ELECTRICAL INDUSTRIES GROUP

Cables
CATALOGUE

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Cables DIVISION | ELECTRICAL INDUSTRIES GROUP LTD.

Armoured Cables BS 5467 and BS 6346

Definition

Armoured Cable is the name given to electrical cable constructed with alayer of aluminum wire armour or steel wire armour. Cables in these standardsare intended for use in supply of main electricity and can be found inunderground systems, power networks, cable ducting, fixed installation inindustrial areas, on exterior surface walls, building and similar applications.

Voltage Rating

Cables manufactured to BS 5467 and BS 6346 are rated for600/1000 Volts and 1900/3300 Volts.

Construction

- Conductors are made up of soft annealed copper and can be either stranded circular or shaped. They conform to BS 5467 Table 2 and BS EN 60228.
- Insulation can either be Cross Linked Poly Ethylene (XLPE) or Polyvinyl Chloride (PVC). The insulation is applied by the extrusion process and in the case of XLPE, it is cross linked to form a homogeneous layer. It conforms to BS 7655-1.3.
- Bedding can be both taped and extruded and conforms to BS 5467 Table 4 to Table 18.
- Armour consists of a single layer of steel wire and conforms to tables 1 and 2 below. The armour wire is tested to BS 5467 and BS 6346 Annex G.1, G.2, G.3 and G.4.
- Oversheath consists of a single layer of extruded PVC and is usually black in color. Sheathing conforms to BS 7655-4.2.

Cable Marking

All cables will carry the following items on the surface print:

- Manufacturers Name
- Electric Cable
- Voltage Designation
- British Standard Number
- Cross Sectional Area
- No. of Cores
- Type of Cable
- Date

NOTE: *Items 1 to 4 will also be embossed on the Oversheath of the cable*

Table 1
BS 5467 XLPE Insulated

Cross Sectional Area	Size of Strand	No. of Strands	No. of Cores	Nominal Insulation Thickness	Nominal Bedding Thickness	Armour Diameter	Nominal Sheathing Thickness	Average Diameter of 3 and 4 cores
1.5mm a	.53mm	7	3/4	.6mm	.8mm	0.9mm	1.3mm	12.6/13.3mm
2.5mm a	.67mm	7	3/4	.7mm	.8mm	0.9mm	1.4mm	14.1/15mm
4.0mm a	.85mm	7	3/4	.7mm	.8mm	0.9mm	1.4mm	15.3/16.4mm
6.0mm a	1.04mm	7	3/4	.7mm	.8mm	0.9/1.25mm	1.4/1.5mm	16.6/18.7mm
10mm a	1.35mm	7	3/4	.7mm	.8mm	1.25mm	1.5mm	19.5/21.1mm
16mm a	1.7mm	7	3/4	.7mm	.8mm	1.25mm	1.6mm	21.6/23.4mm
25mm ab	2.14mm	7	3/4	.9mm	1.0mm	1.6mm	1.7mm	26.7/26.1mm
35mm b	2.58mm	7	3/4	.9mm	1.0mm	1.6mm	1.8mm	25.7/28.6mm
50mm b	1.82mm	19	3/4	1.0mm	1.0mm	1.6mm	1.8/1.9mm	28.5/32mm
70mm b	2.18mm	19	3/4	1.1mm	1.0mm	1.6/2.0mm	1.9/2.1mm	32.2/37.7mm
95mm b	2.58mm	19	3/4	1.1mm	1.2mm	2.0mm	2.1/2.2mm	37/41.7mm
120mm b	2.85mm	19	3/4	1.2mm	1.2mm	2.0/2.5mm	2.2/2.3mm	40.4/47.1mm
150mm b	2.25mm	37	3/4	1.4mm	1.4mm	2.5mm	2.3/2.4mm	45.5/51.4mm
185mm b	2.52mm	37	3/4	1.6mm	1.4mm	2.5mm	2.4/2.6mm	49.8/56.6mm
240mm b	2.25mm	61	3/4	1.7mm	1.4mm	2.5mm	2.6/2.7mm	55.1/63mm

a Circular or Compacted circular stranded conductors (class 2)
b Shaped stranded conductor (class 2)

Table 2
BS 6346 PVC Insulated

Cross Sectional Area	Size of Strand	No. of Strands	No. of Cores	Nominal Insulation Thickness	Nominal Bedding Thickness	Armour Diameter	Nominal Sheathing Thickness	Average Diameter of 3 and 4 cores
1.5mm a	.53mm	7	3/4	.6mm	.8mm	0.9mm	1.4mm	12.8/13.5mm
2.5mm a	.67mm	7	3/4	.7mm	.8mm	0.9mm	1.4mm	14.1/15mm
4.0mm a	.85mm	7	3/4	.8mm	.8mm	0.9/1.25mm	1.4/1.5mm	15.8/17.8mm
6.0mm a	1.04mm	7	3/4	.8mm	.8mm	1.25mm	1.5mm	18/19.2mm
10mm a	1.35mm	7	3/4	1.0mm	.8mm	1.25mm	1.6mm	21.2/22.8mm
16mm a	1.7mm	7	3/4	1.0mm	.8mm	1.25/1.6mm	1.6/1.7mm	23.1/26.3mm
25mm ab	2.14mm	7	3/4	1.2mm	1.0mm	1.6mm	1.7/1.8mm	28.2/27.4mm
35mm b	2.58mm	7	3/4	1.2mm	1.0mm	1.6mm	1.8/1.9mm	26.7/29.9mm
50mm b	1.82mm	19	3/4	1.4mm	1.0mm	1.6/2.0mm	1.9/2.0mm	30.1/34.6mm
70mm b	2.18mm	19	3/4	1.4mm	1.2mm	2.0mm	2.0/2.1mm	34.2/38.4mm
95mm b	2.58mm	19	3/4	1.6mm	1.2mm	2.0mm	2.1/2.2mm	38.5/43.5mm
120mm b	2.85mm	19	3/4	1.6mm	1.2mm	2.0/2.5mm	2.2/2.4mm	41.4/48.1mm
150mm b	2.25mm	37	3/4	1.8mm	1.4mm	2.5mm	2.4/2.5mm	46.3/52.4mm
185mm b	2.52mm	37	3/4	2.0mm	1.4mm	2.5mm	2.5/2.6mm	50.7/57.4mm
240mm b	2.25mm	61	3/4	2.2mm	1.6mm	2.5mm	2.6/2.8mm	56.2/64.1mm

a Circular or Compacted circular stranded conductors (class 2)
b Shaped stranded conductor (class 2)

ECC and Twin Flat Cables BS 6004

Definition

ECC cables are made up of two PVC insulated conductors with a centrally laid bare copper earth conductor. Twin flats are made up of two PVC insulated conductors only, both types covered with a white PVC Sheathing. These cable are used mainly for power and lighting circuits, both domestic and industrial applications.

Voltage Rating

300/500 Volts with a maximum operating temperature of 70°C.

Construction

- Conductors are made up of soft annealed copper and can be stranded or solid.
- Conductors are insulated with PVC and laid parallel. In the case of the ECC, the earth is laid parallel between both cores.
- Both cores and in the presence of an earth conductor, are all covered with a white PVC sheathing.

Cable Marking

- Manufacturers Name
- Voltage Designation
- British Standard no.
- Cross Sectional Area
- Mark of the approvals organization(s)
- Date

NOTE: *Not necessarily in the order stated above.*

Table 1
BS 6004 Earth Circuit Conductor (ECC) Cables

Size and No. of Cores (mm^2)	Class of Conductor	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Overall Dimensions Lower Limit (mm)	Circuit Protective Conductor, Area (mm^2)
1 x 1.0	1	0.6	0.9	4.0 x 5.1	1.0
1 x 1.5	1	0.7	0.9	4.4 x 5.4	1.0
2 x 1.0	1	0.6	0.9	4.0 x 7.2	1.0
2 x 1.5	1	0.7	0.9	4.4 x 8.2	1.0
2 x 2.5	1	0.8	1.0	5.2 x 9.8	1.5
2 x 4.0	2	0.8	1.0	5.6 x 10.5	1.5
2 x 6.0	2	0.8	1.1	6.4 x 12.5	2.5
2 x 10	2	1.0	1.2	7.8 x 15.5	4 a
2 x 16	2	1.0	1.3	9.0 x 18	6 a
3 x 1.0	1	0.6	0.9	4.0 x 9.6	1.0
3 x 1.5	1	0.7	0.9	4.4 x 10.5	1.0
3 x 2.5	1	0.8	1.0	5.2 x 12.5	1.0
3 x 4.0	2	0.8	1.1	5.8 x 14.5	1.5
3 x 6.0	2	0.8	1.1	6.4 x 16.5	2.5
3 x 10	2	1.0	1.2	7.8 x 21.0	4 a
3 x 16	2	1.0	1.3	9.0 x 24.5	6 a

a Class 2 conductors only

Table 2
BS 6004 ECC Cables (Alternative Conductor Version)

Size and No. of Cores (mm^2)	Class of Conductor	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Overall Dimensions Lower Limit (mm)	Circuit Protective Conductor, Area (mm^2)
Flat twin without circuit protective conductor					
2 x 1.5	2	0.7	0.9	4.5 x 7.2	-
2 x 2.5	2	0.8	1.0	5.2 x 8.6	-
Flat twin with circuit protective conductor					
1 x 1.5	2	0.7	0.9	4.4 x 5.4	1.0 a
2 x 1.5	2	0.7	0.9	4.5 x 8.4	1.0 a
2 x 2.5	2	0.8	1.0	5.2 x 9.8	1.5 a

a The circuit protective conductor shall be class 1 as given in table 1

Single Double Cables BS 7889

Definition

Single Double Cables are made up of a copper conductor covered by an XLPE insulation which is further coated with a PVC sheath. Cables manufactured under this standard are intended for use in fixed installations in industrial areas, building and similar applications but not for direct burial in the ground.

Voltage Rating

600/1000 Volts with a maximum operating temperature of 90°C and a maximum short circuit conductor temperature of 250°C.

Construction

- Conductors are soft annealed copper stranded together to form a circular finish.
- The core is XLPE insulated and covered by a black PVC Sheathing

Cable Marking

- Manufacturers Name
- Electric Cable
- Voltage Designation
- British Standard Number
- Cross Sectional Area
- No. of Cores
- Type of Cable
- Date

NOTE: *Items 1 to 4 will also be embossed on the Over sheath of the cable. Not necessarily in the order stated above.*

Table 1
BS 7889 Single Double Cables

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm)
1 x 50	1.0	1.4	mm
1 x 70	1.1	1.4	16.2
1 x 95	1.1	1.5	18.3
120	1.2	1.5	20.2
150	1.4	1.6	22.4
185	1.6	1.6	24.7
240	1.7	1.7	27.7
300	1.8	1.8	30.6
400	2.0	1.9	34.2
500	2.2	2.0	38.0
630	2.4	2.2	42.9

Rhino Cables HO5VV-F (BS 6500 and BS 7919)

Definition

Rhino cables are made up of two or more insulated flexible conductors with an over sheath applied to the cores. These cables are intended for use with appliances and equipment in domestic or similar environments for light or ordinary duty.

Voltage Rating

300/500 Volts with a maximum operating temperature of 70°C.

Construction

- Conductors are made up of soft annealed copper and are class 5, flexible.
- Insulated cores are layed up together which are then covered by a PVC sheath.

Cable Marking

- Manufacturers Name
- Voltage Designation
- British Standard no.
- Cross Sectional Area and no. of cores
- Mark of the approvals organization(s)
- Harmonized code
- Date

NOTE: *Not necessarily in the order stated above.*

Table 1
HO5VV-F (BS 6500) Rhino Cables

Size and No. of Conductors (mm^2)	Nylon Thickness	Size of Ground	Insulation Thickness	
			Overall Dimensions Lower Limit (mm)	Overall Dimensions Upper Limit (mm)
2 x 0.75	0.6	0.8	5.7	7.2
2 x 1.0	0.6	0.8	5.9	7.5
2 x 1.5	0.7	0.8	6.8	8.6
2 x 2.5	0.8	1.0	8.4	10.6
3 x 0.75	0.6	0.8	6.0	7.6
3 x 1.0	0.6	0.8	6.3	8.0
3 x 1.5	0.7	0.9	7.4	9.4
3 x 2.5	0.8	1.0	9.2	11.4
4 x 0.75	0.6	0.8	6.6	8.3
4 x 1.0	0.6	0.9	7.1	9.0
4 x 1.5	0.7	1.0	8.4	10.5
4 x 2.5	0.8	1.1	10.1	12.5
5 x 0.75	0.6	0.9	7.4	9.3
5 x 1.0	0.6	0.9	7.8	9.8
5 x 1.5	0.7	1.1	9.3	11.6
5 x 2.5	0.8	1.2	11.2	13.6

Rhino Cables HO5VV-F (BS 6500 and BS 7919)

Table 2
BS 6500 Rhino Cables

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Mean overall dimensions	
			Overall Dimensions Lower Limit (mm)	Overall Dimensions Upper Limit (mm)
2 x 0.75	0.6	0.8	5.7	7.2
2 x 1.0	0.6	0.8	5.9	7.5
2 x 1.5	0.7	0.8	6.8	8.6
2 x 2.5	0.8	1.0	8.4	10.6
3 x 0.75	0.6	0.8	6.0	7.6
3 x 1.0	0.6	0.8	6.3	8.0
3 x 1.5	0.7	0.9	7.4	9.4
3 x 2.5	0.8	1.0	9.2	11.4
4 x 0.75	0.6	0.8	6.6	8.3
4 x 1.0	0.6	0.9	7.1	9.0
4 x 1.5	0.7	1.0	8.4	10.5
4 x 2.5	0.8	1.1	10.1	12.5
5 x 0.75	0.6	0.9	7.4	9.3
5 x 1.0	0.6	0.9	7.8	9.8
5 x 1.5	0.7	1.1	9.3	11.6
5 x 2.5	0.8	1.2	11.2	13.6

a Class 5 conductors only

Table 3
BS 7919 Rhino Cables

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Mean overall dimensions	
			Overall Dimensions Lower Limit (mm)	Overall Dimensions Upper Limit (mm)
2 x 4.0	0.8	1.1	9.7	12.1
3 x 4.0	0.8	1.2	10.5	13.1
4 x 4.0	0.8	1.2	11.5	14.3
5 x 4.0	0.8	1.4	13.0	16.1

a Class 5 conductors only

Single Core Cables BS 6004

Definition

Single core cables are made up of a single conductor covered by a PVC insulation. They are mainly used in power and lighting circuits, both domestic and commercial applications. They are also used in the internal wiring of appliances suitable for installation in conduits and trunking.

Voltage Rating

450/750 Volts with a maximum operating temperature of 70°C

Construction

- Conductors are made up of soft annealed copper and can be stranded, solid or flexible.
- Covered in PVC (Polyvinyl Chloride) insulation.

Cable Marking

- Manufacturers Name
- Voltage Designation
- British Standard Number
- Cross Sectional Area
- Harmonized Code
- Mark of the approvals organization(s)

NOTE: *Not necessarily in the order stated above.*

Table 1
BS 6004 Single Core Cable

Cross Sectional Area	Class of Conductor	Radial Thickness of Insulation	Mean overall diameter	
			Lower Limit (mm)	Upper Limit (mm)
1.5mm	1	0.7mm	2.6	3.2
1.5mm	2	0.7mm	2.7	3.3
2.5mm	1	0.8mm	3.2	3.9
2.5mm	2	0.8mm	3.3	4.0
4.0mm	1	0.8mm	3.6	4.4
4.0mm	2	0.8mm	3.8	4.6
6.0mm	2	0.8mm	4.3	5.2
10mm	2	1.0mm	5.6	6.7
16mm	2	1.0mm	6.4	7.8
25mm	2	1.2mm	8.1	9.7
35mm	2	1.2mm	9.0	10.9
50mm	2	1.4mm	10.6	12.8
70mm	2	1.4mm	12.1	14.6
95mm	2	1.6mm	14.1	17.1
120mm	2	1.6mm	15.6	18.8
150mm	2	1.8mm	17.3	20.9
185mm	2	2.0mm	19.3	23.3
240mm	2	2.2mm	22.0	26.6
300mm	2	2.4mm	24.5	29.6
400mm	2	2.6mm	27.5	33.2
500mm	2	2.8mm	30.5	36.9
630mm	2	2.8mm	34.0	41.1

Conductor: Class 1 copper solid, or class 2 copper as indicated above

Single Core Cables BS 6004

Table 2
BS 6004 Single core Cable (Flexible)

Cross Sectional Area	Radial Thickness of Insulation	Mean overall diameter	
		Lower Limit (mm)	Upper Limit (mm)
1.5mm	0.7mm	2.8	3.4
2.5mm	0.8mm	3.4	4.1
4.0mm	0.8mm	3.9	4.8
6.0mm	0.8mm	4.4	5.3
10mm	1.0mm	5.7	6.8
16mm	1.0mm	6.7	8.1
25mm	1.2mm	8.4	10.2
35mm	1.2mm	9.7	11.7
50mm	1.4mm	11.5	13.9
70mm	1.4mm	13.2	16.0
95mm	1.6mm	15.1	18.1
120mm	1.6mm	16.7	20.2
150mm	1.8mm	18.6	22.5
185mm	2.0mm	20.6	24.9
240mm	2.2mm	23.5	28.4

Conductor: Class 1 copper solid, or class 2 copper as indicated above

Tray Cable UL 1277

Definition

Tray cable is made for use in petrochemical refineries, industrial control systems, intercom systems, traffic controls relay and power extensions. The cable is used for installation in trays, wireways, troughs, ducts, conduit and channels. Power Limited Tray Cable may be used for burglar alarms, petrochemical refineries, business machines, power limited circuits, intercom systems, cash registers, and industrial control systems.

Voltage Rating

Designed to operate not beyond 600V and up to an operating temperature of 90°C.

Construction

- Cables are made of soft annealed stranded copper
- Cores are XLPE insulated and covered with a PVC Sheathing
- Available core ranges from 2- 37 cores

Cable Marking

- UL File Number
- (UL)
- Size
- Voltage
- Type
- Manufacturers name

NOTE: *All marking will be on the cores.*

Tray Cable UL 1277

Table 1
Tray Cable 10 AWG

10 AWG – 7 Strand		
Number of Strands	Radial Thickness Sheathing (mm^2)	Overall Diameter nom.(mm^2)
2	1.143	7.11 x 11.68
3	1.143	12.44
4	1.524	14.47
5	1.524	15.74
6	1.524	17.01
7	1.524	17.01
8	1.524	18.79
9	1.524	20.06
10	2.032	22.85
11	2.032	22.85
12	2.032	23.62
13	2.032	24.12
14	2.032	24.63
15	2.032	25.16
16	2.032	25.16
17	2.032	27.43
18	2.032	27.43
19	2.032	27.43
20	2.032	28.95
23	2.032	30.22
25	2.032	32.00
27	2.032	33.76
29	2.032	33.27
31	2.032	34.54
32	2.032	35.30
37	2.032	36.57

Table 2
Tray Cable 12 AWG

12 AWG – 7 Strand		
Number of Strands	Radial Thickness Sheathing (mm^2)	Overall Diameter nom.(mm^2)
2	1.143	6.34 x 10.41
3	1.143	11.17
4	1.143	12.19
5	1.143	13.46
6	1.524	15.23
7	1.524	15.23
8	1.524	17.01
9	1.524	17.77
10	1.524	19.55
11	1.524	19.55
12	1.524	20.06
13	1.524	20.31
14	1.524	21.08
15	2.032	23.36
16	2.032	23.36
17	2.032	24.38
18	2.032	24.38
19	2.032	24.38
20	2.032	25.65
23	2.032	26.92
25	2.032	28.44
27	2.032	29.20
29	2.032	29.46
31	2.032	30.73
32	2.032	31.24
37	2.032	32.51

Table 3
Tray Cable 14 AWG

14 AWG – 7 Strand		
Number of Strands	Radial Thickness Sheathing (mm^2)	Overall Diameter nom. (mm^2)
2	1.143	5.84 x 9.39
3	1.143	9.90
4	1.143	10.92
5	1.143	11.93
6	1.143	12.95
7	1.143	12.95
8	1.524	14.98
9	1.524	16.00
10	1.524	17.52
11	1.524	17.52
12	1.524	17.77
13	1.524	18.28
14	1.524	18.97
15	1.524	19.81
16	1.524	19.81
17	1.524	20.82
18	1.524	20.82
19	1.524	20.82
20	2.032	22.85
23	2.032	24.12
25	2.032	25.40
27	2.032	25.90
29	2.032	26.16
31	2.032	27.17
32	2.032	27.93
37	2.032	28.95

Core Colour Coding:

- 3/C - Red, White, and Black with Ground
- 4/C - Red, White, Black and Blue with Ground

NM-B (UL)

Definition

NM-B (non-metallic sheathed cable) may be used for both exposed and concealed work in normally dry locations at temperatures not to exceed 90°C. NM-B cable is primarily used in residential wiring as branch circuits for outlets, switches, and other loads. NM-B cable may be run in air voids of masonry block or tile walls where such walls are not subject to excessive moisture or dampness.

Voltage Rating

600 volts for both exposed and concealed applications at an operating temperature of 90° C for dry locations.

Construction

- Solid conductor of soft uncoated copper for sizes 14-10 AWG
- Stranded conductors of larger uncoated copper for sizes 8 AWG and larger
- Soft uncoated copper conductor for grounding
- 2-conductor constructions have the insulated conductors laid parallel
- Ground wire is wrapped with paper and laid parallel between the insulated conductors
- 3- and 4- conductor construction have the insulated conductors twisted together. When a ground wire is present, it is wrapped with paper and twisted together with the insulated conductors
- The entire construction is wrapped with a paper separator before applying the PVC outer jacket
- Different sizes of cables are represented by different colored PVC jackets as follows:
  - *14 AWG – White*
  - *12 AWG – Yellow*
  - *10 AWG – Orange*
  - *8 AWG – Black*
  - *6 AWG – Black*

Cable Marking

- UL File number
- Size
- Type (NM-B with/without ground)
- Voltage
- (UL)
- Date/time
- Manufacturer

NM-B (UL)

Table 1
NM-B (UL)

Size (AWG) & No. of Conductors	No. of Strands	Ground Wire Size (AWG)	Insulation Thickness (mm)		Sheathing Thickness (mm)	Outside Diameter (mm)
			Lower Limit (mm)	Upper Limit (mm)		
With Ground						
14/2G	1	14	0.38	0.10	0.76	4.06 x 11.43
12/2G	1	12	0.38	0.10	0.76	4.31 x 9.91
10/2G	1	10	0.51	0.10	0.76	5.33 x 12.52
8/2G	7	10	0.76	0.13	0.76	7.37 x 14.73
6/2G	7	10	0.76	0.13	0.76	8.38 x 17.65
14/3G	1	14	0.38	0.10	0.76	8.13
12/3G	1	12	0.38	0.10	0.76	8.76
10/3G	1	10	0.51	0.10	0.76	10.92
8/3G	7	10	0.76	0.13	0.76	14.10
6/3G	7	10	0.76	0.13	0.76	15.55
4/3G	7	8	1.02	0.15	0.76	20.83
2/3G	7	8	1.02	0.15	0.76	24.00
14/4G & 14/2-2G	1	14	0.38	0.10	0.76	8.76
12/4G & 12/2-2G	1	12	0.38	0.10	0.76	9.78
10/4G & 10/2-2G	1	10	0.51	0.10	0.76	13.72
Without Ground						
14/2P	1	-	0.38	0.10	0.76	4.06 x 11.43
12/2P	1	-	0.38	0.10	0.76	4.31 x 9.91
10/2P	1	-	0.51	0.10	0.76	5.33 x 12.52
14/3P	1	-	0.38	0.13	0.76	7.49
12/3P	1	-	0.38	0.13	0.76	8.51
10/3P	1	-	0.51	0.10	0.76	10.03
8/3P	7	-	0.76	0.13	0.76	13.72
6/3P	7	-	0.76	0.13	0.76	15.37

NMD 90 c (UL)-(CAN/CSA-C22.2 No. 48-M90)

Definition

NMD 90 is a non-metallic sheathed cable consisting of solid or stranded annealed copper. NMD 90 cables may be used for both exposed work in dry locations or concealed work in dry or damp locations. NMD 90 cable is primarily used in residential wiring as branch circuits for outlets, switches, and other loads. NMD 90 cable may be run in air voids of masonry block or tile walls where such walls are not subject to excessive moisture or dampness. The construction is manufactured using annealed copper conductors stranded conductors; a 90°C rated thermoplastic polyvinyl chloride (PVC) insulation and a nylon jacket for the individual conductors; and a PVC jacket surrounding the overall construction. The cable sheathing jacket is color coded for quick size identification.

Voltage Rating

600 volts for both exposed and concealed applications at an operating temperature of 90°C for dry locations.

Construction

- Solid conductor of soft copper for sizes 14-10 AWG
- Stranded conductors of larger copper for sizes 8 AWG and larger
- Soft uncoated copper conductor for grounding
- 2-conductor constructions have the insulated conductors laid parallel
- Ground wire is wrapped with paper and laid parallel between the insulated conductors
- 3- and 4- conductor construction have the insulated conductors twisted together. When a ground wire is present, it is wrapped with paper and twisted together with the insulated conductors.
- Different sizes of cables are represented by different colored PVC jackets as follows:
  - *14 AWG – White*
  - *12 AWG – Yellow*
  - *10 AWG – Orange*
  - *8 AWG – White*
  - *6 AWG – White*

Cable Marking

- Certification Number
- c(UL)
- Maximum voltage (300 V)
- The size and number of circuit conductors with the grounding conductor size
- The marking NMD90 NYLON
- Manufacturers Name
- Date

NMD 90 c (UL)-(CAN/CSA-C22.2 No. 48-M90)

Table 1
NMD 90 using THHN cores

Size	No. of Conductors	Size of Ground	Insulation Thickness		Nylon Thickness	Sheathing Thickness		Colour of Sheath
			Nom.	Min.		Nom.	Min.	
14	2 Solid	14	0.76	0.68	0.10	0.76	0.60	White
12	2 Solid	14	0.76	0.68	0.10	0.76	0.60	Yellow
10	2 Solid	12	0.76	0.68	0.10	0.76	0.60	Orange
8	2 7 Str	10	0.89	0.81	0.12	1.14	0.91	White
6	2 7 Str	8	1.14	1.01	0.15	1.14	0.91	White
4	2 7 Str	8	1.14	1.01	0.15	1.52	1.21	White
3	2 7 Str	6	1.14	1.01	0.15	2.03	1.62	White
2	2 7 Str	6	1.14	1.01	0.15	2.03	1.62	White

Colour of Insulation:
- 2 Cores - Black and White
- 3 Cores - Black, White, and Red

RHHW 90°

Definition

RHHW is a single conductor made of a solid or stranded bare annealed copper, with insulation of thermoset materials composed of cross-linked polyethylene XLPE.

Voltage Rating

Designed to operate not beyond 600V and an operating temperature of 90°C.

Construction

- Insulted Conductor of solid or stranded annealed bare copper.
- Insulation of thermoset material composed by cross-linked polyethylene (XPLE).
- This product was designed to operate at 90ºC of temperature inside the conductor in dry and wet conditions. Its cross-linked polyethylene (XLPE) insulation does not propagate the flame as well as provides major mechanical resistance against humidity, chemical agents and oils.

Cable Marking

- UL File number
- (UL)
- Size
- Voltage
- Operating temperature
- Manufactures name

Table 1
RHHW 90º

Size (AWG)	Nominal Cross Sectional Area (mm^2)	Number of strands	Insulation Thickness (mm)	Approximate Overall Diameter (mm)
10	5.26	19	1.14	5.23
8	8.37	7	1.52	6.73
6	13.30	7	1.52	7.69
4	21.15	7	1.52	8.92
2	33.62	7	1.52	10.45
1	42.41	19	2.03	12.46
1/0	53.49	19	2.03	13.51
2/0	67.43	19	2.03	14.66
3/0	85.01	19	2.03	15.96
4/0	107.20	19	2.03	17.46
250	126.68	37	2.41	19.45
300	152.01	37	2.41	20.78
350	177.35	37	2.41	22.04
400	202.68	37	2.41	23.3
500	253.36	37	2.41	25.47
600	304.03	61	2.79	28.17

SJT (UL 62)

Definition

SJT cords are designed for power and flexibility. To be used with heavy duty tools, equipment, portable lights and power extensions.

Voltage Rating

Rated at 300 Volts with an operating temperature of 60°C.

Construction

- Conductors- made up of soft annealed copper, flexible.
- Insulated using high grade PVC.
- Colour Code:
  - ***2 Cores*** – *Black, White*
  - ***3 Cores*** – *Black, White, Green*
  - ***4 Cores*** – *Black, White, Red, Green*
- Then coated using tough PVC Sheathing.

Cable Marking

- Size
- No. of cores
- Type
- Voltage
- Manufacturers name
- Date

Table 1
SJT (UL 62)

Size (AWG)	Nominal Cross Sectional Area (mm^2)	Number of strands	Number of strands	Insulation Thickness (mm)	Approximate Overall Diameter (mm)
14	2	0.254 x 41	0.76	1.14	9.52
	3			1.14	10.03
	4			1.14	11.04
12	2	0.254 x 65	0.76	1.52	11.56
	3			1.52	12.06
	4			1.52	12.92
10	2	0.254 x 105	1.14	2.03	15.31
	3			2.03	16.13
	4			2.03	17.02
8	2	0.254 x 166	1.14	2.03	18.10
	3			2.03	19.23
	4			2.03	21.8

SPT (UL 62)

Definition

SPT cables are suitable for lamps, clocks, household fans and small appliances where not subjected to hard usage. The two conductor cords are for use as internal wiring of air conditioning and refrigeration equipment.

Voltage Rating

Rated at 300 Volts with an operating temperature of 105°C.

Construction

- Conductors – made up of soft annealed copper, flexible.
- Insulated using high grade PVC to withstand high operating temperatures.

Cable Marking

- Size
- No. of cores
- Type
- Voltage
- Manufacturers name
- Date

Table 1
SPT Cable

Size (AWG)	Cross Sectional Area of Conductor (mm^2)	Horizontal Thickness of insulation between conductors (mm)	Horizontal Insulation Thickness away from cores (mm)	Vertical Insulation Thickness away from conductor (mm)	Approximate Overall Diameter (mm)
14	2.08	2.79	2.03	1.83	10.52 x 5.51
12	3.31	2.79	2.41	2.18	12.27 x 6.69
10	5.26	2.79	2.79	2.51	14.27 x 7.97

THHN (UL 83)

Definition

Cables are manufactured to UL 83 and are used as general building (commercial and residential), feeders and branch circuits.

Voltage Rating

Rated at 600 Volts with an operating temperature of 90°C in dry and damp location. 75°C wet or in oil.

Construction

- Conductors – made up of soft annealed copper, solid or stranded.
- Insulated – with high grade flame retardant PVC.
- Jacket – nylon polyamide
- Conductor construction of 1, 7, 19, 37, or 61 strands, according to cable size

Cable Marking

- UL File Number
- c(UL)
- Size
- Type
- Gasoline and Oil Resistant II
- Manufacturers name

Table 1
THHN Cable

Size (AWG/MCM)	Number of strands	Insulation Thickness (mm)	Nylon Thickness (mm)	Approximate Overall Diameter (mm)
14	1	0.38	0.10	2.59
12	1	0.38	0.10	3.01
10	1	0.51	0.10	3.81
14	19	0.38	0.10	2.86
12	19	0.38	0.10	3.36
10	19	0.51	0.10	3.91
8	7	0.76	0.13	5.47
6	7	0.76	0.13	6.46
4	7	1.02	0.15	8.22
3	7	1.02	0.15	9.60
2	7	1.02	0.18	9.75
1	19	1.27	0.18	11.35
1/0	19	1.27	0.18	12.35
2/0	19	1.27	0.18	13.55
3/0	19	1.27	0.18	14.8
4/0	19	1.27	0.20	16.3
250	37	1.52	0.20	18.07
300	37	1.52	0.20	19.08
350	37	1.52	0.20	20.66
400	37	1.52	0.20	21.92
450	37	1.52	0.20	23.04
500	37	1.52	0.23	24.09
550	61	1.78	0.23	25.71
600	61	1.78	0.23	26.68
650	61	1.78	0.23	27.60
700	61	1.78	0.23	28.50
750	61	1.78	0.23	29.31
800	61	1.78	0.23	30.12
900	61	1.78	0.23	31.78
1000	61	1.78	0.23	33.28

TNM-B

Definition

Type TNM-B is an insulated multi conductor composed of solid or stranded soft annealed copper conductors. The Nylon sheath provides mechanical protection against chemical agents, petroleum derivatives and oils. TNM-B can be installed visible, over walls or inside openings in concrete or wood divisions, whenever the conductors will not be exposed to nails or screws.

Voltage Rating

Designed to operate not beyond 600V and up to an operating temperature of 90°C.

Construction

- Conductors are made up of soft annealed copper, solid or stranded
- Each single conductor has a thermoplastic insulation of PVC (Polyvinyl Chloride) and protected by a Nylon sheath.
- The entire multi conductor is protected by a thermoplastic flat insulation of PVC. TNM-B is manufactured in constructions of duplex (two single conductors) and triplex (three single conductors), also in gauges from 14 AWG up to 8 AWG. The internal individual conductors are THHN.

Cable Marking

- Manufacturers name
- Size
- Type
- Voltage
- Date

Table 1
TNM-B Cable

Size (AWG/MCM)	Nominal Cross Sectional Area (mm^2)	Number of strands	Insulation Thickness (mm)	Nylon Thickness (mm)	Sheathing Thickness (mm)	Approximate Overall Diameter (mm)
2 x 14	2.08	Solid	.38	0.1	.64	5.7 x 3.87
2 x 12	3.31	Solid	.38	0.1	.64	6.54 x 4.29
2 x 10	5.26	Solid	.51	0.1	.64	7.9 x 5.11
3 x 14	2.08	Solid	.38	0.1	.64	9.05 x 3.87
3 x 12	3.31	Solid	.38	0.1	.64	10.31 x 4.29
3 x 10	5.26	Solid	.51	0.1	.64	12.71 x 5.11
2 x 14	2.08	19	.38	0.1	.64	7 x 4.14
2 x 12	3.31	19	.38	0.1	.64	8 x 4.64
2 x 10	5.26	19	.51	0.1	.64	9.62 x 5.45
2 x 8	8.37	19	.76	0.13	.64	12.89 x 6.75
3 x 14	2.08	19	.38	0.1	.64	9.86 x 4.14
3 x 12	3.31	19	.38	0.1	.64	11.36 x 4.64
3 x 10	5.26	19	.51	0.1	.64	13.79 x 5.45
3 x 8	8.37	19	.76	0.13	.64	17.69 x 6.75

Welding Cable (UL 62)

Definition

- Soft copper flexible conductor with Elastomer Thermoplastic Insulation.
- Extra hard service Cable, flexible and resistant to heavy-duty, for electric welding equipments.
- Welding Cables are used for Secondary voltage resistance welding leads.
- Power supply applications not exceeding 600 volts AC.

Voltage Rating

Designed to operate not beyond 600V and an operating temperature of 105°C.

Construction

- Conductor are made of soft annealed flexible, stranded copper
- Paper separator, A 105° EPDM black jacket is extruded onto the cable

Cable Marking

- Size
- Voltage
- Type
- Operating temperature
- Manufacturer`s name

Table 1
Welding Cable

Size (AWG/MCM)	Nominal Cross Sectional Area (mm^2)	Number of strands	Insulation Thickness (mm)	Approximate Overall Diameter (mm)
6	4.665	266	2.00	8.28
4	5.883	420	2.00	10.88
2	7.416	665	2.00	12.74
1	8.425	836	2.20	14.31
1/0	9.465	1064	2.40	16.04
2/0	10.640	1323	2.40	17.40
3/0	11.930	1666	3.60	19.06
4/0	13.400	2107	2.80	21.73

XHHW / XHHW-2 UL 44

Definition

Type XHHW/XHHW-2 is a single insulated conductor of solid or stranded bare annealed copper. Then insulated by cross linked polyethylene using thermoset materials.

Voltage Rating

Designed to operate not beyond 600V and up to an operating temperature of 90°C.

Construction

- Conductors are made up of soft annealed copper, solid or stranded.
- Conductors are then insulated by cross linked polyethylene XLPE containing flame retardant and uv resistant compounds.

Cable Marking

- UL File Number
- (UL)
- Size
- Voltage
- Type
- Manufacturers name

Table 1
XHHW Cable

Size (AWG/MCM)	Nominal Cross Sectional Area (mm^2)	Number of strands	Insulation Thickness (mm)	Approximate Overall Diameter (mm)
14	2.08	19	.76	3.42
12	3.31	19	.76	3.92
10	5.26	19	.76	4.47
8	8.37	7	1.14	5.98
6	13.30	7	1.14	6.96
4	21.15	7	1.14	8.16
3	26.66	7	1.14	8.88
2	33.63	7	1.14	9.69
1	42.41	19	1.14	10.68
1/0	53.51	19	1.40	12.25
2/0	67.44	19	1.40	13.40
3/0	85.03	19	1.40	14.70
4/0	107.22	19	1.40	16.20
250	126.68	37	1.65	17.93
300	152.01	37	1.65	19.26
350	177.35	37	1.65	20.52
400	203.00	37	1.65	21.78
450	228.00	37	1.65	22.90
500	253.36	37	1.65	23.95
550	279.00	61	2.03	25.75
600	304.03	61	2.03	26.65
650	329.00	61	2.03	27.64
700	355.00	61	2.03	28.54
750	380.03	61	2.03	29.35
800	405.00	61	2.03	30.16
900	456.00	61	2.03	31.78
1000	506.71	61	2.03	33.31

DUTCH/KEMA-DEKRA SPECIFICATION CABLES

Single Core Cables (HO7V-R, HO7V-U, HO7V-K)

Definition

Single core cables are made up of a single conductor. They are mainly used in power and lighting circuits, both domestic and commercial applications. They are also used in the internal wiring of appliances.

Voltage Rating

450/750 Volts with a maximum operating temperature of 70°C

Construction

- Conductors are made up of soft annealed copper and can be stranded, solid or flexible.
- Covered in PVC (Polyvinyl Chloride) insulation.

Cable Marking

- Manufacturers Name
- Voltage Designation
- British Standard Number
- Cross Sectional Area
- Harmonized Code
- Mark of the approvals organization(s)

NOTE: *Not necessarily in the order stated above.*

Table 1
BS 6004 Single core Cable (Stranded - HO7VR / Solid - HO7V-U)

Cross Sectional Area	Class of Conductor	Radial Thickness of Insulation	Mean overall diameter	
			Lower Limit (mm)	Upper Limit (mm)
1.5mm	1	0.7mm	2.6	3.2
1.5mm	2	0.7mm	2.7	3.3
2.5mm	1	0.8mm	3.2	3.9
2.5mm	2	0.8mm	3.3	4.0
4.0mm	1	0.8mm	3.6	4.4
4.0mm	2	0.8mm	3.8	4.6
6.0mm	2	0.8mm	4.3	5.2
10mm	2	1.0mm	5.6	6.7
16mm	2	1.0mm	6.4	7.8
25mm	2	1.2mm	8.1	9.7
35mm	2	1.2mm	9.0	10.9
50mm	2	1.4mm	10.6	12.8
70mm	2	1.4mm	12.1	14.6
95mm	2	1.6mm	14.1	17.1
120mm	2	1.6mm	15.6	18.8
150mm	2	1.8mm	17.3	20.9
185mm	2	2.0mm	19.3	23.3
240mm	2	2.2mm	22.0	26.6
300mm	2	2.4mm	24.5	29.6
400mm	2	2.6mm	27.5	33.2
500mm	2	2.8mm	30.5	36.9
630mm	2	2.8mm	34.0	41.1

Conductor: Class 1(U) copper solid, or class 2(R) copper stranded as indicated above.

Table 2
BS 6004 Single core Cable (Flexible / HO7V-K)

Cross Sectional Area	Radial Thickness of Insulation	Mean overall diameter	
		Lower Limit (mm)	Upper Limit (mm)
1.5mm	0.7mm	2.8	3.4
2.5mm	0.8mm	3.4	4.1
4.0mm	0.8mm	3.9	4.8
6.0mm	0.8mm	4.4	5.3
10mm	1.0mm	5.7	6.8
16mm	1.0mm	6.7	8.1
25mm	1.2mm	8.4	10.2
35mm	1.2mm	9.7	11.7
50mm	1.4mm	11.5	13.9
70mm	1.4mm	13.2	16.0
95mm	1.6mm	15.1	18.1
120mm	1.6mm	16.7	20.2
150mm	1.8mm	18.6	22.5
185mm	2.0mm	20.6	24.9
240mm	2.2mm	23.5	28.4

Conductor: Class 5(K) Flexible

DUTCH/KEMA-DEKRA SPECIFICATION CABLES

VMvK/VMvK mb Cables *manufactured with Kema Keur Certification*

Definition

VMvK/VMvK mb cables are used in ground, outdoors, in water, in concrete, indoors and in cable ducts. For single branch joints (T-joints) in local networks the concentric conductor can be connected uncut. VMvK mb has superior flame retardant properties.

Voltage Rating

600/1000 Volts with a maximum operating temperature of 70°C.

Construction

- Conductors are made up of soft annealed copper and can be both solid and stranded.
- PVC Insulated cores are layed up together which are then coated by PVC filler.
- A grey PVC sheathing is then applied

Cable Marking

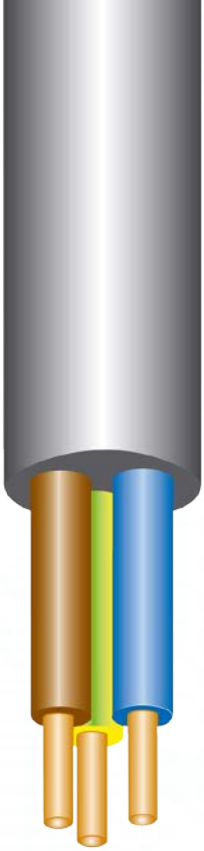
- Manufacturers Name
- Voltage Designation
- IEC or equivalent standard
- Cross Sectional Area and no. of cores
- Mark of the approvals organization(s)
- Date

NOTE: *Not necessarily in the order stated above.*

VMvK/VMvK mb Cables *manufactured with Kema Keur Certification*

Table 1
VMvK/VMvK mb Cable

Size and No. of Cores (mm^2)	Nominal Cross Sectional Area (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm) [upper limit]
Circular Conductors				
1 x 1.5	1	0.8	2.0	7.8
1 x 2.5	1	0.8	2.0	8.2
1 x 4.0	1	0.9	2.0	9.0
1 x 6.0	1	0.9	2.0	9.4
1 x 10.0	2	1.1	2.0	11.5
1 x 16	2	1.1	2.0	12.5
1 x 25	2	1.3	2.0	14.5
1 x 35	2	1.3	2.0	15.5
1 x 50	2	1.5	2.0	17.5
1 x 70	2	1.5	2.0	19.5
1 x 95	2	1.7	2.0	21.5
1 x 120	2	1.7	2.0	23.5
1 x 150	2	1.9	2.0	25.5
1 x 185	2	2.1	2.1	28
1 x 240	2	2.3	2.2	31.5
1 x 300	2	2.5	2.3	34.5
1 x 400	2	2.7	2.5	39.0
2 x 1.5	1	0.8	2.0	12.0
2 x 2.5	1	0.8	2.0	13.0
2 x 4.0	1	0.9	2.0	14.5
2 x 6.0	1	0.9	2.0	15.5
2 x 10.0	2	1.1	2.0	19.5
2 x 16	2	1.1	2.0	21.5
2 x 25	2	1.3	2.0	26.5
3 x 1.5	1	0.8	2.0	12.5
3 x 2.5	1	0.8	2.0	13.5
3 x 4.0	1	0.9	2.0	15.0
3 x 6.0	1	0.9	2.0	16.0
3 x 10.0	2	1.1	2.0	20.5
3 x 16	2	1.1	2.1	23.0
3 x 25	2	1.3	2.1	28.0



XMvK Cables *manufactured with Kema Keur (KEMA 42 C-07)*

Definition

XMvK is a light installation cable usually applied in housing, utilities and similar installations. XMvK is not suited for application in cable bundles.

Voltage Rating

450/750 Volts with a maximum operating temperature of 90°C.

Construction

- Conductors are made up of soft annealed copper and can be both solid and stranded.
- XLPE Insulated cores are layed up together which are then coated by PVC filler.
- A grey PVC sheathing is then applied

Cable Marking

- Manufacturers Name
- Voltage Designation
- IEC or equivalent standard
- Cross Sectional Area and no. of cores
- Mark of the approvals organization(s)
- Date

NOTE: *Not necessarily in the order stated above.*

Table 1
XMvK Solid

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm)
2 x 1.5	0.6	1.4	8.6
2 x 2.5	0.6	1.4	9.4
3 x 1.5	0.6	1.4	9.0
3 x 2.5	0.6	1.4	9.9
4 x 1.5	0.6	1.4	9.7
4 x 2.5	0.6	1.4	10.6
5 x 1.5	0.6	1.4	10.4
5 x 2.5	0.6	1.4	11.5

YMvK Cables *manufactured with Kema Keur*

Definition

YMvK cables can be manufactured using both stranded and solid conductors. They are used mainly in street lighting, industry and building installations.

Voltage Rating

600/1000 Volts with a maximum operating temperature of 90°C.

Construction

- Conductors are made up of soft annealed copper and can be both solid and stranded.
- XLPE Insulated cores are layed up together which are then coated by a PVC filler.
- A grey PVC sheathing is then applied

Cable Marking

- Manufacturers Name
- Voltage Designation
- IEC or equivalent standard
- Cross Sectional Area and no. of cores
- Mark of the approvals organization(s)
- Date

NOTE: *Not necessarily in the order stated above.*

Table 1
YMvK Solid

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm)
1 x 1.5mm	0.7	1.8	6.38
1 x 2.5mm	0.7	1.8	6.78
1 x 4.0mm	0.7	1.8	7.256
1 x 6.0mm	0.7	1.8	7.763
2 x 1.5mm	0.7	1.8	9.9
2 x 2.5mm	0.7	1.8	10.7
2 x 4.0mm	0.7	1.8	11.4
2 x 6.0mm	0.7	1.8	12.4
3 x 1.5mm	0.7	1.8	10.3
3 x 2.5mm	0.7	1.8	11.2
3 x 4.0mm	0.7	1.8	12.0
3 x 6.0mm	0.7	1.8	13.1
4 x 1.5mm	0.7	1.8	11.0
4 x 2.5mm	0.7	1.8	12.0
4 x 4.0mm	0.7	1.8	12.9
4 x 6.0mm	0.7	1.8	14.1
5 x 1.5mm	0.7	1.8	11.9
5 x 2.5mm	0.7	1.8	13.0
5 x 4.0mm	0.7	1.8	14.0
5 x 6.0mm	0.7	1.8	15.3

Table 1
YMvK Stranded Cables

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm)
1 x 10	0.7	1.8	8.9
1 x 16	0.7	1.8	9.8
1 x 25	0.9	1.8	11.4
1 x 35	0.9	1.8	12.5
1 x 50	1.0	1.8	13.9
1 x 70	1.1	1.8	15.8
1 x 95	1.1	1.8	17.5
1 x 120	1.2	1.8	19.1
1 x 150	1.4	1.8	21.0
1 x 185	1.6	1.8	23.2
1 x 240	1.7	1.8	25.7
1 x 300	1.8	1.8	28.2
1 x 400	2.0	1.9	31.5
2 x 10	0.7	1.8	14.6
2 x 16	0.7	1.8	16.8
2 x 25	0.7	1.8	20.0
3 x 10	0.7	1.8	15.4
3 x 16	0.7	1.8	17.8
3 x 25	0.9	1.8	21.6
3 x 35	0.9	1.8	23.6
4 x 16	0.7	1.8	19.5

Table 2
YMvK Shaped Stranded Cables

Size and No. of Cores (mm^2)	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm)
3 x 35	1.0	1.8	23.6
3 x 50	1.0	1.8	25.9
3 x 70	1.1	1.9	29.1
3 x 95	1.1	2.0	32.7
3 x 120	1.2	2.1	35.6
3 x 150	1.4	2.3	40.1
3 x 185	1.6	2.4	44.5
3 x 240	1.7	2.6	50.2
4 x 25	0.9	1.8	23.6
4 x 35	0.9	1.8	25.8
4 x 50	1.0	1.9	29.5
4 x 70	1.1	2.0	33.0
4 x 95	1.1	2.1	37.4
4 x 120	1.2	2.3	41.4
4 x 150	1.4	2.4	46.2
4 x 185	1.6	2.6	51.3
4 x 240	1.7	2.8	58.5

YMvK mb Cables *manufactured with Kema Keur*

Definition

YMvK mb cables can be manufactured using both stranded and solid conductors. They are used mainly in street lighting, industry and building installations with flame retardant properties in the insulation.

Voltage Rating

600/1000 Volts with a maximum operating temperature of 90°C.

Construction

- Conductors are made up of soft annealed copper and can be both solid and stranded.
- XLPE Insulated cores are layed up together which are then coated by PVC filler.
- A grey PVC sheathing is then applied

Cable Marking

- Manufacturers Name
- Voltage Designation
- IEC or equivalent standard
- Cross Sectional Area and no. of cores
- Mark of the approvals organization(s)
- Date

NOTE: *Not necessarily in the order stated above.*

Table 1
YMvK mb Cable (Shaped Conductors)

Size and No. of Cores (mm^2)	Class of Conductor	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm) [upper limit]
Shaped Conductors				
3 x 35	2	0.9	1.8	22
3 x 50	2	1.0	1.8	24
3 x 70	2	1.1	1.9	28
3 x 95	2	1.1	2.0	32
3 x 120	2	1.2	2.1	34
3 x 150	2	1.4	2.3	39
3 x 185	2	1.6	2.4	43
3 x 240	2	1.7	2.6	48
4 x 25	2	0.9	1.8	
4 x 35	2	0.9	1.8	25
4 x 50	2	1.0	1.9	27
4 x 70	2	1.1	2.0	32
4 x 95	2	1.1	2.1	36
4 x 120	2	1.2	2.3	39
4 x 150	2	1.4	2.4	44
4 x 185	2	1.6	2.6	49
4 x 240	2	1.7	2.8	55

Table 2
YMvK mb Cable (Circular Conductors)

Size and No. of Cores (mm^2)	Class of Conductor	Radial Thickness of Insulation (mm)	Radial Thickness of Sheathing (mm)	Approximate Overall Diameter (mm) [upper limit]
Circular Conductors				
1 x 1.5	1	0.7	1.4	7.0
1 x 2.5	1	0.7	1.4	7.3
1 x 4.0	1	0.7	1.4	7.8
1 x 6.0	1	0.7	1.4	8.8
1 x 10.0	2	0.7	1.4	10.0
1 x 16	2	0.7	1.4	11.5
1 x 25	2	0.9	1.4	13.0
1 x 35	2	0.9	1.4	14.5
1 x 50	2	1.0	1.4	16.0
1 x 70	2	1.1	1.4	18.0
1 x 95	2	1.1	1.5	20.5
1 x 120	2	1.2	1.5	22.0
1 x 150	2	1.4	1.6	24.0
1 x 185	2	1.6	1.6	26.5
1 x 240	2	.17	1.7	29.5
1 x 300	2	1.8	1.8	33.0
1 x 400	2	2.0	1.9	37.0
2 x 1.5	1	0.7	1.8	12.0
2 x 2.5	1	0.7	1.8	12.5
2 x 4.0	1	0.7	1.8	14.0
2 x 6.0	1	0.7	1.8	15.0
2 x 10.0	2	0.7	1.8	17.0
2 x 16	2	0.7	1.8	20.0
2 x 25	2	0.9	1.8	24.0
3 x 1.5	1	0.7	1.8	12.5
3 x 2.5	1	0.7	1.8	13.0
3 x 4.0	1	0.7	1.8	14.5
3 x 6.0	1	0.7	1.8	15.5
3 x 10.0	2	0.7	1.8	18.0
3 x 16	2	0.7	1.8	21.0
3 x 25	2	0.9	1.8	25.0

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