.85	25.65	0.04692	900	3,600	500/D
500	61/3.20	28.80	0.03703	1110	4,500	500/D

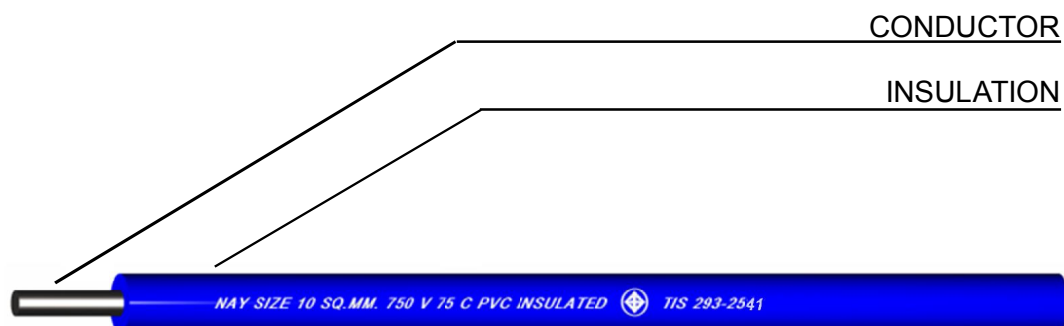
C: Packing in coil.

ALUMINIUM CONDUCTOR CABLES

Building Wires And Cables

	PAGE
NAY 750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE	48-49
THW-A 750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE	50-51

750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE



CABLE STRUCTURE

CONDUCTOR	: Solid hard drawn aluminum wires, Sizes. 10 mm ² up to 16 mm ²
INSULATION	: PVC Colour : Blue
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 Volts
REFERENCE	: TIS 293-2541 Table 1

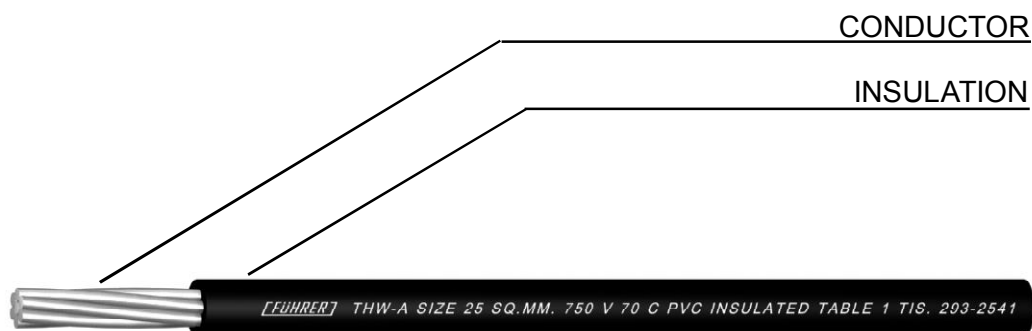


NAY

Nominal cross Sectional Area	Number and diameter of wire	Insulation thickness	Approx. overall diameter	Maximum Conductor Resistance at 20°C	Minimum insulation Resistance at 20°C	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
(mm ²)	(NO./mm)	(mm)	(mm)	(Ω/Km)	(MΩ-Km)	(Ampere)	(Kg/Km)	(m)
10	1/3.49	2.7	9.3	3.08	40	51	110	500/C
16	1/4.43	2.9	10.5	1.91	40	68	147	500/C

C: Packing in coil.

750 V 70°C PVC INSULATED ALUMINIUM CONDUCTOR, SINGLE CORE



CABLE STRUCTURE

CONDUCTOR	: Solid and stranded hard drawn aluminum wires, Sizes. 10 mm ² up to 500 mm ²
INSULATION	: Heat resisting PVC Colour : Black
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 Volts
REFERENCE	: TIS 293-2541 Table 1

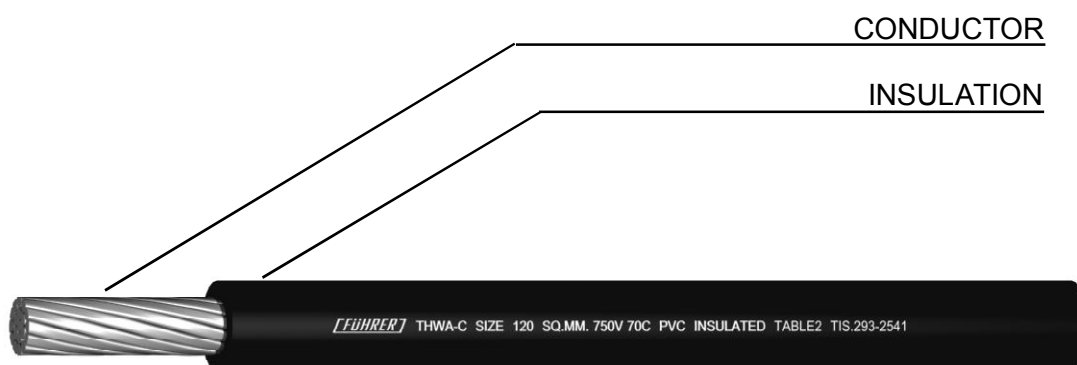


THWA

Nominal Cross Sectional area (mm ²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Approx. Overall diameter (mm)	Maximum Conductor Resistance at 20°C (Ω-Km)	Minimum insulation resistance at 20°C (MΩ-Km)	Maximum continuous current rating in free air (Ampere)	Cable weight (approx.) (Kg/Km)	Standard length (m)
10	1/3.49	1.1	5.9	3.08	0.038	50	50	500/D
10	7/1.32	1.1	6.4	3.08	0.034	52	55	500/D
16	1/4.43	1.1	6.8	1.91	0.032	67	70	500/D
16	7/1.68	1.1	7.4	1.91	0.028	69	80	500/D
25	7/2.12	1.3	9.2	1.20	0.027	92	120	500/D
35	7/2.49	1.3	10.5	0.868	0.023	113	160	500/D
50	7/2.90	1.5	12.0	0.641	0.023	135	210	500/D
50	19/1.76	1.5	12.5	0.641	0.023	135	210	500/D
70	19/2.12	1.5	14.0	0.443	0.020	173	280	500/D
95	19/2.49	1.7	16.5	0.320	0.019	218	390	500/D
120	19/2.80	1.7	18.0	0.253	0.017	257	470	500/D
120	37/2.01	1.7	18.0	0.253	0.017	258	470	500/D
150	37/2.23	1.9	20.0	0.206	0.017	298	600	500/D
185	37/2.50	2.1	22.0	0.164	0.017	351	700	500/D
240	61/2.23	2.3	25.0	0.125	0.016	426	900	500/D
300	61/2.49	2.5	28.0	0.100	0.016	498	1,100	500/D
400	61/2.82	2.7	32.0	0.0778	0.015	594	1,400	500/D
500	61/3.20	3.1	36.0	0.0605	0.015	708	1,900	500/D

C: Packing in coil.

D: Packing in drum.

750 V 70°C PVC INSULATED ALUMINIUM COMPACTED CONDUCTOR, SINGLE CORE**CABLE STRUCTURE**

CONDUCTOR	: Compact stranded hard drawn aluminum wires, Sizes. 10 mm ² up to 500 mm ²
INSULATION	: Heat resisting PVC Colour : Black
CLASSIFICATION	: Maximum conductor temperature 70°C Circuit voltage not exceeding 750 volts
TESTING VOLTAGE	: 2,500 Volts
REFERENCE	: TIS 293-2541 Table 2



THWA-C

Nominal Cross Sectional area	Minimum number of wire	Approx. Overall Conductor diameter	Insulation thickness	Approx. Overall diameter	Maximum conductor resistance at 20°C	Minimum insulation resistance at 70°C	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
(mm ²)	(No)	(mm)	(mm)	(mm)	(Ω-Km)	(MΩ-Km)	(Ampere)	(Kg/Km)	(m)
10	6	3.70	1.1	6.20	3.08	0.0075	52	55	500/D
16	6	4.70	1.1	7.20	1.91	0.0062	71	75	500/D
25	6	5.90	1.3	8.80	1.20	0.0059	95	115	500/D
35	6	6.96	1.3	9.80	0.868	0.0051	115	150	500/D
50	6	8.28	1.5	11.60	0.641	0.0051	130	200	500/D
70	12	9.75	1.5	13.00	0.443	0.0043	180	270	500/D
95	15	11.45	1.7	15.20	0.320	0.0042	220	370	500/D
120	15	12.95	1.7	16.70	0.253	0.0038	270	450	500/D
150	15	14.20	1.9	18.40	0.206	0.0038	300	555	500/D
185	30	15.98	2.1	20.50	0.164	0.0038	370	695	500/D
240	30	18.47	2.3	23.40	0.125	0.0036	450	900	500/D
300	30	20.50	2.5	25.90	0.110	0.0035	520	1115	500/D
400	53	23.35	2.7	33.10	0.0778	0.0033	620	1415	500/D
500	53	26.50	3.1	33.20	0.0605	0.0034	750	1835	500/D

C: Packing in coil.

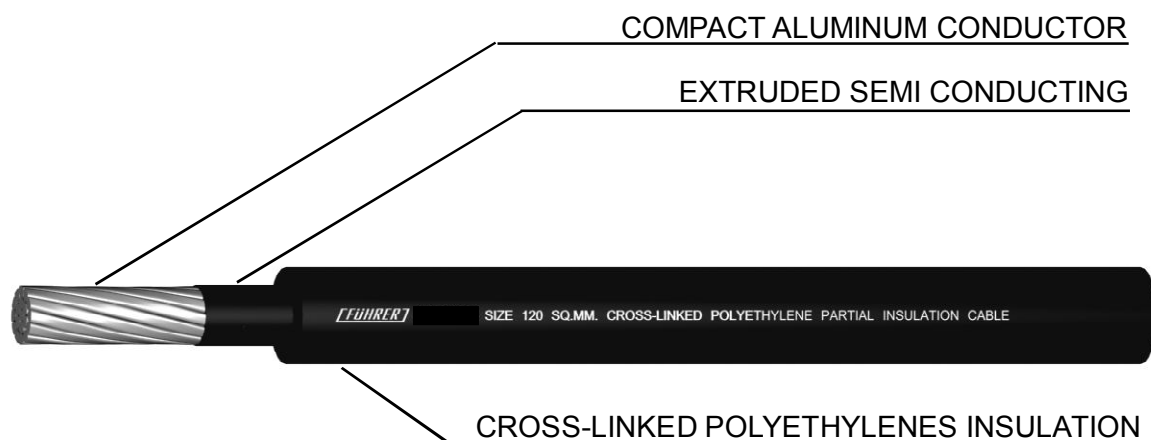
D: Packing in drum.

ALUMINIUM CONDUCTOR CABLES

High Voltage Power Cables

	PAGE
25 KV	
CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE	53-54
35 KV	
CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE	55-56
25 KV	
ALL ALUMINIUM SPACED AERIAL CABLE	57-58
35 KV	
ALL ALUMINIUM SPACED AERIAL CABLE	59-60

CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE



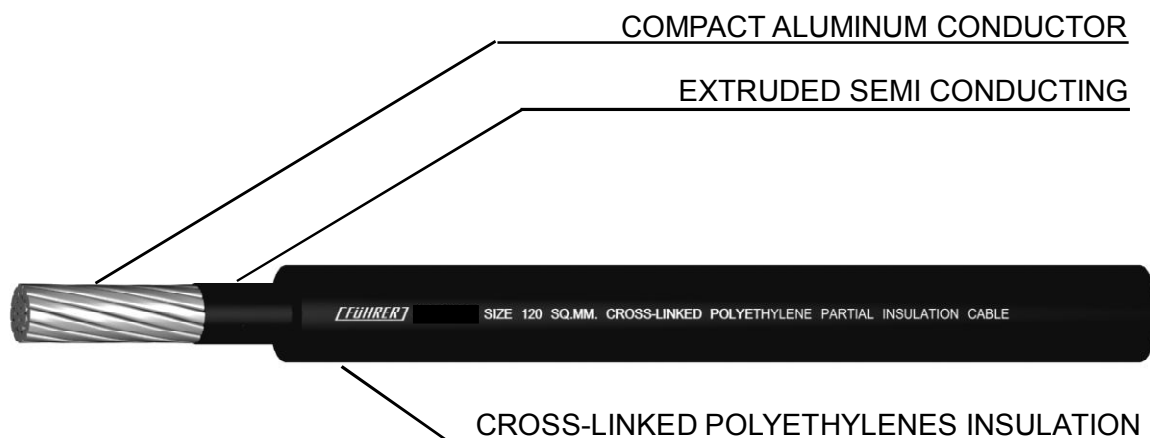
CABLE STRUCTURE

NUMBER OF CORE	: Single core
CONDUCTOR	: Compact stranded hard drawn Aluminum wire Conductor sizes 35 mm ² up to 240 mm ²
CONDUCTOR SHIELD	: Semi conducting cross-linked polyethylene
INSULATION	: Track resistant cross-linked polyethylene Colour : Black
CLASSIFICATION	: Normal operation 90 °C Emergency overload conditions 130 °C Short circuit conditions 250°C Voltage rating 25 Kv.(Phase to Phase)
TESTING VOLTAGE	: 11KV for 5 minutes
REFERENCE	: ICEA S-66-524 /MEA/PEA

PIC 25 KV

Number of core	Nominal cross sectional area (mm ²)	Minimum number of wire (no.)	Diameter of conductor approx. (mm)	Minimum Thickness of conductor shield & insulation (mm)	Overall Diameter (Approx) (mm)	Maximum DC conductor resistance at 20°C (Ω-Km)	Minimum breaking strength of conductor (N)	Minimum insulation resistance at 15.6°C (MΩ-Km)	Allowable current amp cities in free air at 40°C (ambient) (A)	Cable weight (Approx) (Kg/Km)	Standard length (m/d)
1	35	7	6.96	2.27	11.50	0.868	5,591	1,038	146	160	1,000/D
	50	7	8.28	2.36	13.00	0.641	7,313	990	178	215	1,000/D
	70	18	9.80	2.49	14.70	0.443	10,420	901	222	300	1,000/D
	95	18	11.45	2.58	16.60	0.320	14,098	832	274	380	1,000/D
	120	18	12.95	2.63	18.20	0.253	18,518	776	319	460	1,000/D
	150	18	14.20	2.62	19.50	0.206	22,457	728	363	560	1,000/D
	185	34	15.98	2.71	21.40	0.164	28,974	676	421	680	1,000/D
	240	34	18.47	2.82	24.10	0.125	37,506	630	503	880	1,000/D

D: Packing in drum.

CROSS - LINKED POLYETHYLENE PARTIAL INSULATED ALL ALUMINIUM CABLE**CABLE STRUCTURE**

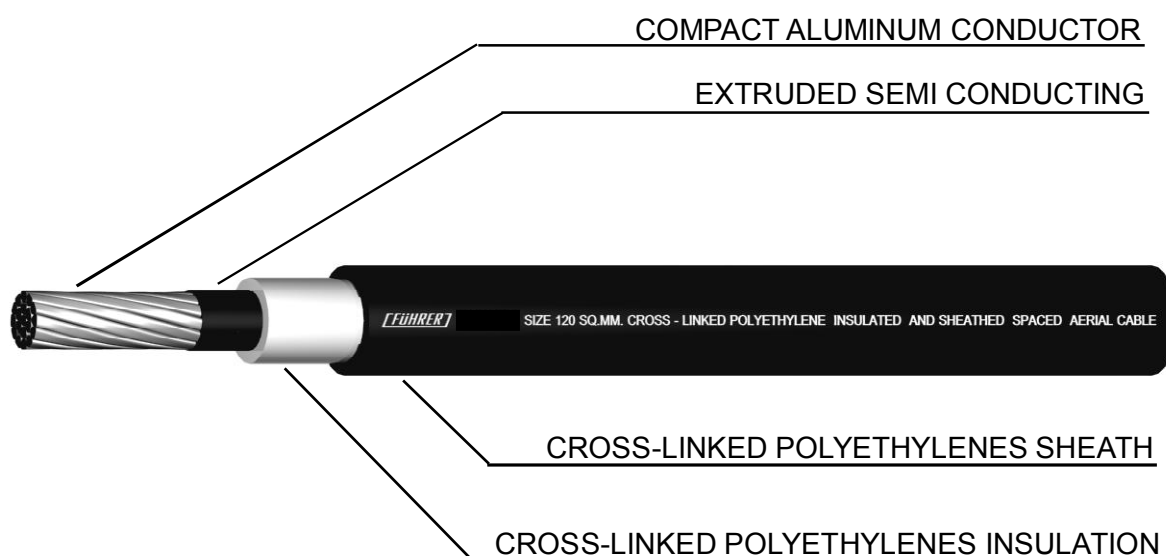
NUMBER OF CORE	:	Single core
CONDUCTOR	:	Compact stranded hard drawn Aluminum wire Conductor sizes 35 mm ² up to 240 mm ²
CONDUCTOR SHIELD	:	Semi conducting cross-linked polyethylene
INSULATION	:	Track resistant cross-linked polyethylene Colour : Black
CLASSIFICATION	:	Normal operation 90 °C Emergency overload conditions 130 °C Short circuit conditions 250°C Voltage rating 35 Kv.(Phase to Phase)
TESTING VOLTAGE	:	17KV for 5 minutes
REFERENCE	:	ICEA S-66-524 /MEA/PEA

PIC 35 KV

Number of core	Nominal cross sectional area (mm ²)	Minimum number of wire (no.)	Diameter of conductor approx. (mm)	Minimum Thickness of conductor shield & insulation (mm)	Overall Diameter (Approx) (mm)	Maximum DC conductor resistance at 20°C (Ω-Km)	Minimum breaking strength of conductor (N)	Minimum insulation resistance at 15.6°C (MΩ-Km)	Allowable current amp cities in free air at 40°C (ambient) (A)	Cable weight (Approx) (Kg/Km)	Standard length (m/d)
1	35	7	6.96	3.25	13.56	0.868	5,591	1,506	148	200	1,000/D
	50	7	8.28	3.40	15.18	0.641	7,313	1,429	180	215	1,000/D
	70	18	9.80	3.60	17.10	0.443	10,420	1,309	224	300	1,000/D
	95	18	11.45	3.70	18.95	0.320	14,098	1,213	275	380	1,000/D
	120	18	12.95	3.80	20.65	0.253	18,518	1,139	319	460	1,000/D
	150	18	14.20	3.80	21.90	0.206	22,457	1,069	363	560	1,000/D
	185	34	15.98	3.90	23.88	0.164	28,974	990	420	680	1,000/D
	240	34	18.47	3.95	26.47	0.125	37,506	901	501	880	1,000/D

D: Packing in drum.

ALUMINUM STRANDED CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED AND SHEATHED SPACED AERIAL CABLE



CABLE STRUCTURE

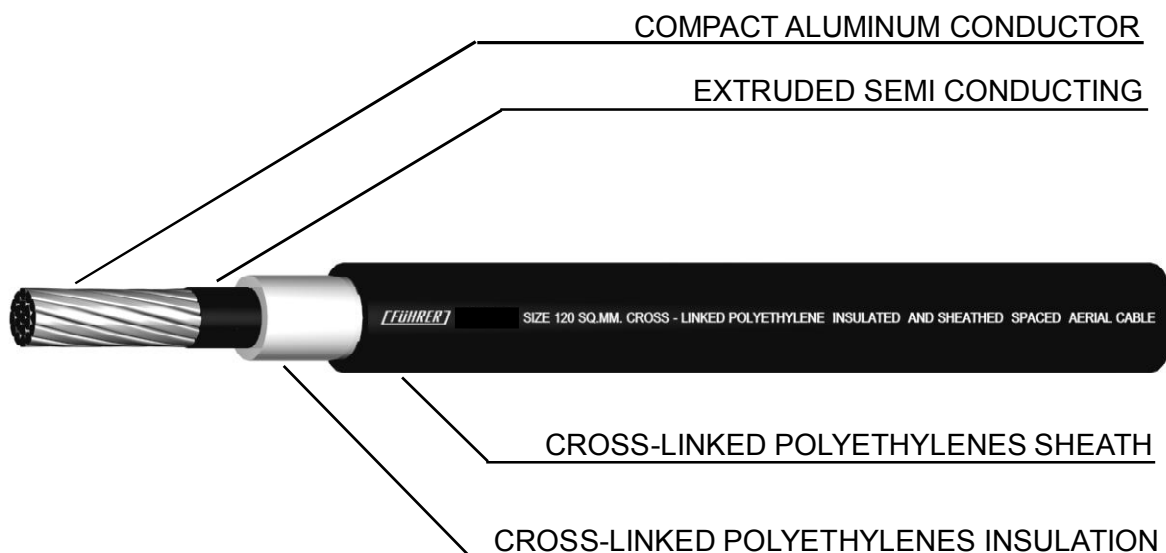
NUMBER OF CORE	: Single core
CONDUCTOR	: Compact stranded hard drawn Aluminum wire Conductor sizes 35 mm ² up to 240 mm ²
CONDUCTOR SHIELD	: Semi conducting cross-linked polyethylene
INSULATION	: Cross-linked polyethylene Colour : Natural
SHEATH	Track resistant cross-linked polyethylene Colour : Black
CLASSIFICATION	: Normal operation 90 °C Emergency overload conditions 130 °C Short circuit conditions 250°C Voltage rating 25 Kv.(Phase to Phase)
TESTING VOLTAGE	: 38KV for 5 minutes
REFERENCE	: ICEA S-66-524 /MEA/PEA

SAC 25 KV

Number of core	Nominal cross sectional area (mm ²)	Minimum number of wire (no.)	Diameter of conductor approx. (mm)	Thickness of insulation (mm)	Thickness of sheath (mm)	Overall Diameter (Approx) (mm)	Maximum DC conductor resistance at 20°C (Ω-Km)	Minimum breaking strength of conductor (N)	Minimum insulation resistance at 15.6°C (MΩ-Km)	Allowable current amp cities in free air at 40°C (ambient) (A)	Cable weight (Approx) (Kg/Km)	Standard length (m/d)
1	35	7	6.96	3.175	3.175	20.88	0.868	5,591	2,500	149	390	1,000/D
	50	7	8.28	3.175	3.175	22.20	0.641	7,313	2,250	186	440	1,000/D
	70	18	9.80	3.175	3.175	23.72	0.443	10,420	2,050	229	540	1,000/D
	95	18	11.45	3.175	3.175	25.37	0.320	14,098	1,850	279	640	1,000/D
	120	18	12.95	3.175	3.175	26.87	0.253	18,518	1,700	321	740	1,000/D
	150	18	14.20	3.175	3.175	28.12	0.206	22,457	1,600	371	850	1,000/D
	185	34	15.98	3.175	3.175	29.90	0.164	28,974	1,500	429	990	1,000/D
	240	34	18.47	3.175	3.175	32.39	0.125	37,506	1,300	520	1,190	1,000/D

D: Packing in drum.

ALUMINUM STRANDED CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED AND SHEATHED SPACED AERIAL CABLE



CABLE STRUCTURE

NUMBER OF CORE	: Single core
CONDUCTOR	: Compact stranded hard drawn Aluminum wire Conductor sizes 35 mm ² up to 240 mm ²
CONDUCTOR SHIELD	: Semi conducting cross-linked polyethylene
INSULATION	: Cross-linked polyethylene Colour : Natural
SHEATH	Track resistant cross-linked polyethylene Colour : Black
CLASSIFICATION	: Normal operation 90 °C Emergency overload conditions 130 °C Short circuit conditions 250°C Voltage rating 35 Kv.(Phase to Phase)
TESTING VOLTAGE	: 49KV for 5 minutes
REFERENCE	: ICEA S-66-524 /MEA/PEA

SAC 35 KV

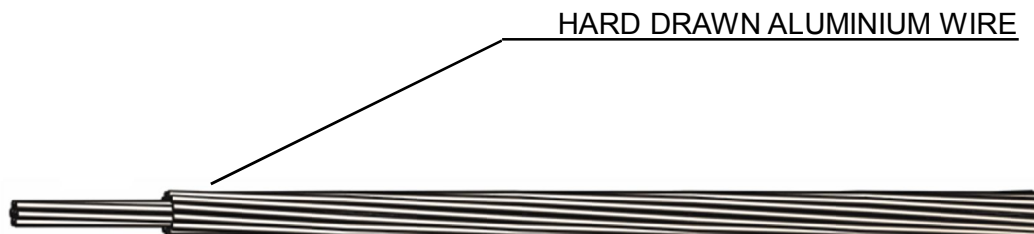
Number of core	Nominal cross sectional area (mm ²)	Minimum number of wire (no.)	Diameter of conductor approx. (mm)	Thickness of insulation (mm)	Thickness of sheath (mm)	Overall Diameter (Approx) (mm)	Maximum DC conductor resistance at 20°C (Ω-Km)	Minimum breaking strength of conductor (N)	Minimum insulation resistance at 15.6°C (MΩ-Km)	Allowable current amp cities in free air at 40°C (ambient) (A)	Cable weight (Approx) (Kg/Km)	Standard length (m/d)
1	35	7	6.96	4.445	3.175	23.42	0.868	5,591	2,900	148	490	1,000/D
	50	7	8.28	4.445	3.175	14.93	0.641	7,313	2,600	184	530	1,000/D
	70	18	9.80	4.445	3.175	26.26	0.443	10,420	2,400	227	630	1,000/D
	95	18	11.45	4.445	3.175	27.91	0.320	14,098	2,100	276	750	1,000/D
	120	18	12.95	4.445	3.175	29.41	0.253	18,518	2,000	318	850	1,000/D
	150	18	14.20	4.445	3.175	30.66	0.206	22,457	1,800	367	960	1,000/D
	185	34	15.98	4.445	3.175	32.44	0.164	28,974	1,700	125	1,100	1,000/D
	240	34	18.47	4.445	3.175	34.93	0.125	37,506	1,500	515	1,400	1,000/D

D: Packing in drum.

ALUMINIUM CONDUCTOR CABLES

Bare Conductor

	PAGE
AAC ALL ALUMINIUM STRANDED CONDUCTOR	64-65
ACSR ALL ALUMINIUM STRANDED CONDUCTOR	66-67

ALL ALUMINIUM STRANDED CONDUCTOR**CABLE STRUCTURE**

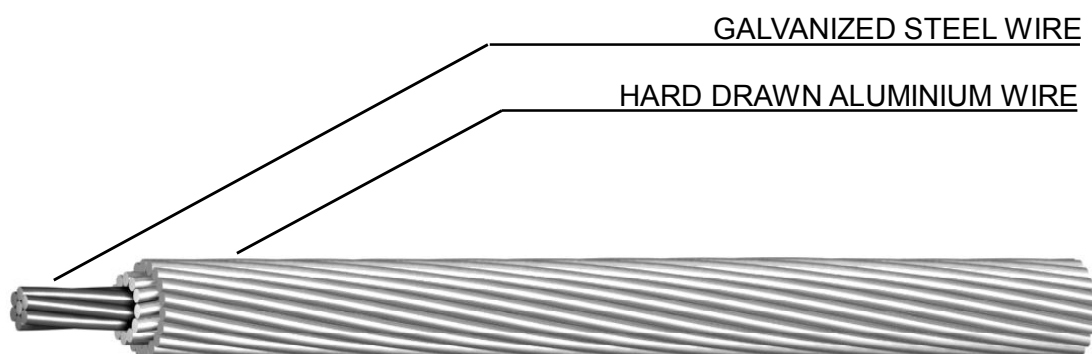
CONDUCTOR	: Concentric stranded hard drawn aluminium wires, Sizes. 16 mm ² up to 500 mm ²
STANDING DIRECTION	: Z - Stranding
REFERENCE	: TIS 85-2522

**AAC**

Nominal Cross Sectional Area (mm ²)	Number and approx. diameter of wire (No./mm)	Approx. Overall Conductor diameter (mm)	Maximum Conductor resistance at 20°C (Ω-Km)	Breaking Strength (Kgf)	Maximum Continuous Current Rating in Free air (Ampere)	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	0.5757	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	1,100	1000/D
500	61/3.25	29.25	0.0571	7,695	990	1,400	1000/D

C: Packing in coil.

D: Packing in drum.

ALUMINIUM CONDUCTOR STEEL REINFORCED**CABLE STRUCTURE**

CONDUCTOR	:	Hard drawn aluminium wire Sizes. 16 mm ² up to 550 mm ²
STANDING DIRECTION	:	Z - Stranding
STEEL CORE	:	Galvanized steel (Zinc coated), solid and concentric stranded, sizes 2.5 mm ² up to 70 mm ²
REFERENCE	:	TIS 85-2548 , TIS 86-2522



ACSR

Nominal cross sectional area	ALUMINIUM		STEEL WIRE		Approx. Overall conductor diameter	Maximum conductor resistance at 20°C	Breaking strength	Maximum continuous current rating in free air	Cable weight (approx.)	Standard length
	Number and approx. diameter of wire	Cross sectional area	Number and approx. diameter of wire	Cross sectional area						
(mm ²)	(No/mm)	(mm ²)	(No/mm)	(mm ²)	(mm)	(Ω/Km)	(Kgf.)	(Ampere)	(Kg/Km)	(m)
16/2.5	6/1.80	15.3	1/1.80	2.54	5.40	1.880	592	90	60	4,000/D
25/4	6/2.25	23.9	1/2.25	3.98	6.75	1.203	916	125	95	4,000/D
35/6	6/2.70	34.4	1/2.70	5.73	8.10	0.8353	1,265	145	140	3,000/D
50/8	6/3.20	48.3	1/3.20	8.04	9.60	0.5947	1,716	170	200	3,000/D
50/30	12/2.33	51.2	7/2.33	29.85	11.50	0.5644	4,380	170	380	3,000/D
70/12	26/1.85	69.9	7/1.44	11.40	11.50	0.4131	2,676	290	280	3,000/D
95/15	26/2.15	94.4	7/1.67	15.33	13.50	0.3058	3,565	350	380	3,000/D
95/55	12/3.20	96.5	7/3.20	56.30	16.00	0.2993	7,965	350	700	3,000/D
120/20	26/2.44	121.6	7/1.90	19.85	15.50	0.2375	4,555	410	490	2,000/D
120/70	12/3.60	122.1	7/3.60	71.25	18.00	0.2365	10,034	410	900	2,000/D
125/30	30/2.33	127.9	7/2.33	29.85	16.00	0.2259	5,759	425	600	2,000/D
150/25	26/2.70	148.9	7/2.10	24.25	17.00	0.1939	5,513	470	600	2,000/D
170/40	30/2.70	171.8	7/2.70	40.08	18.50	0.1683	7,675	520	800	2,000/D
185/30	26/3.00	183.8	7/2.33	29.85	18.50	0.1571	6,618	535	750	2,000/D
210/35	26/3.20	209.1	7/2.49	34.09	20.00	0.1381	7,489	590	850	1,500/D
210/50	30/3.00	212.1	7/3.00	49.48	21.00	0.1363	9,390	610	1,000	1,500/D
230/30	24/3.50	230.9	7/2.33	29.85	21.00	0.1250	7,313	630	900	1,500/D
240/40	26/3.45	243.1	7/2.68	39.49	21.00	0.1188	8,640	645	1,000	1,500/D
265/35	24/3.74	263.7	7/2.49	34.10	22.00	0.1095	8,307	680	1,000	1,000/D
300/50	26/3.86	304.3	7/3.00	49.50	24.00	0.0949	10,702	740	1,200	1,000/D
305/40	54/2.68	304.6	7/2.68	39.50	24.00	0.0949	9,942	740	1,200	1,000/D
380/50	54/3.00	381.7	7/3.00	49.50	27.00	0.0758	1,2312	840	1,500	1,000/D
435/55	54/3.20	434.3	7/3.20	56.30	28.00	0.0666	1,3673	900	1,700	1,000/D
490/65	54/3.40	490.3	7/3.40	63.60	30.00	0.0590	15,343	960	1,900	1,000/D
550/70	54/3.60	549.7	7/3.60	71.30	32.00	0.0526	17,096	1020	2,100	500/D
680/85	54/4.00	678.6	19/2.40	86.00	36.00	0.0426	12,040	1150	2,600	500/D

C: Packing in coil.

D: Packing in drum.

TECHNICAL DATA AND GENERAL INFORMATION

	PAGE
Wire Gauges	69-72
Continuous Current Rating for Each Condition of Wires &Cables	73
Temperature Correction Factors for Conductor Resistance	74
Table of Dimensions for Motor Starters	75
The Copper Conductor Resistance	76-77

Wire Gauges

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
4/0	-	-	-	454	11.532	206,100	0.1619	104.4	624	928.1
-	-	5/0	-	432	10.973	186,624	0.1466	94.56	565	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	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	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	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
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	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
-	-	3	-	252	6.401	63,504	0.04988	32.18	192.2	286.1
4	-	-	-	238	6.045	56,640	0.04449	2870	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
5	-	-	-	220	5.588	48,400	0.03801	24.52	146.5	218
-	-	-	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	202.4
-	4	-	-	204.3	5.189	41,738	0.03278	21.15	126.3	188
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
-	-	-	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

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	1279	1903
-	14	-	-	64.08	1.628	4,106	0.003225	2.081	12.43	1850
-	-	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	-	-	40.30	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

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
-	-	-	1.0	39.37	1.000	1,550	0.001217	0.7854	4.690	6.982
-	-	20	-	36	0.9144	1,296	0.001018	0.6576	3.923	5.838
-	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	0.1844	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	0.4000	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	0.3606	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	0.3045	0.4531

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
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
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	-	16	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	0.0000009635	0.0006216	0.003713	0.005526
-	-	50	-	1	0.02540	1.000	0.0000007854	0.0005067	0.003027	0.004505
-	50	-	-	0.986	0.02505	0.9728	0.0000007641	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



Continuous Current Rating for Each Condition of Wires & Cables

1. Maximum allowable current carrying capacities for the insulated cables installed in location where the ambient temperature is not exceed 40°C shall not be less than those stated in the tables.
2. In location where the ambient temperature differ from 40°C (Install in free air) and 30°C (Install in ground). The multiplier in the table below shall be used to obtain the maximum allowable current carrying capacities.

Temperature (°c)	Multiplier			
	In air (Ambient temperature 40°C)		In ground (Ambient temperature 30°C)	
	Insulation grade		Insulation grade	
	70°C	90°C	70°C	90°C
21-25	1.23	1.14	1.06	1.04
26-30	1.16	1.09	1	1
31-35	1.08	1.05	0.94	0.96
36-40	1	1	0.87	0.91
41-45	0.91	0.95	0.79	0.87
46-50	0.82	0.89	0.71	0.82
51-55	0.71	0.84	0.61	0.77
56-60	0.58	0.78	0.5	0.71
61-65	0.41	0.71	0.35	0.65
66-70	-	0.63	-	0.58
71-75	-	0.54	-	0.5
76-80	-	0.45	-	0.41
80-85	-	0.32	-	0.29
86-90	-	-	-	-

3. In a single conduit where the conductors are installed, the allowable ampacity of each conductor shall be reduced as shown in the following table.

Number of Core	Multiplier
4-6	0.82
7-9	0.72
10-20	0.56
21-30	0.48
31-40	0.44
Over-40	0.38

Remark: For multicore cables, the number of core is counted as number of wire by excepting the ground.

* Ref to MEA (Metropolitan Electricity Authority)

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

The correction factor is given by:

$$K = \frac{1}{K_1} = \frac{1}{1 + \alpha (\theta - 20)}$$

Where:

k = temperature correction factor of conductor

k₁ = reciprocal of k

α = constant mass temperature coefficient at 20°C per °C

0.00393 for copper (based on 100% conductivity)

0.00403 for aluminum (based on 61% conductivity)

θ = referred temperature, °C

Table of Dimensions for Motor Starters

The figures are based on normol 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		0.05		15	0.15 -0.25	1	1.5		
		0.1		0.1		15	0.25 -0.4	2	1.5		
		0.15		0.2		15	0.4 -0.65	4	1.5		
0.1	1.1	0.2		0.25	0.5	15	0.4 -0.65	4	1.5		
0.15		0.25		0.6	0.5	0.9	15	0.6 -1.0	6	1.5	
0.25		0.5		1.0	~		15	1.0 -1.6	6	1.5	
0.5	1.8	0.75	1.5	0.75	1.2	15	1.0 -1.6	6	1.5		
		1.0	1.9	1.0	1.6	15	1.5 -2.5	15 (10)	1.5		
		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		
7.5	19.5	10	15			10	14	25	13 -20	60	2.5
		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		
25	63	35	50	35	46	60	40 -60	160	16		
		40	56	40	52	60	40 -60	160	16		
		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		
100	245	150	200	150	180	350	175 -250	600	120		
		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			

The Copper Conductor Resistance

Nominal Direct Current Resistance, Ohms/1 ,000 Meter At 20°C

The number of wires in the conductors of cables for fixed wiring.

TIS 11-2531 , TABLE 1

Nominal cross-sectional area (mm ²)	Number of wires in conductor	Diameter of wires in conductor (mm.)	Maximum resistance of conductor at 20°C (Ohms/km)
			Single core & Multi core
0.5	1	0.80	36.0
1	1	1.13	18.1
1	7	0.43	18.1
1.5	1	1.38	12.1
1.5	7	0.53	12.1
2.5	1	1.78	7.41
2.5	7	0.67	7.41
4	1	2.25	4.61
4	7	0.85	4.61
6	7	1.04	3.08
10	7	1.35	1.83
16	7	1.70	1.15
25	7	2.14	0.727
35	19	1.53	0.524
50	19	1.78	0.387
70	19	2.14	0.268
95	19	2.52	0.193
120	37	2.03	0.153
150	37	2.25	0.124
185	37	2.52	0.0991
240	61	2.25	0.0754
300	61	2.52	0.0601
400	61	2.85	0.0470
500	61	3.20	0.0366

The diameter of wires in the conductors of flexible cables and cords

TIS 11-2531, TABLE 2

Nominal cross-sectional area (mm ²)	Minimum Number of wires in conductor	Maximum Diameter of wires in conductor (mm.)	Maximum resistance of conductor at 20°C (Ohms/km)
			Single core & Multi core
0.5	16	0.21	39.0
0.5	28	0.16	39.0
0.75	24	0.21	26.0
0.75	42	1.16	26.0
1	32	0.21	19.5
1.5	30	0.26	13.3
2.5	50	0.26	7.98
4	56	0.31	4.95
6	84	0.31	3.30
10	80	0.41	1.91
16	126	0.41	1.21
25	196	0.41	0.780
35	276	0.41	0.554
50	396	0.41	0.386
70	360	0.51	0.272
95	475	0.51	0.206

