CROSS-LINKED POLYETHYLENE INSULATED ARMOURED PVC SHEATHED FLAME RETARDANT CABLE

TYPE H1 : XLPE/SCT/PVC/SWA/PVC/CU CABLE
TYPE H1 : XLPE/SCT/PVC/AWA/PVC/CU CABLE

DESCRIPTION

Single core and three-core with copper conductor, XLPE insulated, copper tape screened, Flame retardant PVC bedding , galvanised steel wire armoured and Flame retardant PVC outer sheath. Cables are rated at 6.6/11 kV (12 kV).

CONSTRUCTION

1 **Conductor**
Plain circular compacted stranded copper conductor to IEC 60228 class 2.

2 **Conductor screen**
Extruded layer of semiconductive compound.

3 **Insulation**
XLPE (cross-linked polyethylene)

Insulation screen

4a. **Non-metallic part**
Extruded layer of semiconductive compound.

4b. **Metallic part**
Copper tape screen (SCT).

5 **Colour for core identification**

Single core	- Natural
Three cores	- Red, yellow and blue tapes shall be applied between non metallic and metallic part of insulation screen.

6 **Cabling**
Three insulated screened cores are laid up together and filled with non-hygroscopic material compatible with insulation.

7 **Bedding**
Flame retardant PVC, colour black.

8 **Armour**
Single core - aluminium wires shall be applied over the PVC bedding.
Multi-core - galvanized steel wires shall be applied over the PVC bedding.

9 **Outer sheath**
Flame retardant PVC, colour red.

SPECIFICATIONS:

IEC 60502
IEC 60332-3 Cat A
IEC 60754 (HCl emission 17 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE H1 : XLPE/SCT/PVC/AWA/PVC/CU CABLE - SINGLE CORE
6.6/11 kV (12 kV)

Nominal cross-sectional area of conductor	Nominal diameter of conductor	Nominal thickness of XLPE insulation	Metallic Screening Approx. thickness of copper tape	Nominal thickness of PVC bedding	Nominal diameter of aluminium wire	Nominal thickness of PVC sheath	Approx. overall diameter of cable	Approx. weight of cable
mm²	mm	mm	mm	mm	mm	mm	mm	Kg / Km
50	8.1	3.4	0.1	1.2	1.6	1.8	27.3	1260
70	9.7	3.4	0.1	1.2	1.6	1.9	29.1	1540
95	11.5	3.4	0.1	1.2	1.6	2.0	31.1	1870
120	12.9	3.4	0.1	1.2	2.0	2.0	33.3	2240
150	14.3	3.4	0.1	1.2	2.0	2.1	34.9	2580
185	16.1	3.4	0.1	1.2	2.0	2.1	36.7	3000
240	18.4	3.4	0.1	1.2	2.0	2.2	39.2	3680
300	20.6	3.4	0.1	1.2	2.0	2.3	41.6	4380
400	23.3	3.4	0.1	1.3	2.5	2.4	45.7	5480
500	26.2	3.4	0.1	1.3	2.5	2.5	48.8	6590
630	29.8	3.4	0.1	1.4	2.5	2.6	53.4	8200
800	33.7	3.4	0.1	1.5	2.5	2.8	57.9	10130

TYPE H1 : XLPE/SCT/PVC/SWA/PVC/CU CABLE - THREE CORES
6.6/11 kV (12 kV)

Nominal cross-sectional area of conductor	Nominal diameter of conductor	Nominal thickness of XLPE insulation	Metallic Screening Approx. thickness of copper tape	Nominal thickness of PVC bedding	Nominal diameter of steel wire	Nominal thickness of PVC sheath	Approx. overall diameter of cable	Approx. weight of cable
mm²	mm	mm	mm	mm	mm	mm	mm	Kg / Km
50	8.1	3.4	0.1	1.4	2.5	2.7	51.7	5310
70	9.7	3.4	0.1	1.5	2.5	2.8	55.6	6330
95	11.5	3.4	0.1	1.5	2.5	2.9	59.5	7500
120	12.9	3.4	0.1	1.6	2.5	3.0	63.1	8610
150	14.3	3.4	0.1	1.7	2.5	3.1	66.5	9800
185	16.1	3.4	0.1	1.7	2.5	3.3	70.6	11330
240	18.4	3.4	0.1	1.8	3.15	3.5	78.1	14620
300	20.6	3.4	0.1	1.9	3.15	3.6	83.3	17120
400	23.3	3.4	0.1	2.0	3.15	3.9	89.9	20440

CROSS-LINKED POLYETHYLENE INSULATED ARMOURED PVC SHEATHED FLAME RETARDANT CABLE

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE
TYPE P2 : CU/XLPE/PVC/AWA/PVC CABLE

DESCRIPTION

Single-core and multi-core cables with copper conductor, XLPE insulated, flame retardant PVC bedding, galvanised steel wire armouring and flame retardant PVC sheathed.
Cables are rated at 600/1000V (1200 V).

CONSTRUCTION

1 **Conductor**
Plain circular, compacted or shaped stranded copper conductor, conform to IEC 60228 class 2.

2 **Insulation**
XLPE (cross-linked polyethylene)

3 **Colours for core identification**

Single core	- natural
Two core	- red, black
Three core	- red, yellow and blue
Four core	- red, yellow, blue and black
Five core & above	- white core with numbering
Earth core	- green/yellow

4 **Cabling**
Two, three, four, five or more insulated cores are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

5 **Bedding**
Flame retardant PVC compound, colour black.

6 **Armour**
Single Core -- Aluminium wire shall be applied over the bedding.
Multi Cores -- Galvanised steel wire shall be applied over the bedding.

7 **Sheath**
Flame retardant PVC compound, colour black.

SPECIFICATIONS:

IEC 60502
IEC 60332-3 Cat A
IEC 60754 (HCl emission 17 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE P2 : CU/XLPE/PVC/AWA/PVC CABLE - SINGLE CORE
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of aluminium wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
16	c.c.	0.7	1.0	0.9	1.8	13.6	350
25	c.c.	0.9	1.0	0.9	1.8	15.2	480
35	c.c.	0.9	1.0	0.9	1.8	16.4	590
50	c.c.	1.0	1.0	1.25	1.8	18.5	780
70	c.c.	1.1	1.0	1.25	1.8	20.4	1030
95	c.c.	1.1	1.0	1.25	1.8	22.1	1310
120	c.c.	1.2	1.0	1.6	1.8	25.1	1650
150	c.c.	1.4	1.0	1.6	1.8	26.9	2010
185	c.c.	1.6	1.0	1.6	1.8	29.1	2370
240	c.c.	1.7	1.0	1.6	1.9	31.9	3000
300	c.c.	1.8	1.0	1.6	1.9	34.4	3650
400	c.c.	2.0	1.2	2.0	2.1	39.2	4720
500	c.c.	2.2	1.2	2.0	2.2	42.8	5830
630	c.c.	2.4	1.2	2.0	2.3	47.1	7320
800	c.c.	2.6	1.4	2.5	2.5	53.0	9410
1000	r.m.	2.8	1.4	2.5	2.7	60.9	11790

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - TWO CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.9	1.8	13.5	340
2.5	r.m.	0.7	1.0	0.9	1.8	14.3	390
4	r.m.	0.7	1.0	0.9	1.8	15.4	460
6	r.m.	0.7	1.0	0.9	1.8	16.5	540
10	r.m.	0.7	1.0	1.25	1.8	19.1	800
16	c.c.	0.7	1.0	1.25	1.8	20.6	980
25	c.c.	0.9	1.0	1.6	1.8	24.6	1460
35	c.c.	0.9	1.0	1.6	1.8	26.9	1780
50	s.m.	1.0	1.0	1.6	1.8	26.1	1910
70	s.m.	1.1	1.0	1.6	2.0	29.5	2480
95	s.m.	1.1	1.2	2.0	2.1	33.6	3410
120	s.m.	1.2	1.2	2.0	2.2	36.5	4050
150	s.m.	1.4	1.2	2.0	2.3	39.7	4890
185	s.m.	1.6	1.4	2.5	2.5	46.0	6180
240	s.m.	1.7	1.4	2.5	2.7	50.5	7640
300	s.m.	1.8	1.6	2.5	2.8	54.9	9200
400	s.m.	2.0	1.6	2.5	3.1	60.6	11350

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor
s.m. - shaped stranded conductor

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - THREE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.9	1.8	13.9	370
2.5	r.m.	0.7	1.0	0.9	1.8	14.8	430
4	r.m.	0.7	1.0	0.9	1.8	16.0	520
6	r.m.	0.7	1.0	0.9	1.8	17.2	620
10	r.m.	0.7	1.0	1.25	1.8	19.9	930
16	c.c.	0.7	1.0	1.25	1.8	21.5	1170
25	c.c.	0.9	1.0	1.6	1.8	25.8	1760
35	c.c.	0.9	1.0	1.6	1.8	28.3	2170
50	s.m.	1.0	1.0	1.6	1.9	29.5	2560
70	s.m.	1.1	1.2	2.0	2.0	34.5	3630
95	s.m.	1.1	1.2	2.0	2.2	38.2	4620
120	s.m.	1.2	1.2	2.0	2.3	41.6	5600
150	s.m.	1.4	1.4	2.5	2.5	48.0	7260
185	s.m.	1.6	1.4	2.5	2.6	52.4	8490
240	s.m.	1.7	1.6	2.5	2.8	58.2	10680
300	s.m.	1.8	1.6	2.5	3.0	63.2	12860
400	s.m.	2.0	1.6	2.5	3.2	69.7	15930

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - FOUR CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.9	1.8	14.7	420
2.5	r.m.	0.7	1.0	0.9	1.8	15.7	490
4	r.m.	0.7	1.0	0.9	1.8	17.0	600
6	r.m.	0.7	1.0	1.25	1.8	19.1	840
10	r.m.	0.7	1.0	1.25	1.8	21.4	1100
16	c.c.	0.7	1.0	1.6	1.8	23.8	1540
25	c.c.	0.9	1.0	1.6	1.8	27.8	2120
35	c.c.	0.9	1.0	1.6	1.9	30.8	2660
50	s.m.	1.0	1.0	1.6	2.0	32.7	3230
70	s.m.	1.1	1.2	2.0	2.2	38.4	4600
95	s.m.	1.1	1.2	2.0	2.3	42.5	5870
120	s.m.	1.2	1.4	2.5	2.5	49.0	7620
150	s.m.	1.4	1.4	2.5	2.6	53.3	9200
185	s.m.	1.6	1.4	2.5	2.8	58.5	10900
240	s.m.	1.7	1.6	2.5	3.0	65.0	13720
300	s.m.	1.8	1.6	2.5	3.2	70.9	16610
400	s.m.	2.0	1.8	3.15	3.5	80.4	21690

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor
s.m. - shaped stranded conductor

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - FIVE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.9	1.8	15.6	470
2.5	r.m.	0.7	1.0	0.9	1.8	16.7	560
4	r.m.	0.7	1.0	1.25	1.8	18.9	800
6	r.m.	0.7	1.0	1.25	1.8	20.4	960
10	r.m.	0.7	1.0	1.25	1.8	22.9	1280
16	c.c.	0.7	1.0	1.6	1.8	25.6	1800
25	c.c.	0.9	1.0	1.6	1.8	30.0	2500
35	c.c.	0.9	1.0	1.6	1.9	33.4	3160
50	c.c.	1.0	1.2	2.0	2.1	39.1	4340
70	c.c.	1.1	1.2	2.0	2.3	44.6	5740
95	c.c.	1.1	1.4	2.5	2.4	52.0	7830

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - MULTI-CORES (1.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	1.5	r.m.	0.7	1.0	0.9	1.8	16.5	520
7	1.5	r.m.	0.7	1.0	0.9	1.8	16.5	540
8	1.5	r.m.	0.7	1.0	1.25	1.8	18.1	690
9	1.5	r.m.	0.7	1.0	1.25	1.8	19.0	750
10	1.5	r.m.	0.7	1.0	1.25	1.8	20.2	810
11	1.5	r.m.	0.7	1.0	1.25	1.8	20.2	830
12	1.5	r.m.	0.7	1.0	1.25	1.8	20.6	870
13	1.5	r.m.	0.7	1.0	1.25	1.8	21.4	920
14	1.5	r.m.	0.7	1.0	1.25	1.8	21.4	940
15	1.5	r.m.	0.7	1.0	1.25	1.8	22.3	1000
16	1.5	r.m.	0.7	1.0	1.25	1.8	22.3	1020
17	1.5	r.m.	0.7	1.0	1.25	1.8	23.2	1070
18	1.5	r.m.	0.7	1.0	1.25	1.8	23.2	1090
19	1.5	r.m.	0.7	1.0	1.25	1.8	23.2	1110
20	1.5	r.m.	0.7	1.0	1.6	1.8	24.8	1310
21	1.5	r.m.	0.7	1.0	1.6	1.8	24.8	1330
24	1.5	r.m.	0.7	1.0	1.6	1.8	26.8	1480
27	1.5	r.m.	0.7	1.0	1.6	1.8	27.3	1560
30	1.5	r.m.	0.7	1.0	1.6	1.8	28.1	1660
37	1.5	r.m.	0.7	1.0	1.6	1.8	29.8	1870
48	1.5	r.m.	0.7	1.0	1.6	1.9	33.5	2270

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - MULTI-CORES (2.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	2.5	r.m.	0.7	1.0	1.25	1.8	18.4	730
7	2.5	r.m.	0.7	1.0	1.25	1.8	18.4	750
8	2.5	r.m.	0.7	1.0	1.25	1.8	19.5	830
9	2.5	r.m.	0.7	1.0	1.25	1.8	20.5	900
10	2.5	r.m.	0.7	1.0	1.25	1.8	21.8	970
11	2.5	r.m.	0.7	1.0	1.25	1.8	21.8	1000
12	2.5	r.m.	0.7	1.0	1.25	1.8	22.4	1060
13	2.5	r.m.	0.7	1.0	1.25	1.8	23.3	1120
14	2.5	r.m.	0.7	1.0	1.25	1.8	23.3	1150
15	2.5	r.m.	0.7	1.0	1.6	1.8	24.9	1380
16	2.5	r.m.	0.7	1.0	1.6	1.8	24.9	1410
17	2.5	r.m.	0.7	1.0	1.6	1.8	25.9	1470
18	2.5	r.m.	0.7	1.0	1.6	1.8	25.9	1500
19	2.5	r.m.	0.7	1.0	1.6	1.8	25.9	1530
20	2.5	r.m.	0.7	1.0	1.6	1.8	27.0	1610
21	2.5	r.m.	0.7	1.0	1.6	1.8	27.0	1640
24	2.5	r.m.	0.7	1.0	1.6	1.8	29.4	1840
27	2.5	r.m.	0.7	1.0	1.6	1.8	29.9	1950
30	2.5	r.m.	0.7	1.0	1.6	1.9	31.0	2090
37	2.5	r.m.	0.7	1.0	1.6	1.9	33.0	2390
48	2.5	r.m.	0.7	1.2	2.0	2.1	38.6	3260

TYPE P2 : CU/XLPE/PVC/SWA/PVC CABLE - MULTI-CORES (4 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	4	r.m.	0.7	1.0	1.25	1.8	20.1	900
7	4	r.m.	0.7	1.0	1.25	1.8	20.1	930
8	4	r.m.	0.7	1.0	1.25	1.8	21.3	1040
9	4	r.m.	0.7	1.0	1.25	1.8	22.5	1140
10	4	r.m.	0.7	1.0	1.6	1.8	24.7	1370
11	4	r.m.	0.7	1.0	1.6	1.8	24.7	1420
12	4	r.m.	0.7	1.0	1.6	1.8	25.3	1490
13	4	r.m.	0.7	1.0	1.6	1.8	26.3	1580
14	4	r.m.	0.7	1.0	1.6	1.8	26.3	1630
15	4	r.m.	0.7	1.0	1.6	1.8	27.5	1730
16	4	r.m.	0.7	1.0	1.6	1.8	27.5	1780
17	4	r.m.	0.7	1.0	1.6	1.8	28.7	1870
18	4	r.m.	0.7	1.0	1.6	1.8	28.7	1920
19	4	r.m.	0.7	1.0	1.6	1.8	28.7	1960
20	4	r.m.	0.7	1.0	1.6	1.8	29.9	2090
21	4	r.m.	0.7	1.0	1.6	1.8	29.9	2130
24	4	r.m.	0.7	1.0	1.6	1.9	32.8	2380
27	4	r.m.	0.7	1.0	1.6	1.9	33.4	2550
30	4	r.m.	0.7	1.0	1.6	2.0	34.7	2750
37	4	r.m.	0.7	1.2	2.0	2.1	38.5	3530
48	4	r.m.	0.7	1.2	2.0	2.2	43.2	4300

Note : r.m. - circular stranded conductor

CROSS-LINKED POLYETHYLENE INSULATED BRAIDED PVC SHEATHED FLAME RETARDANT CABLE

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE
TYPE P3 : CU/XLPE/PVC/TCWB/PVC CABLE

DESCRIPTION

Single-core and multi-core cables with copper conductor, XLPE insulated, flame retardant PVC bedding, galvanised steel wire braiding and flame retardant PVC sheathed.
Cables are rated at 600/1000V (1200 V).

CONSTRUCTION

1 **Conductor**
Plain circular, compacted or shaped stranded copper conductor, conform to IEC 60228 class 2.

2 **Insulation**
XLPE (cross-linked polyethylene)

3 **Colours for core identification**

Single core	- natural
Two core	- red, black
Three core	- red, yellow and blue
Four core	- red, yellow, blue and black
Five core & above	- white core with numbering
Earth core	- green/yellow

4 **Cabling**
Two, three, four, five or more insulated cores are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

5 **Bedding**
Flame retardant PVC compound, colour black.

6 **Armour**
Single Core -- Tinned copper wire shall be braided over the bedding.
Multi Cores -- Galvanised steel wire shall be braided over the bedding.

7 **Sheath**
Flame retardant PVC compound, colour black.

SPECIFICATIONS:

IEC 60092, IEC 60502
IEC 60332-3 Cat A
IEC 60754 (HCl emission 17 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE P3 : CU/XLPE/PVC/TCWB/PVC CABLE - SINGLE CORE
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of tinned copper wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
16	c.c.	0.7	1.0	0.3	1.2	12.1	340
25	c.c.	0.9	1.0	0.3	1.2	13.7	460
35	c.c.	0.9	1.0	0.3	1.3	15.1	590
50	c.c.	1.0	1.0	0.3	1.3	16.5	740
70	c.c.	1.1	1.0	0.3	1.4	18.6	990
95	c.c.	1.1	1.0	0.3	1.5	20.5	1280
120	c.c.	1.2	1.0	0.3	1.5	22.3	1560
150	c.c.	1.4	1.0	0.3	1.6	24.3	1930
185	c.c.	1.6	1.0	0.3	1.7	26.7	2300
240	c.c.	1.7	1.0	0.3	1.8	29.5	2920
300	c.c.	1.8	1.0	0.3	1.9	32.2	3590
400	c.c.	2.0	1.2	0.3	2.0	36.0	4530
500	c.c.	2.2	1.2	0.3	2.1	39.6	5630
630	c.c.	2.4	1.2	0.3	2.3	44.1	7120
800	c.c.	2.6	1.4	0.3	2.5	49.0	9020
1000	r.m.	2.8	1.4	0.3	2.6	56.7	11330

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - TWO CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.3	1.2	12.0	210
2.5	r.m.	0.7	1.0	0.3	1.2	12.8	250
4	r.m.	0.7	1.0	0.3	1.2	13.9	310
6	r.m.	0.7	1.0	0.3	1.3	15.2	380
10	r.m.	0.7	1.0	0.3	1.3	17.1	510
16	c.c.	0.7	1.0	0.3	1.4	18.8	670
25	c.c.	0.9	1.0	0.3	1.5	22.3	960
35	c.c.	0.9	1.0	0.3	1.6	24.8	1230
50	s.m.	1.0	1.0	0.3	1.7	24.2	1390
70	s.m.	1.1	1.0	0.3	1.9	27.6	1890
95	s.m.	1.1	1.2	0.3	2.0	30.9	2500
120	s.m.	1.2	1.2	0.3	2.1	33.8	3080
150	s.m.	1.4	1.2	0.3	2.3	37.2	3830
185	s.m.	1.6	1.4	0.3	2.5	41.5	4630
240	s.m.	1.7	1.4	0.3	2.6	45.8	5880
300	s.m.	1.8	1.6	0.3	2.8	50.4	7290
400	s.m.	2.0	1.6	0.3	3.1	56.1	9210

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor
s.m. - shaped stranded conductor

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - THREE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.3	1.2	12.4	240
2.5	r.m.	0.7	1.0	0.3	1.2	13.3	290
4	r.m.	0.7	1.0	0.3	1.3	14.7	370
6	r.m.	0.7	1.0	0.3	1.3	15.9	460
10	r.m.	0.7	1.0	0.3	1.4	18.1	640
16	c.c.	0.7	1.0	0.3	1.4	19.7	840
25	c.c.	0.9	1.0	0.3	1.6	23.7	1240
35	c.c.	0.9	1.0	0.3	1.7	26.4	1610
50	s.m.	1.0	1.0	0.3	1.8	27.6	1960
70	s.m.	1.1	1.2	0.3	2.0	32.0	2730
95	s.m.	1.1	1.2	0.3	2.1	35.5	3580
120	s.m.	1.2	1.2	0.3	2.2	38.9	4430
150	s.m.	1.4	1.4	0.3	2.4	43.3	5580
185	s.m.	1.6	1.4	0.3	2.6	47.9	6690
240	s.m.	1.7	1.6	0.3	2.8	53.7	8620
300	s.m.	1.8	1.6	0.3	3.0	58.7	10620

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - FOUR CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.3	1.2	13.2	280
2.5	r.m.	0.7	1.0	0.3	1.2	14.2	340
4	r.m.	0.7	1.0	0.3	1.3	15.7	440
6	r.m.	0.7	1.0	0.3	1.3	17.1	550
10	r.m.	0.7	1.0	0.3	1.4	19.6	780
16	c.c.	0.7	1.0	0.3	1.5	21.5	1050
25	c.c.	0.9	1.0	0.3	1.7	25.9	1560
35	c.c.	0.9	1.0	0.3	1.8	28.9	2040
50	s.m.	1.0	1.0	0.3	1.9	30.8	2560
70	s.m.	1.1	1.2	0.3	2.1	35.7	3570
95	s.m.	1.1	1.2	0.3	2.2	39.8	4700
120	s.m.	1.2	1.4	0.3	2.4	44.3	5900
150	s.m.	1.4	1.4	0.3	2.6	48.8	7360
185	s.m.	1.6	1.4	0.3	2.8	54.0	8850
240	s.m.	1.7	1.6	0.3	3.0	60.5	11410

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor
s.m. - shaped stranded conductor

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - FIVE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	0.7	1.0	0.3	1.2	14.1	320
2.5	r.m.	0.7	1.0	0.3	1.3	15.4	400
4	r.m.	0.7	1.0	0.3	1.3	16.9	510
6	r.m.	0.7	1.0	0.3	1.4	18.6	660
10	r.m.	0.7	1.0	0.3	1.5	21.3	940
16	c.c.	0.7	1.0	0.3	1.6	23.5	1280
25	c.c.	0.9	1.0	0.3	1.7	28.1	1890
35	c.c.	0.9	1.0	0.3	1.9	31.7	2490
50	c.c.	1.0	1.2	0.3	2.0	36.4	3280
70	c.c.	1.1	1.2	0.3	2.2	41.9	4500
95	c.c.	1.1	1.4	0.3	2.4	47.5	6030

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - MULTI-CORES (1.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	1.5	r.m.	0.7	1.0	0.3	1.3	15.2	370
7	1.5	r.m.	0.7	1.0	0.3	1.3	15.2	380
8	1.5	r.m.	0.7	1.0	0.3	1.3	16.1	420
9	1.5	r.m.	0.7	1.0	0.3	1.4	17.2	470
10	1.5	r.m.	0.7	1.0	0.3	1.4	18.4	510
11	1.5	r.m.	0.7	1.0	0.3	1.4	18.4	530
12	1.5	r.m.	0.7	1.0	0.3	1.4	18.8	560
13	1.5	r.m.	0.7	1.0	0.3	1.4	19.6	600
14	1.5	r.m.	0.7	1.0	0.3	1.4	19.6	620
15	1.5	r.m.	0.7	1.0	0.3	1.5	20.7	670
16	1.5	r.m.	0.7	1.0	0.3	1.5	20.7	690
17	1.5	r.m.	0.7	1.0	0.3	1.5	21.6	730
18	1.5	r.m.	0.7	1.0	0.3	1.5	21.6	750
19	1.5	r.m.	0.7	1.0	0.3	1.5	21.6	770
20	1.5	r.m.	0.7	1.0	0.3	1.5	22.5	810
21	1.5	r.m.	0.7	1.0	0.3	1.5	22.5	830
24	1.5	r.m.	0.7	1.0	0.3	1.6	24.7	940
27	1.5	r.m.	0.7	1.0	0.3	1.6	25.2	1000
30	1.5	r.m.	0.7	1.0	0.3	1.7	26.2	1090
37	1.5	r.m.	0.7	1.0	0.3	1.7	27.9	1270
48	1.5	r.m.	0.7	1.0	0.3	1.9	31.8	1600

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - MULTI-CORES (2.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	2.5	r.m.	0.7	1.0	0.3	1.3	16.4	460
7	2.5	r.m.	0.7	1.0	0.3	1.3	16.4	470
8	2.5	r.m.	0.7	1.0	0.3	1.4	17.7	540
9	2.5	r.m.	0.7	1.0	0.3	1.4	18.7	590
10	2.5	r.m.	0.7	1.0	0.3	1.5	20.2	650
11	2.5	r.m.	0.7	1.0	0.3	1.5	20.2	680
12	2.5	r.m.	0.7	1.0	0.3	1.5	20.8	730
13	2.5	r.m.	0.7	1.0	0.3	1.5	21.7	780
14	2.5	r.m.	0.7	1.0	0.3	1.5	21.7	810
15	2.5	r.m.	0.7	1.0	0.3	1.5	22.6	860
16	2.5	r.m.	0.7	1.0	0.3	1.5	22.6	890
17	2.5	r.m.	0.7	1.0	0.3	1.6	23.8	950
18	2.5	r.m.	0.7	1.0	0.3	1.6	23.8	980
19	2.5	r.m.	0.7	1.0	0.3	1.6	23.8	1010
20	2.5	r.m.	0.7	1.0	0.3	1.6	24.9	1060
21	2.5	r.m.	0.7	1.0	0.3	1.6	24.9	1090
24	2.5	r.m.	0.7	1.0	0.3	1.7	27.5	1240
27	2.5	r.m.	0.7	1.0	0.3	1.7	28.0	1340
30	2.5	r.m.	0.7	1.0	0.3	1.8	29.1	1460
37	2.5	r.m.	0.7	1.0	0.3	1.8	31.1	1720
48	2.5	r.m.	0.7	1.2	0.3	2.0	35.9	2210

TYPE P3 : CU/XLPE/PVC/SWB/PVC CABLE - MULTI-CORES (4 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	4	r.m.	0.7	1.0	0.3	1.4	18.3	600
7	4	r.m.	0.7	1.0	0.3	1.4	18.3	630
8	4	r.m.	0.7	1.0	0.3	1.5	19.7	730
9	4	r.m.	0.7	1.0	0.3	1.5	20.9	810
10	4	r.m.	0.7	1.0	0.3	1.5	22.4	860
11	4	r.m.	0.7	1.0	0.3	1.5	22.4	910
12	4	r.m.	0.7	1.0	0.3	1.6	23.2	980
13	4	r.m.	0.7	1.0	0.3	1.6	24.2	1050
14	4	r.m.	0.7	1.0	0.3	1.6	24.2	1090
15	4	r.m.	0.7	1.0	0.3	1.6	25.4	1170
16	4	r.m.	0.7	1.0	0.3	1.6	25.4	1220
17	4	r.m.	0.7	1.0	0.3	1.7	26.8	1290
18	4	r.m.	0.7	1.0	0.3	1.7	26.8	1340
19	4	r.m.	0.7	1.0	0.3	1.7	26.8	1390
20	4	r.m.	0.7	1.0	0.3	1.7	28.0	1500
21	4	r.m.	0.7	1.0	0.3	1.7	28.0	1520
24	4	r.m.	0.7	1.0	0.3	1.8	30.9	1710
27	4	r.m.	0.7	1.0	0.3	1.9	31.7	1860
30	4	r.m.	0.7	1.0	0.3	1.9	32.8	2030
37	4	r.m.	0.7	1.2	0.3	2.0	35.8	2450
48	4	r.m.	0.7	1.2	0.3	2.2	40.7	3100

Note : r.m. - circular stranded conductor

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED FLAME RETARDANT CABLE

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE
TYPE P4A : CU/EPR/EVA/TCWB/EVA CABLE

DESCRIPTION

Single-core and multi-core cables with copper conductor, EPR insulated, flame retardant low smoke zero halogen compound bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 600/1000V (1200 V).

CONSTRUCTION

1 **Conductor**
Plain circular or compacted stranded copper conductor, conform to IEC 60228 class 2.

2 **Insulation**
EPR (Ethylene propylene rubber)

3 **Colours for core identification**

Single core	- Black
Two core	- red, black
Three core	- red, yellow and blue
Four core	- red, yellow, blue and black
Five core & above	- white core with numbering
Earth core	- green/yellow

4 **Cabling**
Two, three, four, five or more insulated cores are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

5 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

6 **Armour**
Single Core -- Tinned copper wire shall be braided over the bedding.
Multi Cores -- Galvanized steel wire shall be braided over the bedding.

7 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black.

SPECIFICATIONS:

IEC 60092, IEC 60502
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE P4A : CU/EPR/EVA/TCWB/EVA CABLE - SINGLE CORE
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of tinned copper wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
16	c.c.	1.0	1.0	0.3	1.2	12.7	360
25	c.c.	1.2	1.0	0.3	1.3	14.5	500
35	c.c.	1.2	1.0	0.3	1.3	15.7	620
50	c.c.	1.4	1.0	0.3	1.4	17.5	790
70	c.c.	1.4	1.0	0.3	1.4	19.2	1030
95	c.c.	1.6	1.0	0.3	1.5	21.5	1360
120	c.c.	1.6	1.0	0.3	1.6	23.3	1650
150	c.c.	1.8	1.0	0.3	1.6	25.1	2020
185	c.c.	2.0	1.0	0.3	1.7	27.5	2390
240	c.c.	2.2	1.0	0.3	1.8	30.5	3050

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - TWO CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.2	13.0	250
2.5	r.m.	1.0	1.0	0.3	1.2	13.8	290
4	r.m.	1.0	1.0	0.3	1.3	15.0	360
6	r.m.	1.0	1.0	0.3	1.3	16.1	430
10	r.m.	1.0	1.0	0.3	1.4	18.1	570
16	c.c.	1.0	1.0	0.3	1.5	19.8	730
25	c.c.	1.2	1.0	0.3	1.6	23.2	1040
35	c.c.	1.2	1.0	0.3	1.7	25.6	1310
50	c.c.	1.4	1.0	0.3	1.8	29.3	1700
70	c.c.	1.4	1.0	0.3	1.9	32.7	2240
95	c.c.	1.6	1.2	0.3	2.1	37.8	3010
120	c.c.	1.6	1.2	0.3	2.2	40.9	3650
150	c.c.	1.8	1.2	0.3	2.3	44.7	4480
185	c.c.	2.0	1.4	0.3	2.5	49.7	5410
240	c.c.	2.2	1.4	0.3	2.7	55.6	6900

Note : r.m. - circular stranded conductor

c.c. - compacted circular stranded conductor

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - THREE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.2	13.5	290
2.5	r.m.	1.0	1.0	0.3	1.3	14.6	350
4	r.m.	1.0	1.0	0.3	1.3	15.7	420
6	r.m.	1.0	1.0	0.3	1.4	17.1	520
10	r.m.	1.0	1.0	0.3	1.4	19.0	700
16	c.c.	1.0	1.0	0.3	1.5	20.8	920
25	c.c.	1.2	1.0	0.3	1.6	24.4	1330
35	c.c.	1.2	1.0	0.3	1.7	27.0	1700
50	c.c.	1.4	1.0	0.3	1.9	31.1	2230
70	c.c.	1.4	1.2	0.3	2.0	35.3	3020
95	c.c.	1.6	1.2	0.3	2.2	40.2	4030
120	c.c.	1.6	1.2	0.3	2.3	43.6	4920
150	c.c.	1.8	1.4	0.3	2.5	48.3	6160
185	c.c.	2.0	1.4	0.3	2.6	53.0	7340
240	c.c.	2.2	1.6	0.3	2.9	60.0	9510

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - FOUR CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.3	14.6	340
2.5	r.m.	1.0	1.0	0.3	1.3	15.6	400
4	r.m.	1.0	1.0	0.3	1.4	17.1	510
6	r.m.	1.0	1.0	0.3	1.4	18.4	630
10	r.m.	1.0	1.0	0.3	1.5	20.8	870
16	c.c.	1.0	1.0	0.3	1.6	22.7	1150
25	c.c.	1.2	1.0	0.3	1.7	26.7	1670
35	c.c.	1.2	1.0	0.3	1.8	29.7	2160
50	c.c.	1.4	1.2	0.3	2.0	34.6	2870
70	c.c.	1.4	1.2	0.3	2.1	38.7	3860
95	c.c.	1.6	1.2	0.3	2.3	44.2	5170
120	c.c.	1.6	1.4	0.3	2.5	48.6	6400
150	c.c.	1.8	1.4	0.3	2.7	53.3	7950
185	c.c.	2.0	1.6	0.3	2.9	59.2	9560

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - FIVE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.3	15.6	390
2.5	r.m.	1.0	1.0	0.3	1.4	16.9	480
4	r.m.	1.0	1.0	0.3	1.4	18.3	600
6	r.m.	1.0	1.0	0.3	1.5	20.0	750
10	r.m.	1.0	1.0	0.3	1.5	22.5	1040
16	c.c.	1.0	1.0	0.3	1.6	24.6	1390
25	c.c.	1.2	1.0	0.3	1.8	29.3	2050
35	c.c.	1.2	1.0	0.3	1.9	32.6	2650
50	c.c.	1.4	1.2	0.3	2.1	37.9	3520
70	c.c.	1.4	1.2	0.3	2.3	42.7	4770
95	c.c.	1.6	1.4	0.3	2.5	49.2	6400

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (1.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	1.5	r.m.	1.0	1.0	0.3	1.3	16.6	450
7	1.5	r.m.	1.0	1.0	0.3	1.3	16.6	460
8	1.5	r.m.	1.0	1.0	0.3	1.4	17.9	520
9	1.5	r.m.	1.0	1.0	0.3	1.5	19.2	590
10	1.5	r.m.	1.0	1.0	0.3	1.5	20.5	630
11	1.5	r.m.	1.0	1.0	0.3	1.5	20.5	660
12	1.5	r.m.	1.0	1.0	0.3	1.5	21.1	700
13	1.5	r.m.	1.0	1.0	0.3	1.5	22.0	750
14	1.5	r.m.	1.0	1.0	0.3	1.5	22.0	780
15	1.5	r.m.	1.0	1.0	0.3	1.6	23.2	840
16	1.5	r.m.	1.0	1.0	0.3	1.6	23.2	870
17	1.5	r.m.	1.0	1.0	0.3	1.6	24.2	910
18	1.5	r.m.	1.0	1.0	0.3	1.6	24.2	940
19	1.5	r.m.	1.0	1.0	0.3	1.6	24.2	970
20	1.5	r.m.	1.0	1.0	0.3	1.7	25.5	1030
21	1.5	r.m.	1.0	1.0	0.3	1.7	25.5	1060
24	1.5	r.m.	1.0	1.0	0.3	1.8	28.1	1200
27	1.5	r.m.	1.0	1.0	0.3	1.8	28.6	1280
30	1.5	r.m.	1.0	1.0	0.3	1.8	29.5	1380
37	1.5	r.m.	1.0	1.0	0.3	1.9	31.8	1630
48	1.5	r.m.	1.0	1.2	0.3	2.1	36.7	2100

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (2.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	2.5	r.m.	1.0	1.0	0.3	1.4	18.1	550
7	2.5	r.m.	1.0	1.0	0.3	1.4	18.1	570
8	2.5	r.m.	1.0	1.0	0.3	1.5	19.5	660
9	2.5	r.m.	1.0	1.0	0.3	1.5	20.7	730
10	2.5	r.m.	1.0	1.0	0.3	1.5	22.2	780
11	2.5	r.m.	1.0	1.0	0.3	1.5	22.2	820
12	2.5	r.m.	1.0	1.0	0.3	1.6	23.0	880
13	2.5	r.m.	1.0	1.0	0.3	1.6	24.0	940
14	2.5	r.m.	1.0	1.0	0.3	1.6	24.0	980
15	2.5	r.m.	1.0	1.0	0.3	1.7	25.3	1060
16	2.5	r.m.	1.0	1.0	0.3	1.7	25.3	1100
17	2.5	r.m.	1.0	1.0	0.3	1.7	26.4	1160
18	2.5	r.m.	1.0	1.0	0.3	1.7	26.4	1190
19	2.5	r.m.	1.0	1.0	0.3	1.7	26.4	1230
20	2.5	r.m.	1.0	1.0	0.3	1.8	27.8	1310
21	2.5	r.m.	1.0	1.0	0.3	1.8	27.8	1350
24	2.5	r.m.	1.0	1.0	0.3	1.9	30.7	1530
27	2.5	r.m.	1.0	1.0	0.3	1.9	31.3	1650
30	2.5	r.m.	1.0	1.0	0.3	1.9	32.3	1780
37	2.5	r.m.	1.0	1.2	0.3	2.0	35.3	2160
48	2.5	r.m.	1.0	1.2	0.3	2.2	40.2	2720

TYPE P4A : CU/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (4 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	4	r.m.	1.0	1.0	0.3	1.5	19.8	700
7	4	r.m.	1.0	1.0	0.3	1.5	19.8	730
8	4	r.m.	1.0	1.0	0.3	1.5	21.2	840
9	4	r.m.	1.0	1.0	0.3	1.6	22.7	970
10	4	r.m.	1.0	1.0	0.3	1.6	24.5	1010
11	4	r.m.	1.0	1.0	0.3	1.6	24.5	1070
12	4	r.m.	1.0	1.0	0.3	1.7	25.3	1150
13	4	r.m.	1.0	1.0	0.3	1.7	26.5	1230
14	4	r.m.	1.0	1.0	0.3	1.7	26.5	1290
15	4	r.m.	1.0	1.0	0.3	1.7	27.7	1380
16	4	r.m.	1.0	1.0	0.3	1.7	30.1	1570
17	4	r.m.	1.0	1.0	0.3	1.8	29.3	1520
18	4	r.m.	1.0	1.0	0.3	1.8	29.3	1580
19	4	r.m.	1.0	1.0	0.3	1.8	29.3	1630
20	4	r.m.	1.0	1.0	0.3	1.9	30.8	1750
21	4	r.m.	1.0	1.0	0.3	1.9	30.8	1810
24	4	r.m.	1.0	1.2	0.3	2.0	34.6	2080
27	4	r.m.	1.0	1.2	0.3	2.0	35.3	2260
30	4	r.m.	1.0	1.2	0.3	2.1	36.6	2480
37	4	r.m.	1.0	1.2	0.3	2.2	39.4	2950
48	4	r.m.	1.0	1.2	0.3	2.4	44.9	3730

Note : r.m. - circular stranded conductor

ETHYLENE PROPYLENE RUBBER INSULATED ARMOURED EVA SHEATHED FLAME RETARDANT CABLE

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE
TYPE P4B : CU/EPR/EVA/AWA/EVA CABLE

DESCRIPTION

Single-core and multi-core cables with copper conductor, EPR insulated, flame retardant low smoke zero halogen compound bedding, galvanised steel wire armouring and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 600/1000V (1200 V).

CONSTRUCTION

1 **Conductor**
Plain circular or compacted stranded copper conductor, conform to IEC 60228 class 2.

2 **Insulation**
EPR (Ethylene propylene rubber)

3 **Colours for core identification**

Single core	- Black
Two core	- red, black
Three core	- red, yellow and blue
Four core	- red, yellow, blue and black
Five core & above	- white core with numbering
Earth core	- green/yellow

4 **Cabling**
Two, three, four, five or more insulated cores are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

5 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

6 **Armour**
Single Core -- Aluminium wire shall be applied over the bedding.
Multi Cores -- Galvanized steel wire shall be applied over the bedding.

7 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black.

SPECIFICATIONS:

IEC 60502, IEC 60092
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE P4B : CU/EPR/EVA/AWA/EVA CABLE - SINGLE CORE
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of aluminium wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
16	c.c.	1.0	1.0	0.9	1.8	14.2	380
25	c.c.	1.2	1.0	0.9	1.8	15.8	510
35	c.c.	1.2	1.0	0.9	1.8	17.0	630
50	c.c.	1.4	1.0	1.25	1.8	19.3	830
70	c.c.	1.4	1.0	1.25	1.8	21.0	1080
95	c.c.	1.6	1.0	1.25	1.8	23.1	1390
120	c.c.	1.6	1.0	1.6	1.8	25.9	1730
150	c.c.	1.8	1.0	1.6	1.8	27.7	2100
185	c.c.	2.0	1.0	1.6	1.8	29.9	2470
240	c.c.	2.2	1.0	1.6	1.9	32.9	3130

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - TWO CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.9	1.8	14.5	390
2.5	r.m.	1.0	1.0	0.9	1.8	15.3	440
4	r.m.	1.0	1.0	0.9	1.8	16.3	510
6	r.m.	1.0	1.0	1.25	1.8	18.1	700
10	r.m.	1.0	1.0	1.25	1.8	19.9	860
16	c.c.	1.0	1.0	1.25	1.8	21.4	1040
25	c.c.	1.2	1.0	1.6	1.8	25.3	1550
35	c.c.	1.2	1.0	1.6	1.8	27.5	1860
50	c.c.	1.4	1.0	1.6	1.9	31.2	2330
70	c.c.	1.4	1.0	2.0	2.0	35.4	3180
95	c.c.	1.6	1.2	2.0	2.2	40.5	4110
120	c.c.	1.6	1.2	2.0	2.3	43.6	4840
150	c.c.	1.8	1.2	2.5	2.4	49.4	6190
185	c.c.	2.0	1.4	2.5	2.6	54.4	7350
240	c.c.	2.2	1.4	2.5	2.8	60.3	9060

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - THREE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.9	1.8	15.0	430
2.5	r.m.	1.0	1.0	0.9	1.8	15.9	490
4	r.m.	1.0	1.0	1.25	1.8	17.7	680
6	r.m.	1.0	1.0	1.25	1.8	18.9	800
10	r.m.	1.0	1.0	1.25	1.8	20.8	1010
16	c.c.	1.0	1.0	1.25	1.8	22.4	1250
25	c.c.	1.2	1.0	1.6	1.8	26.5	1870
35	c.c.	1.2	1.0	1.6	1.8	28.9	2290
50	c.c.	1.4	1.0	1.6	2.0	33.0	2900
70	c.c.	1.4	1.2	2.0	2.1	38.0	4050
95	c.c.	1.6	1.2	2.0	2.2	42.7	5180
120	c.c.	1.6	1.2	2.0	2.3	46.1	6180
150	c.c.	1.8	1.4	2.5	2.5	52.8	7990
185	c.c.	2.0	1.4	2.5	2.7	57.7	9380
240	c.c.	2.2	1.6	2.5	2.9	64.5	11810

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - FOUR CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.9	1.8	15.9	490
2.5	r.m.	1.0	1.0	0.9	1.8	16.9	570
4	r.m.	1.0	1.0	1.25	1.8	18.9	790
6	r.m.	1.0	1.0	1.25	1.8	20.2	930
10	r.m.	1.0	1.0	1.25	1.8	22.4	1200
16	c.c.	1.0	1.0	1.6	1.8	24.8	1650
25	c.c.	1.2	1.0	1.6	1.8	28.6	2250
35	c.c.	1.2	1.0	1.6	1.9	31.6	2810
50	c.c.	1.4	1.2	2.0	2.1	37.3	3890
70	c.c.	1.4	1.2	2.0	2.2	41.4	4980
95	c.c.	1.6	1.2	2.5	2.4	48.9	6890
120	c.c.	1.6	1.4	2.5	2.5	53.1	8240
150	c.c.	1.8	1.4	2.5	2.7	57.8	9970
185	c.c.	2.0	1.6	2.5	2.9	63.7	11830
240	c.c.	2.2	1.6	2.5	3.1	70.7	14790

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - FIVE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.9	1.8	16.9	550
2.5	r.m.	1.0	1.0	1.25	1.8	18.7	750
4	r.m.	1.0	1.0	1.25	1.8	20.1	900
6	r.m.	1.0	1.0	1.25	1.8	21.6	1070
10	r.m.	1.0	1.0	1.6	1.8	24.8	1550
16	c.c.	1.0	1.0	1.6	1.8	26.7	1940
25	c.c.	1.2	1.0	1.6	1.9	31.2	2680
35	c.c.	1.2	1.0	2.0	2.0	35.3	3600
50	c.c.	1.4	1.2	2.0	2.2	40.6	4620
70	c.c.	1.4	1.2	2.0	2.3	45.2	5970
95	c.c.	1.6	1.4	2.5	2.5	53.7	8280

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - MULTI-CORES (1.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	1.5	r.m.	1.0	1.0	1.25	1.8	18.6	730
7	1.5	r.m.	1.0	1.0	1.25	1.8	18.6	740
8	1.5	r.m.	1.0	1.0	1.25	1.8	19.7	810
9	1.5	r.m.	1.0	1.0	1.25	1.8	20.8	890
10	1.5	r.m.	1.0	1.0	1.25	1.8	22.1	960
11	1.5	r.m.	1.0	1.0	1.25	1.8	22.1	990
12	1.5	r.m.	1.0	1.0	1.25	1.8	22.7	1030
13	1.5	r.m.	1.0	1.0	1.6	1.8	24.3	1250
14	1.5	r.m.	1.0	1.0	1.6	1.8	24.3	1270
15	1.5	r.m.	1.0	1.0	1.6	1.8	25.3	1350
16	1.5	r.m.	1.0	1.0	1.6	1.8	25.3	1380
17	1.5	r.m.	1.0	1.0	1.6	1.8	26.3	1450
18	1.5	r.m.	1.0	1.0	1.6	1.8	26.3	1480
19	1.5	r.m.	1.0	1.0	1.6	1.8	26.3	1500
20	1.5	r.m.	1.0	1.0	1.6	1.8	27.4	1570
21	1.5	r.m.	1.0	1.0	1.6	1.8	27.4	1600
24	1.5	r.m.	1.0	1.0	1.6	1.9	30.0	1800
27	1.5	r.m.	1.0	1.0	1.6	1.9	30.5	1900
30	1.5	r.m.	1.0	1.0	1.6	1.9	31.4	2020
37	1.5	r.m.	1.0	1.0	1.6	2.0	33.7	2320
48	1.5	r.m.	1.0	1.2	2.0	2.1	39.2	3160

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - MULTI-CORES (2.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	2.5	r.m.	1.0	1.0	1.25	1.8	19.9	850
7	2.5	r.m.	1.0	1.0	1.25	1.8	19.9	870
8	2.5	r.m.	1.0	1.0	1.25	1.8	21.1	970
9	2.5	r.m.	1.0	1.0	1.6	1.8	23.0	1200
10	2.5	r.m.	1.0	1.0	1.6	1.8	24.5	1280
11	2.5	r.m.	1.0	1.0	1.6	1.8	24.5	1320
12	2.5	r.m.	1.0	1.0	1.6	1.8	25.1	1390
13	2.5	r.m.	1.0	1.0	1.6	1.8	26.1	1470
14	2.5	r.m.	1.0	1.0	1.6	1.8	26.1	1510
15	2.5	r.m.	1.0	1.0	1.6	1.8	27.2	1610
16	2.5	r.m.	1.0	1.0	1.6	1.8	27.2	1640
17	2.5	r.m.	1.0	1.0	1.6	1.8	28.3	1720
18	2.5	r.m.	1.0	1.0	1.6	1.8	28.3	1760
19	2.5	r.m.	1.0	1.0	1.6	1.8	28.3	1800
20	2.5	r.m.	1.0	1.0	1.6	1.9	29.7	1910
21	2.5	r.m.	1.0	1.0	1.6	1.9	29.7	1940
24	2.5	r.m.	1.0	1.0	1.6	1.9	32.4	2180
27	2.5	r.m.	1.0	1.0	1.6	2.0	33.2	2320
30	2.5	r.m.	1.0	1.0	2.0	2.0	35.0	2730
37	2.5	r.m.	1.0	1.2	2.0	2.1	38.0	3190
48	2.5	r.m.	1.0	1.2	2.0	2.3	42.9	3890

TYPE P4B : CU/EPR/EVA/SWA/EVA CABLE - MULTI-CORES (4 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	4	r.m.	1.0	1.0	1.25	1.8	21.4	1020
7	4	r.m.	1.0	1.0	1.25	1.8	21.4	1050
8	4	r.m.	1.0	1.0	1.6	1.8	23.5	1320
9	4	r.m.	1.0	1.0	1.6	1.8	24.8	1440
10	4	r.m.	1.0	1.0	1.6	1.8	26.6	1550
11	4	r.m.	1.0	1.0	1.6	1.8	26.6	1610
12	4	r.m.	1.0	1.0	1.6	1.8	27.2	1690
13	4	r.m.	1.0	1.0	1.6	1.8	28.4	1800
14	4	r.m.	1.0	1.0	1.6	1.8	28.4	1860
15	4	r.m.	1.0	1.0	1.6	1.8	29.6	1980
16	4	r.m.	1.0	1.0	1.6	1.8	29.6	2030
17	4	r.m.	1.0	1.0	1.6	1.9	31.2	2160
18	4	r.m.	1.0	1.0	1.6	1.9	31.2	2210
19	4	r.m.	1.0	1.0	1.6	1.9	31.2	2270
20	4	r.m.	1.0	1.0	1.6	1.9	32.5	2380
21	4	r.m.	1.0	1.0	1.6	1.9	32.5	2430
24	4	r.m.	1.0	1.2	2.0	2.1	37.3	3090
27	4	r.m.	1.0	1.2	2.0	2.1	38.0	3300
30	4	r.m.	1.0	1.2	2.0	2.1	39.1	3510
37	4	r.m.	1.0	1.2	2.0	2.2	41.9	4070
48	4	r.m.	1.0	1.2	2.5	2.4	49.4	5420

Note : r.m. - circular stranded conductor

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED FIRE RESISTANT AND FLAME RETARDANT CABLE

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE
TYPE P5 : CU/MICA/EPR/EVA/TCWB/EVA CABLE

DESCRIPTION

Single-core and multi-core cables with copper conductor, mica tape, EPR insulated, flame retardant low smoke zero halogen compound EVA bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 600/1000V (1200 V).

CONSTRUCTION

1 **Conductor**
Plain circular or compacted stranded copper conductor, conform to IEC 60228 class 2.

2 **Fire proof layer**
Mica tape

3 **Insulation**
EPR (Ethylene propylene rubber)

4 **Colours for core identification**

Single core	- Black
Two core	- red, black
Three core	- red, yellow and blue
Four core	- red, yellow, blue and black
Five core & above	- white core with numbering
Earth core	- green/yellow

5 **Cabling**
Two, three, four, five or more insulated cores are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

6 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

7 **Armour**
Single Core -- Tinned copper wire shall be braided over the bedding.
Multi Cores -- Galvanized steel wire shall be braided over the bedding.

8 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black.

SPECIFICATIONS:

IEC 60092, IEC 60502
IEC 60331
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE P5 : CU/MICA/EPR/EVA/TCWB/EVA CABLE - SINGLE CORE
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of tinned copper wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
16	c.c.	1.0	1.0	0.3	1.2	13.3	380
25	c.c.	1.2	1.0	0.3	1.3	15.2	530
35	c.c.	1.2	1.0	0.3	1.3	16.3	650
50	c.c.	1.4	1.0	0.3	1.4	18.1	820
70	c.c.	1.4	1.0	0.3	1.4	19.8	1060
95	c.c.	1.6	1.0	0.3	1.5	22.2	1380
120	c.c.	1.6	1.0	0.3	1.6	23.9	1670
150	c.c.	1.8	1.0	0.3	1.6	25.7	2040
185	c.c.	2.0	1.0	0.3	1.7	28.1	2420
240	c.c.	2.2	1.0	0.3	1.8	31.1	3080

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - TWO CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.2	14.0	280
2.5	r.m.	1.0	1.0	0.3	1.2	14.8	320
4	r.m.	1.0	1.0	0.3	1.3	16.0	390
6	r.m.	1.0	1.0	0.3	1.3	17.1	460
10	r.m.	1.0	1.0	0.3	1.4	19.1	600
16	c.c.	1.0	1.0	0.3	1.5	21.0	780
25	c.c.	1.2	1.0	0.3	1.6	24.4	1090
35	c.c.	1.2	1.0	0.3	1.7	26.8	1370
50	c.c.	1.4	1.0	0.3	1.8	30.5	1760
70	c.c.	1.4	1.0	0.3	1.9	34.0	2310
95	c.c.	1.6	1.2	0.3	2.1	39.0	3080
120	c.c.	1.6	1.2	0.3	2.2	42.1	3720
150	c.c.	1.8	1.2	0.3	2.3	45.9	4550
185	c.c.	2.0	1.4	0.3	2.5	50.9	5500
240	c.c.	2.2	1.4	0.3	2.7	56.8	7000

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - THREE CORES 600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.2	14.6	320
2.5	r.m.	1.0	1.0	0.3	1.3	15.7	380
4	r.m.	1.0	1.0	0.3	1.3	16.8	460
6	r.m.	1.0	1.0	0.3	1.4	18.2	560
10	r.m.	1.0	1.0	0.3	1.4	20.1	740
16	c.c.	1.0	1.0	0.3	1.5	22.1	980
25	c.c.	1.2	1.0	0.3	1.6	25.7	1390
35	c.c.	1.2	1.0	0.3	1.7	28.3	1760
50	c.c.	1.4	1.0	0.3	1.9	32.4	2300
70	c.c.	1.4	1.2	0.3	2.0	36.6	3100
95	c.c.	1.6	1.2	0.3	2.2	41.5	4110
120	c.c.	1.6	1.2	0.3	2.3	44.9	5000
150	c.c.	1.8	1.4	0.3	2.5	49.6	6240
185	c.c.	2.0	1.4	0.3	2.6	54.3	7430
240	c.c.	2.2	1.6	0.3	2.9	61.3	9600

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - FOUR CORES 600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.3	15.8	380
2.5	r.m.	1.0	1.0	0.3	1.3	16.8	450
4	r.m.	1.0	1.0	0.3	1.4	18.3	560
6	r.m.	1.0	1.0	0.3	1.4	19.6	680
10	r.m.	1.0	1.0	0.3	1.5	22.0	920
16	c.c.	1.0	1.0	0.3	1.6	24.2	1220
25	c.c.	1.2	1.0	0.3	1.7	28.2	1750
35	c.c.	1.2	1.0	0.3	1.8	31.1	2240
50	c.c.	1.4	1.2	0.3	2.0	36.0	2970
70	c.c.	1.4	1.2	0.3	2.1	40.2	3960
95	c.c.	1.6	1.2	0.3	2.3	45.7	5270
120	c.c.	1.6	1.4	0.3	2.5	50.0	6510
150	c.c.	1.8	1.4	0.3	2.7	54.8	8060
185	c.c.	2.0	1.6	0.3	2.9	60.6	9680

Note : r.m. - circular stranded conductor

c.c. - compacted circular stranded conductor

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - FIVE CORES
600/1000V (1200 V)

Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
mm²		mm	mm	mm	mm	mm	Kg / Km
1.5	r.m.	1.0	1.0	0.3	1.3	17.0	450
2.5	r.m.	1.0	1.0	0.3	1.4	18.3	540
4	r.m.	1.0	1.0	0.3	1.4	19.7	660
6	r.m.	1.0	1.0	0.3	1.5	21.4	810
10	r.m.	1.0	1.0	0.3	1.5	23.8	1100
16	c.c.	1.0	1.0	0.3	1.6	26.2	1470
25	c.c.	1.2	1.0	0.3	1.8	30.9	2140
35	c.c.	1.2	1.0	0.3	1.9	34.2	2750
50	c.c.	1.4	1.2	0.3	2.1	39.5	3610
70	c.c.	1.4	1.2	0.3	2.3	44.3	4850
95	c.c.	1.6	1.4	0.3	2.5	50.8	6530

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (1.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	1.5	r.m.	1.0	1.0	0.3	1.3	18.2	510
7	1.5	r.m.	1.0	1.0	0.3	1.3	18.2	520
8	1.5	r.m.	1.0	1.0	0.3	1.4	19.6	610
9	1.5	r.m.	1.0	1.0	0.3	1.5	21.0	680
10	1.5	r.m.	1.0	1.0	0.3	1.5	22.5	720
11	1.5	r.m.	1.0	1.0	0.3	1.5	22.5	750
12	1.5	r.m.	1.0	1.0	0.3	1.5	23.2	800
13	1.5	r.m.	1.0	1.0	0.3	1.5	24.2	850
14	1.5	r.m.	1.0	1.0	0.3	1.5	24.2	880
15	1.5	r.m.	1.0	1.0	0.3	1.6	25.5	960
16	1.5	r.m.	1.0	1.0	0.3	1.6	25.5	990
17	1.5	r.m.	1.0	1.0	0.3	1.6	26.7	1040
18	1.5	r.m.	1.0	1.0	0.3	1.6	26.7	1070
19	1.5	r.m.	1.0	1.0	0.3	1.6	26.7	1100
20	1.5	r.m.	1.0	1.0	0.3	1.7	28.1	1170
21	1.5	r.m.	1.0	1.0	0.3	1.7	28.1	1200
24	1.5	r.m.	1.0	1.0	0.3	1.8	31.1	1370
27	1.5	r.m.	1.0	1.0	0.3	1.8	31.7	1460
30	1.5	r.m.	1.0	1.0	0.3	1.8	32.9	1580
37	1.5	r.m.	1.0	1.0	0.3	1.9	35.4	1870
48	1.5	r.m.	1.0	1.2	0.3	2.1	40.8	2400

Note : r.m. - circular stranded conductor
c.c. - compacted circular stranded conductor

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (2.5 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	2.5	r.m.	1.0	1.0	0.3	1.4	19.6	620
7	2.5	r.m.	1.0	1.0	0.3	1.4	19.6	640
8	2.5	r.m.	1.0	1.0	0.3	1.5	21.1	740
9	2.5	r.m.	1.0	1.0	0.3	1.5	22.5	820
10	2.5	r.m.	1.0	1.0	0.3	1.5	24.2	870
11	2.5	r.m.	1.0	1.0	0.3	1.5	24.2	910
12	2.5	r.m.	1.0	1.0	0.3	1.6	25.1	980
13	2.5	r.m.	1.0	1.0	0.3	1.6	26.2	1050
14	2.5	r.m.	1.0	1.0	0.3	1.6	26.2	1090
15	2.5	r.m.	1.0	1.0	0.3	1.7	27.7	1190
16	2.5	r.m.	1.0	1.0	0.3	1.7	27.7	1230
17	2.5	r.m.	1.0	1.0	0.3	1.7	29.0	1290
18	2.5	r.m.	1.0	1.0	0.3	1.7	29.0	1330
19	2.5	r.m.	1.0	1.0	0.3	1.7	29.0	1380
20	2.5	r.m.	1.0	1.0	0.3	1.8	30.5	1460
21	2.5	r.m.	1.0	1.0	0.3	1.8	30.5	1500
24	2.5	r.m.	1.0	1.0	0.3	1.9	33.9	1720
27	2.5	r.m.	1.0	1.0	0.3	1.9	34.5	1840
30	2.5	r.m.	1.0	1.0	0.3	1.9	35.7	2000
37	2.5	r.m.	1.0	1.2	0.3	2.0	38.9	2410
48	2.5	r.m.	1.0	1.2	0.3	2.2	44.3	3040

TYPE P5 : CU/MICA/EPR/EVA/SWB/EVA CABLE - MULTI-CORES (4 mm²)
600/1000V (1200 V)

Number of core	Nominal cross-sectional area	Conductor shape	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²		mm	mm	mm	mm	mm	Kg / Km
6	4	r.m.	1.0	1.0	0.3	1.5	21.4	770
7	4	r.m.	1.0	1.0	0.3	1.5	21.4	800
8	4	r.m.	1.0	1.0	0.3	1.5	22.9	920
9	4	r.m.	1.0	1.0	0.3	1.6	24.6	1040
10	4	r.m.	1.0	1.0	0.3	1.6	26.5	1100
11	4	r.m.	1.0	1.0	0.3	1.6	26.5	1170
12	4	r.m.	1.0	1.0	0.3	1.7	27.4	1250
13	4	r.m.	1.0	1.0	0.3	1.7	28.7	1340
14	4	r.m.	1.0	1.0	0.3	1.7	28.7	1400
15	4	r.m.	1.0	1.0	0.3	1.7	30.1	1510
16	4	r.m.	1.0	1.0	0.3	1.7	30.1	1570
17	4	r.m.	1.0	1.0	0.3	1.8	31.8	1660
18	4	r.m.	1.0	1.0	0.3	1.8	31.8	1720
19	4	r.m.	1.0	1.0	0.3	1.8	31.8	1780
20	4	r.m.	1.0	1.0	0.3	1.9	33.6	1920
21	4	r.m.	1.0	1.0	0.3	1.9	33.6	1980
24	4	r.m.	1.0	1.2	0.3	2.0	37.6	2260
27	4	r.m.	1.0	1.2	0.3	2.0	38.4	2470
30	4	r.m.	1.0	1.2	0.3	2.1	39.8	2700
37	4	r.m.	1.0	1.2	0.3	2.2	42.9	3210
48	4	r.m.	1.0	1.2	0.3	2.4	49.0	4070

Note : r.m. - circular stranded conductor

POLYETHYLENE INSULATED BRAIDED LSOH SHEATHED INDIVIDUAL AND OVERALL SCREENED FLAME RETARDANT INSTRUMENT CABLE

TYPE I1 : CU/PE/PE/SWB/LSOH INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single pair and multi-pair cables with copper conductor, PE insulated, individual and overall screened, polyethylene bedding, galvanised steel wire braided and flame retardant low smoke zero halogen compound sheathed.
Cables are rated at 300/500 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular solid copper conductor, conform to IEC 60228 or BS 6360 class 1.

2 **Insulation**
PE (polyethylene)

3 **Pairing**
Two insulated cores shall be uniformly twisted together to form a pair with maximum lay length of 100 mm. Each pair is screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm².

4 **Pair identification**
Colour code

5 **Cabling**
Twisted pairs are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

6 **Screening**
Accumulated pairs screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm².

7 **Bedding**
Polyethylene compound, colour black.

8 **Armour**
Galvanized steel wire shall be braided over the bedding.

9 **Sheath**
Flame retardant low smoke zero halogen compound, colour black. (Blue - IS)

SPECIFICATIONS:

BS 5308
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE I1 : CU/PE/PE/SWB/LSOH INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE 300/500 V

Number of pairs	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.0	1 / 1.13	0.6	0.8	0.3	1.3	11.2	180
2	1.0	1 / 1.13	0.6	1.1	0.3	1.5	16.9	380
3	1.0	1 / 1.13	0.6	1.1	0.3	1.5	17.7	420
4	1.0	1 / 1.13	0.6	1.2	0.3	1.5	19.1	490
5	1.0	1 / 1.13	0.6	1.2	0.3	1.6	20.8	560
6	1.0	1 / 1.13	0.6	1.2	0.3	1.6	22.3	640
7	1.0	1 / 1.13	0.6	1.2	0.3	1.6	22.3	670
8	1.0	1 / 1.13	0.6	1.3	0.3	1.7	24.2	760
9	1.0	1 / 1.13	0.6	1.3	0.3	1.7	25.7	840
10	1.0	1 / 1.13	0.6	1.3	0.3	1.8	27.8	930
11	1.0	1 / 1.13	0.6	1.3	0.3	1.8	27.8	960
12	1.0	1 / 1.13	0.6	1.3	0.3	1.8	28.6	1020
13	1.0	1 / 1.13	0.6	1.3	0.3	1.8	28.6	1050
14	1.0	1 / 1.13	0.6	1.3	0.3	1.8	28.6	1090
15	1.0	1 / 1.13	0.6	1.5	0.3	1.9	30.6	1180
16	1.0	1 / 1.13	0.6	1.5	0.3	1.9	30.6	1220
17	1.0	1 / 1.13	0.6	1.5	0.3	1.9	32.0	1300
18	1.0	1 / 1.13	0.6	1.5	0.3	1.9	32.0	1340
19	1.0	1 / 1.13	0.6	1.5	0.3	1.9	32.0	1370
20	1.0	1 / 1.13	0.6	1.7	0.3	2.0	34.0	1470
21	1.0	1 / 1.13	0.6	1.7	0.3	2.0	34.0	1510
22	1.0	1 / 1.13	0.6	1.7	0.3	2.0	35.5	1600
23	1.0	1 / 1.13	0.6	1.7	0.3	2.0	35.5	1630
24	1.0	1 / 1.13	0.6	1.7	0.3	2.0	37.3	1710

PAIR IDENTIFICATION :

Pair No.	a-wire	b-wire
1	Black	Blue
2	Black	Green
3	Blue	Green
4	Black	Brown
5	Blue	Brown
6	Green	Brown
7	Black	White
8	Blue	White
9	Green	White
10	Brown	White
11	Black	Red
12	Blue	Red

Pair No.	a-wire	b-wire
13	Green	Red
14	Brown	Red
15	White	Red
16	Black	Orange
17	Blue	Orange
18	Green	Orange
19	Brown	Orange
20	White	Orange
21	Red	Orange
22	Black	Yellow
23	Blue	Yellow
24	Green	Yellow

POLYETHYLENE INSULATED BRAIDED LSOH SHEATHED OVERALL SCREENED FLAME RETARDANT INSTRUMENT CABLE

TYPE I2 : CU/PE/PE/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single pair and multi-pair cables with copper conductor, PE insulated, overall screened, polyethylene bedding, galvanised steel wire braided and flame retardant low smoke zero halogen compound sheathed. Cables are rated at 300/500 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular solid copper conductor, conform to IEC 60228 or BS 6360 class 1.

2 **Insulation**
PE (polyethylene)

3 **Pairing**
Two insulated cores shall be uniformly twisted together to form a pair with maximum lay length of 100 mm.
Note : Two pair cables with overall screen shall have four cores laid in quad formation.

4 **Pair identification**
Colour code.

5 **Cabling**
Twisted pairs are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

6 **Screening**
Accumulated pairs screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm^2.

7 **Bedding**
Polyethylene compound, colour black.

8 **Armour**
Galvanized steel wire shall be braided over the bedding.

9 **Sheath**
Flame retardant low smoke zero halogen compound, colour black. (Blue - IS)

SPECIFICATIONS:

BS 5308
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE I2 : CU/PE/PE/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE 300/500 V

Number of pairs	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.0	1 / 1.13	0.6	0.8	0.3	1.3	11.2	180
2	1.0	1 / 1.13	0.6	0.8	0.3	1.4	12.3	240
3	1.0	1 / 1.13	0.6	1.1	0.3	1.4	15.3	340
4	1.0	1 / 1.13	0.6	1.1	0.3	1.5	16.6	400
5	1.0	1 / 1.13	0.6	1.2	0.3	1.5	17.9	460
6	1.0	1 / 1.13	0.6	1.2	0.3	1.6	19.3	510
7	1.0	1 / 1.13	0.6	1.2	0.3	1.6	19.3	540
8	1.0	1 / 1.13	0.6	1.2	0.3	1.6	20.5	600
9	1.0	1 / 1.13	0.6	1.2	0.3	1.7	21.9	680
10	1.0	1 / 1.13	0.6	1.2	0.3	1.7	23.4	720
11	1.0	1 / 1.13	0.6	1.2	0.3	1.7	23.4	750
12	1.0	1 / 1.13	0.6	1.3	0.3	1.7	24.3	800
13	1.0	1 / 1.13	0.6	1.3	0.3	1.7	24.3	820
14	1.0	1 / 1.13	0.6	1.3	0.3	1.7	24.3	850
15	1.0	1 / 1.13	0.6	1.3	0.3	1.8	25.5	920
16	1.0	1 / 1.13	0.6	1.3	0.3	1.8	25.5	950
17	1.0	1 / 1.13	0.6	1.3	0.3	1.8	26.6	990
18	1.0	1 / 1.13	0.6	1.3	0.3	1.8	26.6	1020
19	1.0	1 / 1.13	0.6	1.3	0.3	1.8	26.6	1040
20	1.0	1 / 1.13	0.6	1.5	0.3	1.8	28.2	1130
21	1.0	1 / 1.13	0.6	1.5	0.3	1.8	28.2	1160
22	1.0	1 / 1.13	0.6	1.5	0.3	1.8	29.3	1200
23	1.0	1 / 1.13	0.6	1.5	0.3	1.8	29.3	1230
24	1.0	1 / 1.13	0.6	1.5	0.3	1.8	30.8	1290

PAIR IDENTIFICATION :

Pair No.	a-wire	b-wire
1	Black	Blue
2	Black	Green
3	Blue	Green
4	Black	Brown
5	Blue	Brown
6	Green	Brown
7	Black	White
8	Blue	White
9	Green	White
10	Brown	White
11	Black	Red
12	Blue	Red

Pair No.	a-wire	b-wire
13	Green	Red
14	Brown	Red
15	White	Red
16	Black	Orange
17	Blue	Orange
18	Green	Orange
19	Brown	Orange
20	White	Orange
21	Red	Orange
22	Black	Yellow
23	Blue	Yellow
24	Green	Yellow

Note : Two pair cables with overall screen shall have four cores laid in quad formation **Black, Blue, Green, Brown** in clockwise rotation

POLYETHYLENE INSULATED BRAIDED LSOH SHEATHED INDIVIDUAL AND OVERALL SCREENED FLAME RETARDANT INSTRUMENT CABLE

TYPE I3 : CU/PE/PE/SWB/LSOH INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single triad and multi-triad cables with copper conductor, PE insulated, individual and overall screened, polyethylene bedding, galvanised steel wire braided and flame retardant low smoke zero halogen compound sheathed.
Cables are rated at 300/500 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular solid copper conductor, conform to IEC 60228 or BS 6360 class 1.

2 **Insulation**
PE (polyethylene)

3 **Tripling**
Three insulated cores shall be uniformly twisted together to form a triad.
Each triad is screened with aluminium/mylar tape, helically applied with metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm².

4 **Triad identification**
Colour code.

5 **Cabling**
Twisted triads are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

6 **Screening**
Accumulated triads screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm².

7 **Bedding**
Polyethylene compound, colour black.

8 **Armour**
Galvanized steel wire shall be braided over the bedding.

9 **Sheath**
Flame retardant low smoke zero halogen compound, colour black. (Blue - IS)

SPECIFICATIONS:

BS 5308
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE I3 : CU/PE/PE/SWB/LSOH INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE 300/500 V

Number of triads	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.0	1 / 1.13	0.6	0.8	0.3	1.4	11.7	210
2	1.0	1 / 1.13	0.6	1.2	0.3	1.5	18.8	450
3	1.0	1 / 1.13	0.6	1.2	0.3	1.5	19.7	520
4	1.0	1 / 1.13	0.6	1.2	0.3	1.6	21.4	610
5	1.0	1 / 1.13	0.6	1.2	0.3	1.6	23.1	680
6	1.0	1 / 1.13	0.6	1.3	0.3	1.7	25.2	800
7	1.0	1 / 1.13	0.6	1.3	0.3	1.7	25.2	850
8	1.0	1 / 1.13	0.6	1.3	0.3	1.7	27.0	930
9	1.0	1 / 1.13	0.6	1.4	0.3	1.8	29.2	1060
10	1.0	1 / 1.13	0.6	1.4	0.3	1.8	31.4	1160
11	1.0	1 / 1.13	0.6	1.4	0.3	1.8	31.4	1230
12	1.0	1 / 1.13	0.6	1.5	0.3	1.9	32.7	1310

TRIAD IDENTIFICATION :

Triad No.	a-wire	b-wire	c-wire
1	Black	Blue	Turquoise
2	Black	Green	Turquoise
3	Blue	Green	Turquoise
4	Black	Brown	Turquoise
5	Blue	Brown	Turquoise
6	Green	Brown	Turquoise
7	Black	White	Turquoise
8	Blue	White	Turquoise
9	Green	White	Turquoise
10	Brown	White	Turquoise
11	Black	Red	Turquoise
12	Blue	Red	Turquoise

POLYETHYLENE INSULATED BRAIDED LSOH SHEATHED OVERALL SCREENED FLAME RETARDANT INSTRUMENT CABLE

TYPE I4 : CU/PE/PE/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single triad and multi-triad cables with copper conductor, PE insulated, overall screened, polyethylene bedding, galvanised steel wire braided and flame retardant low smoke zero halogen compound sheathed. Cables are rated at 300/500 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular solid copper conductor, conform to IEC 60228 or BS 6360 class 1.

2 **Insulation**
PE (polyethylene)

3 **Tripling**
Three insulated cores shall be uniformly twisted together to form a triad.

4 **Triad identification**
Colour code.

5 **Cabling**
Twisted triads are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

6 **Screening**
Accumulated triads screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm².

7 **Bedding**
Polyethylene compound, colour black.

8 **Armour**
Galvanized steel wire shall be braided over the bedding.

9 **Sheath**
Flame retardant low smoke zero halogen compound, colour black. (Blue - IS)

SPECIFICATIONS:

BS 5308
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE I4 : CU/PE/PE/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE 300/500 V

Number of triads	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.0	1 / 1.13	0.6	0.8	0.3	1.4	11.7	210
2	1.0	1 / 1.13	0.6	1.1	0.3	1.5	17.0	380
3	1.0	1 / 1.13	0.6	1.2	0.3	1.5	18.0	450
4	1.0	1 / 1.13	0.6	1.2	0.3	1.5	19.3	520
5	1.0	1 / 1.13	0.6	1.2	0.3	1.6	21.0	600
6	1.0	1 / 1.13	0.6	1.2	0.3	1.6	22.5	670
7	1.0	1 / 1.13	0.6	1.2	0.3	1.6	22.5	710
8	1.0	1 / 1.13	0.6	1.3	0.3	1.7	24.4	820
9	1.0	1 / 1.13	0.6	1.3	0.3	1.8	26.1	920
10	1.0	1 / 1.13	0.6	1.4	0.3	1.8	28.3	990
11	1.0	1 / 1.13	0.6	1.4	0.3	1.8	28.3	1030
12	1.0	1 / 1.13	0.6	1.4	0.3	1.8	29.1	1090
13	1.0	1 / 1.13	0.6	1.4	0.3	1.9	29.5	1150
14	1.0	1 / 1.13	0.6	1.4	0.3	1.9	29.5	1190
15	1.0	1 / 1.13	0.6	1.5	0.3	1.9	31.0	1280

TRIAD IDENTIFICATION :

Triad No.	a-wire	b-wire	c-wire
1	Black	Blue	Turquoise
2	Black	Green	Turquoise
3	Blue	Green	Turquoise
4	Black	Brown	Turquoise
5	Blue	Brown	Turquoise
6	Green	Brown	Turquoise
7	Black	White	Turquoise
8	Blue	White	Turquoise
9	Green	White	Turquoise
10	Brown	White	Turquoise
11	Black	Red	Turquoise
12	Blue	Red	Turquoise
13	Green	Red	Turquoise
14	Brown	Red	Turquoise
15	White	Red	Turquoise

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED INDIVIDUAL AND OVERALL SCREENED FIRE RESISTANT AND FLAME RETARDANT INSTRUMENT CABLE

TYPE F1 : CU/MICA/EPR/EVA/SWB/EVA INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single pair and multi-pair cables with copper conductor, mica tape, EPR insulated, individual and overall screened, flame retardant low smoke zero halogen compound EVA bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 250/450 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular stranded copper conductor, conform to IEC 60228 or BS 6360 class 2.

2 **Fire proof layer**
Mica tape

3 **Insulation**
EPR (Ethylene Propylene Rubber)

4 **Pairing**
Two insulated cores shall be uniformly twisted together to form a pair.
Each pair is screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm².

5 **Pair identification**
Single pair : Red, white
Multi pair : Red, white (Pairs are identified by number).

6 **Cabling**
Twisted pairs are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

7 **Screening**
Accumulated pairs screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm².

8 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

9 **Armour**
Galvanized steel wire shall be braided over the bedding.

10 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black. (Blue - IS)

SPECIFICATIONS:

BS 6883, BS 7917
IEC 60092
IEC 60331
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE F1 : CU/MICA/EPR/EVA/SWB/EVA INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

250/450 V

Number of pairs	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.5	7 / 0.53	0.8	1.1	0.3	1.2	14.3	300
2	1.5	7 / 0.53	0.8	1.3	0.3	1.4	22.0	610
3	1.5	7 / 0.53	0.8	1.3	0.3	1.5	23.3	710
4	1.5	7 / 0.53	0.8	1.4	0.3	1.6	25.6	860
5	1.5	7 / 0.53	0.8	1.4	0.3	1.6	27.7	990
6	1.5	7 / 0.53	0.8	1.5	0.3	1.7	30.3	1130
7	1.5	7 / 0.53	0.8	1.5	0.3	1.7	30.3	1210
8	1.5	7 / 0.53	0.8	1.6	0.3	1.8	33.0	1400
9	1.5	7 / 0.53	0.8	1.7	0.3	1.9	35.8	1600
10	1.5	7 / 0.53	0.8	1.8	0.3	2.0	39.0	1780
11	1.5	7 / 0.53	0.8	1.8	0.3	2.0	39.0	1850
12	1.5	7 / 0.53	0.8	1.8	0.3	2.0	40.2	1910
13	1.5	7 / 0.53	0.8	1.9	0.3	2.1	40.7	2030
14	1.5	7 / 0.53	0.8	1.9	0.3	2.1	40.7	2100
15	1.5	7 / 0.53	0.8	1.9	0.3	2.2	42.9	2270
16	1.5	7 / 0.53	0.8	1.9	0.3	2.2	42.9	2340
17	1.5	7 / 0.53	0.8	2.0	0.3	2.2	45.2	2480
18	1.5	7 / 0.53	0.8	2.0	0.3	2.2	45.2	2560
19	1.5	7 / 0.53	0.8	2.0	0.3	2.2	45.2	2630
20	1.5	7 / 0.53	0.8	2.1	0.3	2.3	47.7	2830

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED OVERALL SCREENED FIRE RESISTANT AND FLAME RETARDANT INSTRUMENT CABLE

TYPE F2 : CU/MICA/EPR/EVA/SWB/EVA OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single pair and multi-pair cables with copper conductor, mica tape, EPR insulated, overall screened, flame retardant low smoke zero halogen compound EVA bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 250/450 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular stranded copper conductor, conform to IEC 60228 or BS 6360 class 2.

2 **Fire proof layer**
Mica tape

3 **Insulation**
EPR (Ethylene Propylene Rubber)

4 **Pairing**
Two insulated cores shall be uniformly twisted together to form a pair.
Note : Two pair cables with overall screen shall have four cores laid in quad formation.

5 **Pair identification**
Single pair : Red, white
Multi pair : Red, white (Pairs are identified by number).

6 **Cabling**
Twisted pairs are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

7 **Screening**
Accumulated pairs screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm^2.

8 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

9 **Armour**
Galvanized steel wire shall be braided over the bedding.

10 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black. (Blue - IS)

SPECIFICATIONS:

BS 6883 , BS 7917
IEC 60092
IEC 60331
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE F2 : CU/MICA/EPR/EVA/SWB/EVA OVERALL SCREENED INSTRUMENT CABLE 250/450 V

Number of pairs	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.5	7 / 0.53	0.8	1.1	0.3	1.2	14.3	300
2	1.5	7 / 0.53	0.8	1.1	0.3	1.2	15.8	390
3	1.5	7 / 0.53	0.8	1.3	0.3	1.4	20.4	590
4	1.5	7 / 0.53	0.8	1.3	0.3	1.5	22.2	690
5	1.5	7 / 0.53	0.8	1.4	0.3	1.6	24.3	830
6	1.5	7 / 0.53	0.8	1.4	0.3	1.6	26.2	910
7	1.5	7 / 0.53	0.8	1.4	0.3	1.6	26.2	970
8	1.5	7 / 0.53	0.8	1.5	0.3	1.7	28.4	1120
9	1.5	7 / 0.53	0.8	1.6	0.3	1.8	30.7	1280
10	1.5	7 / 0.53	0.8	1.7	0.3	1.9	33.5	1390
11	1.5	7 / 0.53	0.8	1.7	0.3	1.9	33.5	1440
12	1.5	7 / 0.53	0.8	1.7	0.3	1.9	34.5	1530
13	1.5	7 / 0.53	0.8	1.7	0.3	2.0	34.7	1600
14	1.5	7 / 0.53	0.8	1.7	0.3	2.0	34.7	1660
15	1.5	7 / 0.53	0.8	1.8	0.3	2.0	36.6	1780
16	1.5	7 / 0.53	0.8	1.8	0.3	2.0	36.6	1840
17	1.5	7 / 0.53	0.8	1.9	0.3	2.1	38.7	1980
18	1.5	7 / 0.53	0.8	1.9	0.3	2.1	38.7	2040
19	1.5	7 / 0.53	0.8	1.9	0.3	2.1	38.7	2090
20	1.5	7 / 0.53	0.8	1.9	0.3	2.2	40.6	2220

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED INDIVIDUAL AND OVERALL SCREENED FIRE RESISTANT AND FLAME RETARDANT INSTRUMENT CABLE

TYPE F3 : CU/MICA/EPR/EVA/SWB/EVA INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single triad and multi-triad cables with copper conductor, mica tape, EPR insulated, individual and overall screened, flame retardant low smoke zero halogen compound EVA bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 250/450 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular stranded copper conductor, conform to IEC 60228 or BS 6360 class 2.

2 **Fire proof layer**
Mica tape

3 **Insulation**
EPR (Ethylene Propylene Rubber)

4 **Tripling**
Three insulated cores shall be uniformly twisted together to form a triad.
Each triad is screened with aluminium/mylar tape, helically applied metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm².

5 **Triad identification**
Single triad : Red, white, black
Multi triads : Red, white, black (Triads are identified by number).

6 **Cabling**
Twisted triads are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

7 **Screening**
Accumulated triads screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm².

8 **Bedding**
Flame retardant low smoke zero halogen compound EVA, colour black.

9 **Armour**
Galvanized steel wire shall be braided over the bedding.

10 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black. (Blue - IS)

SPECIFICATIONS:

BS 6883 , BS 7917
IEC 60092
IEC 60331
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE F3 : CU/MICA/EPR/EVA/SWB/EVA INDIVIDUAL AND OVERALL SCREENED INSTRUMENT CABLE

250/450 V

Number of triads	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.5	7 / 0.53	0.8	1.1	0.3	1.2	14.9	340
2	1.5	7 / 0.53	0.8	1.4	0.3	1.5	25.2	770
3	1.5	7 / 0.53	0.8	1.4	0.3	1.6	26.8	910
4	1.5	7 / 0.53	0.8	1.5	0.3	1.6	29.2	1080
5	1.5	7 / 0.53	0.8	1.5	0.3	1.7	32.0	1280
6	1.5	7 / 0.53	0.8	1.6	0.3	1.8	35.1	1460
7	1.5	7 / 0.53	0.8	1.6	0.3	1.8	35.1	1560
8	1.5	7 / 0.53	0.8	1.7	0.3	1.9	38.2	1800
9	1.5	7 / 0.53	0.8	1.7	0.3	1.9	40.9	2020
10	1.5	7 / 0.53	0.8	1.9	0.3	2.1	45.1	2300
11	1.5	7 / 0.53	0.8	1.9	0.3	2.1	45.1	2400
12	1.5	7 / 0.53	0.8	1.9	0.3	2.2	46.7	2500

ETHYLENE PROPYLENE RUBBER INSULATED BRAIDED EVA SHEATHED OVERALL SCREENED FIRE RESISTANT AND FLAME RETARDANT INSTRUMENT CABLES

TYPE F4 : CU/MICA/EPR/EVA/SWB/EVA OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single triad and multi-triad cables with copper conductor, mica tape, EPR insulated, overall screened, flame retardant low smoke zero halogen compound EVA bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound EVA sheathed.
Cables are rated at 250/450 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular stranded copper conductor, conform to IEC 60228 or BS 6360 class 2.

2 **Fire proof layer**
Mica tape

3 **Insulation**
EPR (Ethylene Propylene Rubber)

4 **Tripling**
Three insulated cores shall be uniformly twisted together to form a triad.

5 **Triad identification**
Single triad : Red, white, black
Multi triads : Red, white, black (Triads are identified by number).

6 **Cabling**
Twisted triads are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

7 **Screening**
Accumulated triads screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 1.0 mm^2.

8 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black.

9 **Armour**
Galvanized steel wire shall be braided over the bedding.

10 **Sheath**
Flame retardant low smoke zero halogen compound EVA, colour black. (Blue - IS)

SPECIFICATIONS:

BS 6883 , BS 7917
IEC 60092
IEC 60331
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE F4 : CU/MICA/EPR/EVA/SWB/EVA OVERALL SCREENED INSTRUMENT CABLE 250/450 V

Number of triads	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	1.5	7 / 0.53	0.8	1.1	0.3	1.2	14.9	340
2	1.5	7 / 0.53	0.8	1.3	0.3	1.5	22.9	670
3	1.5	7 / 0.53	0.8	1.3	0.3	1.5	24.1	770
4	1.5	7 / 0.53	0.8	1.4	0.3	1.6	26.5	940
5	1.5	7 / 0.53	0.8	1.5	0.3	1.6	28.9	1100
6	1.5	7 / 0.53	0.8	1.5	0.3	1.7	31.5	1240
7	1.5	7 / 0.53	0.8	1.5	0.3	1.7	31.5	1330
8	1.5	7 / 0.53	0.8	1.6	0.3	1.8	34.3	1530
9	1.5	7 / 0.53	0.8	1.7	0.3	1.9	37.1	1750
10	1.5	7 / 0.53	0.8	1.8	0.3	2.0	40.5	1900
11	1.5	7 / 0.53	0.8	1.8	0.3	2.0	40.5	1980
12	1.5	7 / 0.53	0.8	1.8	0.3	2.0	41.7	2110
13	1.5	7 / 0.53	0.8	1.9	0.3	2.1	42.4	2240
14	1.5	7 / 0.53	0.8	1.9	0.3	2.1	42.4	2320
15	1.5	7 / 0.53	0.8	2.0	0.3	2.2	44.9	2510

SILICON RUBBER INSULATED BRAIDED LSOH SHEATHED OVERALL SCREENED FIRE RESISTANT AND FLAME RETARDANT INSTRUMENT CABLE

TYPE TEL-1 : CU/MICA/SiR/LSOH/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE

DESCRIPTION

Single pair and multi-pair cables with copper conductor, mica tape, Silicon Rubber insulated, overall screened, flame retardant low smoke zero halogen compound LSOH bedding, galvanised steel wire braiding and flame retardant low smoke zero halogen compound LSOH sheathed.
Cables are rated at 100 V.

CONSTRUCTION

1 **Conductor**
Plain annealed circular solid copper conductor, conform to IEC 60228 or BS 6360 class 1.

2 **Fire proof layer**
Mica tape

3 **Insulation**
SiR (Silicon Rubber)

4 **Pairing**
Two insulated cores shall be uniformly twisted together to form a pair
Note : Two pair cables with overall screen shall have four cores laid in quad formation.

5 **Pair identification**
Colour code.

6 **Cabling**
Twisted pairs are laid up together, if necessary filled with non-hygroscopic material compatible with the insulation.

7 **Screening**
Accumulated pairs screened with aluminium/mylar tape, helically applied with the metallic side down, in electrical contact with a tinned annealed copper drain wire of 0.5 mm^2

8 **Bedding**
Flame retardant low smoke zero halogen compound LSOH, colour black.

9 **Armour**
Galvanized steel wire shall be braided over the bedding.

10 **Sheath**
Flame retardant low smoke zero halogen compound LSOH, colour grey.

SPECIFICATIONS:

IEC 60092, IEC 60502
IEC 60331, BS 6387
IEC 60332-3 Cat A
IEC 60754 (HCl emission 0.5 % maximum by weight)
ASTM D 2863 (Oxygen index greater than 30%)

TYPE TEL-1 : CU/MICA/SiR/LSOH/SWB/LSOH OVERALL SCREENED INSTRUMENT CABLE 100 V

Number of pairs	Nominal cross-sectional area	Conductor strands	Nominal thickness of insulation	Nominal thickness of bedding	Nominal diameter of steel wire	Nominal thickness of sheath	Approx. overall diameter	Approx. cable weight
	mm²	no. / mm	mm	mm	mm	mm	mm	Kg / Km
1	0.5	1 / 0.8	1.0	1.0	0.3	1.2	13.1	250
2	0.5	1 / 0.8	1.0	1.0	0.3	1.2	14.5	320
3	0.5	1 / 0.8	1.0	1.0	0.3	1.4	18.4	450
4	0.5	1 / 0.8	1.0	1.0	0.3	1.4	19.8	520
5	0.5	1 / 0.8	1.0	1.0	0.3	1.5	21.6	610
6	0.5	1 / 0.8	1.0	1.0	0.3	1.5	23.2	670
7	0.5	1 / 0.8	1.0	1.0	0.3	1.5	23.2	710
8	0.5	1 / 0.8	1.0	1.0	0.3	1.6	25.1	790
9	0.5	1 / 0.8	1.0	1.0	0.3	1.7	27.0	890
10	0.5	1 / 0.8	1.0	1.0	0.3	1.7	29.1	970
11	0.5	1 / 0.8	1.0	1.0	0.3	1.7	29.1	1010
12	0.5	1 / 0.8	1.0	1.0	0.3	1.8	30.1	1080
13	0.5	1 / 0.8	1.0	1.0	0.3	1.8	30.1	1110
14	0.5	1 / 0.8	1.0	1.0	0.3	1.8	30.1	1150
15	0.5	1 / 0.8	1.0	1.0	0.3	1.9	31.8	1230
16	0.5	1 / 0.8	1.0	1.0	0.3	1.9	31.8	1270
17	0.5	1 / 0.8	1.0	1.2	0.3	2.0	34.1	1400
18	0.5	1 / 0.8	1.0	1.2	0.3	2.0	34.1	1440
19	0.5	1 / 0.8	1.0	1.2	0.3	2.0	34.1	1480
20	0.5	1 / 0.8	1.0	1.2	0.3	2.0	35.6	1550

PAIR IDENTIFICATION :

Pair No.	a-wire	b-wire
1	Black	Blue
2	Black	Green
3	Blue	Green
4	Black	Brown
5	Blue	Brown
6	Green	Brown
7	Black	White
8	Blue	White
9	Green	White
10	Brown	White

Pair No.	a-wire	b-wire
11	Black	Red
12	Blue	Red
13	Green	Red
14	Brown	Red
15	White	Red
16	Black	Orange
17	Blue	Orange
18	Green	Orange
19	Brown	Orange
20	White	Orange

Note : Two pair cables with overall screen shall have four cores laid in quad formation.
Black, Blue, Green, Brown in clockwise rotation