



LOW VOLTAGE POWER CABLES

IT IS NEITHER THE STRONG NOR THE MOST INTELLIGENT THAT SURVIVE.
IT IS THE MOST RESPONSIVE TO CHANGE - CHARLES DARWIN

CABLES OF OUR MANUFACTURE

LOW VOLTAGE POWER CABLES

PVC INSULATED SINGLE CORE CABLES WITH HARD DRAWN COPPER / ALUMINIUM CONDUCTOR
BS 6485, ECG E-9



LOW VOLTAGE AERIAL BUNDLED CONDUCTOR
BS 7870-5



LOW VOLTAGE PVC/XLPE INSULATED ARMoured AND UNARMoured POWER CABLES
IEC 60502-1, BS 7889



APPLICATION:

LOW VOLTAGE POWER DISTRIBUTION, CONSUMER SERVICE CONNECTIONS, UNDERGROUND
POWER DISTRIBUTION/CONNECTIONS, OUTDOOR INSTALLATIONS





PVC INSULATED SINGLE CORE CABLE WITH HARD DRAWN COPPER / ALUMINIUM CONDUCTOR

BS 6485

Conductor: hard drawn copper conductor class 2 BS 7884 / Aluminium BS 215
 Insulation: PVC TI1

Minimum insulation thickness: Type 8 (LV) 0.8mm
 Type 16(HV) 1.6mm



COPPER CONDUCTOR

| Nominal cross sect. area | Stranding and wire diameter | Approx. overall diameter of bare conductor | Max. d.c. resistance @20°C | Approx. breaking load | Approx. overall diameter of covered conductor | |
|--------------------------|-----------------------------|--|----------------------------|-----------------------|---|---------|
| mm ² | mm | mm | Ω/km | kN | Type 8 | Type 16 |
| 14 | 7/1.60 | 4.8 | 1.303 | 5.744 | 6.8 | 8.4 |
| 16 | 3/2.65 | 5.7 | 1.106 | 6.59 | 7.7 | 9.3 |
| 16 | 7/1.70 | 5.1 | 1.154 | 5.946 | 7.1 | 8.3 |
| 32 | 3/3.75 | 8.06 | 0.552 | 12.71 | 10.5 | 12.1 |
| 35 | 7/2.50 | 7.5 | 0.5387 | 12.86 | 9.9 | 11.5 |
| 70 | 7/3.55 | 10.65 | 0.2646 | 26.88 | 13.5 | 14.7 |
| 100 | 7/4.30 | 12.9 | 0.181 | 37.64 | 15.7 | 16.9 |



ALUMINIUM CONDUCTOR

| Nominal cross sect. area | Stranding and wire diameter | Approx. overall diameter of bare conductor | Max. d.c. resistance @20°C | Approx. breaking load | Approx. overall diameter of covered conductor |
|--------------------------|-----------------------------|--|----------------------------|-----------------------|---|
| mm ² | mm | mm | Ω/km | kN | Type 8 |
| 22 | 7/2.06 | 6.18 | 1.227 | 3.99 | 8.2 |
| 50 | 7/3.10 | 9.3 | 0.5419 | 8.28 | 11.7 |
| 100 | 7/4.39 | 13.17 | 0.2702 | 16.00 | 16 |
| 200 | 19/3.78 | 18.9 | 0.1349 | 32.4 | 21.7 |

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PVC INSULATED SINGLE CORE CABLE WITH HARD DRAWN COPPER / ALUMINIUM CONDUCTOR
 ECG E-9 SPECIFICATION (LV &HV)

COPPER CONDUCTOR



| | | | |
|--|----------------|----------------|----------------|
| Nominal Cross Section. Area, mm ² | 16 | 35 | 70 |
| No. and diameter of wire, mm | 7/1.70 | 7/2.5 | 7/3.55 |
| Overall Diameter, mm | 5.1 | 7.5 | 10.65 |
| Conductor weight, (kg/km) / std max | 142.4 144.0 | 308.0 314.9 | 621.0 634.7 |
| Single wire weight (kg/km) / std max | 49.03 50.04 | 43.64 44.52 | 87.99 89.74 |
| Conductor minimum breaking load after stranding, (N) | 5,946 | 14,097 | 26,880 |
| Max. Conductor DC resistance at 20°C, Ohm/km | 1.154 | 0.5319 | 0.2585 |
| Thickness of insulation (LV), mm | 1.00 | 1.00 | 1.00 |
| Thickness of insulation (HV), mm | 1.80 | 1.80 | 1.80 |



ALUMINIUM CONDUCTOR

| | | | | | | | |
|--|--------|--------|--------|--------|---------|---------|----------|
| Nominal Cross Section. Area, mm ² | 25 | | 50 | 120 | 150 | 265 | 400 |
| No. and diameter of wire, mm | 7/2.13 | 7/2.10 | 7/3.1 | 19/2.8 | 19/3.25 | 19/4.22 | 37/ 3.71 |
| Overall Diameter, mm | 6.4 | 6.30 | 9.3 | 14 | 16.3 | 21.10 | 26.0 |
| Conductor weight - kg / km | 68.4 | 66.8 | 145 | 322 | 434 | 731 | 1102 |
| Conductor minimum breaking load after stranding, (N) | 4,500 | 4,120 | 8,720 | 19,890 | 26,010 | 45,520 | 64,000 |
| Max. Conductor DC resistance at 20°C, Ohm/km | 1.1453 | 1,1807 | 0.5409 | 0.2456 | 0.1823 | 0.1081 | 0.0721 |
| Thickness of insulation (LV), mm | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Thickness of insulation (HV), mm | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 |

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LOW VOLTAGE AERIAL BUNDLED CONDUCTOR

BS 7870-5

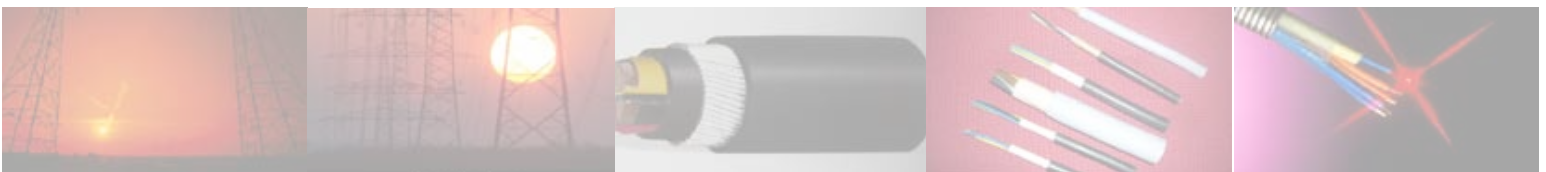
Conductor: All Aluminium circular stranded BS 6360
 Insulation: XLPE



REQUIREMENTS FOR TWO-, FOUR- AND FIVE-CORE BUNDLES (BS 7870-5)

| | Nominal cross-sectional area of conductors (mm ²) | | | | | |
|--|---|-------|-------|-------|-------|-------|
| | 25 | 35 | 50 | 70 | 95 | 120 |
| Nominal No. of wires in conductor | 7 | 7 | 19 | 19 | 19 | 19 |
| Diameter of conductor | | | | | | |
| minimum (mm) | 5.6 | 6.6 | 7.7 | 9.3 | 11.0 | 12.5 |
| maximun (mm) | 6.5 | 7.5 | 8.5 | 10.2 | 12.0 | 13.5 |
| Minimum average thickness of insulation (mm) | 1.3 | 1.3 | 1.5 | 1.5 | 1.7 | 1.7 |
| Minimum thickness of insulation at any point (mm) | 1.07 | 1.07 | 1.25 | 1.25 | 1.43 | 1.43 |
| Max thickness of insulation | | | | | | |
| phase core excluding ribs (mm) | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| neutral core including ribs (mm) | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Maximum diameter of core | | | | | | |
| phase core excluding ribs (mm) | 9.7 | 10.7 | 12.1 | 13.8 | 16.1 | 17.6 |
| neutral core including ribs (mm) | 10.2 | 11.2 | 12.6 | 14.3 | 16.6 | 18.1 |
| Neutral core identification | | | | | | |
| number of ribs (min) | 12 | 12 | 12 | 16 | 16 | 16 |
| Maximum D.C. resistance of conductor in bundle at 20°C (Ω/km) | 1.200 | 0.868 | 0.641 | 0.443 | 0.320 | 0.253 |
| Ultimate tensile strength of conductor based on 170N/mm ² (calculated) (kN) | 4.1 | 5.6 | 7.6 | 11.0 | 15.3 | 19.4 |
| | | | | | | |

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V
IEC 60502-1



Conductor : class 2 (annealed plain copper/ aluminium)
 Insulation: PVC
 Inner & outer sheath: PVC
 Identification of core: black /red
 Armouring: Aluminium wire armour

SINGLE-CORE CABLES WITH CIRCULAR STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Nominal Aluminium armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|--|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 50 | 1.4 | 1.0 | 1.7 | 1.8 | 25.7 |
| 70 | 1.4 | 1.0 | 1.7 | 1.8 | 27.5 |
| 95 | 1.6 | 1.0 | 1.7 | 1.8 | 29.8 |
| 120 | 1.6 | 1.0 | 1.7 | 1.8 | 31.4 |
| 150 | 1.8 | 1.0 | 1.7 | 1.9 | 33.6 |
| 185 | 2.0 | 1.0 | 1.7 | 1.9 | 35.8 |
| 240 | 2.2 | 1.2 | 2.0 | 2.1 | 40.2 |
| 300 | 2.4 | 1.2 | 2.0 | 2.2 | 43.3 |
| 400 | 2.6 | 1.2 | 2.0 | 2.3 | 47.0 |
| 500 | 2.8 | 1.2 | 2.5 | 2.4 | 51.6 |
| 630 | 2.8 | 1.4 | 2.5 | 2.6 | 56.4 |

a circular stranded conductor (class 2).

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V IEC 60502-1



| | |
|--------------------------|--|
| Conductor : | class 2 (annealed plain copper/ aluminium) |
| Insulation: | PVC |
| Inner & outer sheath: | PVC |
| Identification of cores: | brown, blue/red, black |
| Armouring: | Steel wire armour |

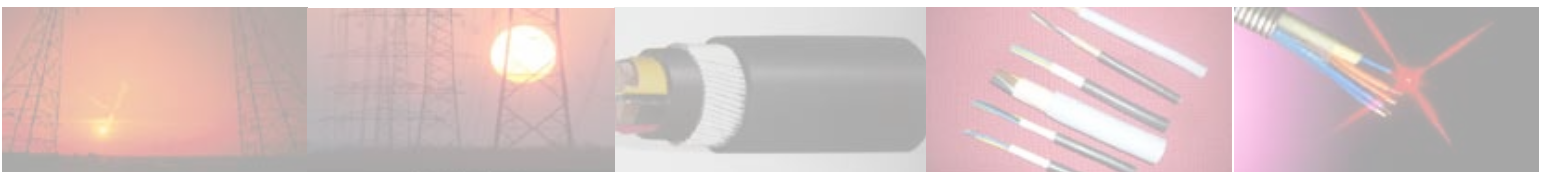
TWO-CORE CABLES WITH STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 1.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 18.7 |
| 2.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 19.6 |
| 4 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 22.2 |
| 6 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 23.2 |
| 10 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 25.2 |
| 16 ^a | 1.0 | 1.0 | 1.6 | 1.8 | 28.0 |
| 25 ^a | 1.2 | 1.0 | 1.6 | 1.8 | 31.4 |
| 35 ^a | 1.2 | 1.0 | 1.6 | 1.9 | 33.9 |
| 50 ^b | 1.4 | 1.0 | 1.6 | 2.0 | 37.6 |
| 70 ^b | 1.4 | 1.0 | 2.0 | 2.2 | 42.4 |
| 95 ^b | 1.6 | 1.2 | 2.0 | 2.3 | 47.6 |
| 120 ^b | 1.6 | 1.2 | 2.5 | 2.5 | 52.2 |

a circular stranded conductor (class 2)

b sector shaped stranded conductor (class 2)

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V
IEC 60502-2



| | |
|--------------------------|---|
| Conductor : | class 2 (annealed plain copper/aluminium) |
| Insulation: | PVC |
| Inner & outer sheath: | PVC |
| Identification of cores: | brown, black, grey/ red, yellow, blue |
| Armouring: | Steel wire armour |

THREE-CORE CABLES WITH STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 1.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 19.2 |
| 2.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 20.2 |
| 4 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 22.9 |
| 6 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 24.6 |
| 10 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 26.2 |
| 16 ^a | 1.0 | 1.0 | 1.6 | 1.8 | 29.1 |
| 25 ^a | 1.2 | 1.0 | 1.6 | 1.8 | 32.9 |
| 25 ^b | 1.2 | 1.0 | 1.6 | 1.8 | 29.2 |
| 35 ^a | 1.2 | 1.0 | 1.6 | 1.8 | 35.5 |
| 35 ^b | 1.2 | 1.0 | 1.6 | 1.9 | 31.2 |
| 50 ^b | 1.4 | 1.0 | 1.6 | 1.9 | 33.4 |
| 70 ^b | 1.4 | 1.0 | 2.0 | 2.0 | 38.2 |
| 95 ^b | 1.6 | 1.2 | 2.0 | 2.2 | 42.7 |
| 120 ^b | 1.6 | 1.2 | 2.0 | 2.2 | 45.2 |
| 150 ^b | 1.8 | 1.2 | 2.5 | 2.4 | 49.7 |
| 185 ^b | 2.0 | 1.4 | 2.5 | 2.5 | 54.1 |
| 240 ^b | 2.2 | 1.4 | 2.5 | 2.7 | 59.3 |

a circular stranded conductor (class 2)

b sector shaped stranded conductor (class 2)

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V IEC 60502-1

| | |
|--------------------------|---|
| Conductor : | class 2 (annealed plain copper/ aluminium) |
| Insulation: | PVC |
| Inner & outer sheath: | PVC |
| Identification of cores: | blue, brown, black, grey/red, yellow, blue, black |
| Armouring: | Steel wire armour |



FOUR-CORE CABLES WITH CIRCULAR STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 1.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 20.0 |
| 2.5 ^a | 0.8 | 1.0 | 0.9 | 1.8 | 21.1 |
| 4 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 24.1 |
| 6 ^a | 1.0 | 1.0 | 1.25 | 1.8 | 25.5 |
| 10 ^a | 1.0 | 1.0 | 1.6 | 1.8 | 28.4 |
| 16 ^a | 1.0 | 1.0 | 1.6 | 1.8 | 31.0 |
| 25 ^a | 1.2 | 1.0 | 1.6 | 1.9 | 35.3 |
| 25 ^b | 1.2 | 1.0 | 1.6 | 1.8 | 32.1 |
| 35 ^a | 1.2 | 1.0 | 1.6 | 2.1 | 39.3 |
| 35 ^b | 1.2 | 1.0 | 1.6 | 1.9 | 34.6 |
| 50 ^b | 1.4 | 1.0 | 1.6 | 2.0 | 37.9 |
| 70 ^b | 1.4 | 1.2 | 2.00 | 2.2 | 43.9 |
| 95 ^b | 1.6 | 1.2 | 2.00 | 2.3 | 47.9 |
| 120 ^b | 1.6 | 1.2 | 2.5 | 2.5 | 52.3 |
| 150 ^b | 1.8 | 1.4 | 2.5 | 2.6 | 56.7 |
| 185 ^b | 2.0 | 1.4 | 2.5 | 2.8 | 61.6 |
| 240 ^b | 2.2 | 1.6 | 2.5 | 3.0 | 68.2 |

a circular stranded conductor (class 2)

b sector shaped stranded conductor (class 2)

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V
IEC 60502-1



Conductor : class 2 (annealed plain copper/aluminium)
 Insulation: PVC
 Inner & outer sheath: PVC
 Identification of core: green-yellow, blue, brown, black, grey /red, yellow, blue, black, green-yellow
 Armouring: Steel wire armour

FIVE-CORE CABLES WITH STRANDED COPPER/ ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 1.5 | 0.8 | 1.0 | 0.9 | 1.8 | 21.6 |
| 2.5 | 0.8 | 1.0 | 1.25 | 1.8 | 23.0 |
| 4 | 1.0 | 1.0 | 1.25 | 1.8 | 25.4 |
| 6 | 1.0 | 1.0 | 1.6 | 1.8 | 27.6 |
| 10 | 1.0 | 1.0 | 1.6 | 1.8 | 30.1 |
| 16 | 1.0 | 1.0 | 1.6 | 1.9 | 33.2 |
| 25 | 1.2 | 1.0 | 1.6 | 2.0 | 36.9 |
| 35 | 1.2 | 1.2 | 2.0 | 2.2 | 42.7 |
| 50 | 1.4 | 1.2 | 2.0 | 2.3 | 47.6 |

a circular stranded conductor (class 2)

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PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V IEC 60502-1



| | |
|--------------------------|--|
| Conductor : | class 2 (annealed plain copper) |
| Insulation: | PVC |
| Inner & outer sheath: | PVC |
| Identification of cores: | number printing on white/black insulation, one is green-yellow |
| Armouring: | Steel wire armour |

ARMoured AUXILIARY CABLES

| Number of cores and nominal cross-sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Nominal steel wire armour diameter | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| No × mm ² | mm | mm | mm | mm | mm |
| 7×1.5 | 0.8 | 1.0 | 1.25 | 1.8 | 22.6 |
| 8×1.5 | 0.8 | 1.0 | 1.25 | 1.8 | 24.0 |
| 9×1.5 | 0.8 | 1.0 | 1.25 | 1.8 | 25.1 |
| 11×1.5 | 0.8 | 1.0 | 1.25 | 1.8 | 25.7 |
| 12×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 26.9 |
| 13×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 27.7 |
| 14×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 27.7 |
| 16×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 28.7 |
| 18×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 29.6 |
| 19×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 29.6 |
| 21×1.5 | 0.8 | 1.0 | 1.6 | 1.8 | 30.7 |
| 24×1.5 | 0.8 | 1.0 | 1.6 | 1.9 | 33.0 |
| 27×1.5 | 0.8 | 1.0 | 1.6 | 1.9 | 33.4 |
| 30×1.5 | 0.8 | 1.0 | 1.6 | 1.9 | 34.3 |
| 31×1.5 | 0.8 | 1.0 | 1.6 | 1.9 | 35.2 |
| 37×1.5 | 0.8 | 1.0 | 1.6 | 2.0 | 36.3 |
| 41×1.5 | 0.8 | 1.0 | 2.0 | 2.1 | 39.5 |





PVC INSULATED ARMoured CABLES FOR VOLTAGES OF 600/1000V
IEC 60502-1 (CONT'D)

| Number of cores and nominal cross-sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Nominal steel wire armour diameter | Thickness of outer sheath | Approximate overall diameter |
|---|--------------------------------|----------------------------------|---|----------------------------------|-------------------------------------|
| No × mm ² | mm | mm | mm | mm | mm |
| 48×1.5 | 0.8 | 1.2 | 2.0 | 2.1 | 41.4 |
| 7×2.5 | 0.8 | 1.0 | 1.25 | 1.8 | 23.9 |
| 10×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 28.2 |
| 12×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 28.8 |
| 13×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 29.3 |
| 14×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 29.7 |
| 16×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 30.8 |
| 19×2.5 | 0.8 | 1.0 | 1.6 | 1.8 | 31.9 |
| 24×2.5 | 0.8 | 1.0 | 1.6 | 1.9 | 35.7 |
| 27×2.5 | 0.8 | 1.0 | 1.6 | 2.0 | 36.4 |
| 38×2.5 | 0.8 | 1.2 | 2.0 | 2.1 | 42.1 |
| 48×2.5 | 0.8 | 1.2 | 2.0 | 2.3 | 45.4 |
| 54×2.5 | 0.8 | 1.2 | 2.0 | 2.3 | 46.4 |
| 60×2.5 | 0.8 | 1.2 | 2.0 | 2.4 | 48.7 |
| 6×4.0 | 1.0 | 1.0 | 1.6 | 1.8 | 27.5 |
| 7×4.0 | 1.0 | 1.0 | 1.6 | 1.8 | 27.5 |
| 12×4.0 | 1.0 | 1.0 | 1.6 | 1.8 | 32.7 |
| 6×6.0 | 1.0 | 1.0 | 1.6 | 1.8 | 29.2 |

^a circular stranded conductor (class 2)



PVC INSULATED MULTICORE UNARMoured CABLES FOR VOLTAGES OF 600/1000V
 IEC 60502-1


Conductor : class 2 (annealed plain copper/aluminium)
 Insulation: PVC
 Inner & outer sheath: PVC
 Identification of cores: two core - brown, blue / three-core - brown, black, grey
 four-core - blue, brown, black, grey / five core - green-yellow, blue, brown, black, grey

| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm |
| TWO-CORE CABLES | | | | |
| 1.5 ^a | 0.8 | 1.0 | 1.8 | 16.9 |
| 2.5 ^a | 0.8 | 1.0 | 1.8 | 17.8 |
| 4 ^a | 1.0 | 1.0 | 1.8 | 19.7 |
| 6 ^a | 1.0 | 1.0 | 1.8 | 20.8 |
| 10 ^a | 1.0 | 1.0 | 1.8 | 22.7 |
| 16 ^a | 1.0 | 1.0 | 1.8 | 24.8 |
| 25 ^b | 1.2 | 1.0 | 1.8 | 28.2 |
| 35 ^b | 1.2 | 1.0 | 1.8 | 30.5 |
| 50 ^b | 1.4 | 1.0 | 1.9 | 34.2 |
| 70 ^b | 1.4 | 1.2 | 2.0 | 38.4 |
| 95 ^b | 1.6 | 1.2 | 2.2 | 43.4 |
| THREE-CORE CABLES | | | | |
| 1.5 ^a | 0.8 | 1.0 | 1.8 | 17.4 |
| 2.5 ^a | 0.8 | 1.0 | 1.8 | 18.4 |
| 4 ^a | 1.0 | 1.0 | 1.8 | 20.4 |
| 6 ^a | 1.0 | 1.0 | 1.8 | 21.6 |
| 10 ^a | 1.0 | 1.0 | 1.8 | 23.6 |
| 16 ^a | 1.0 | 1.0 | 1.8 | 25.9 |
| 25 ^b | 1.2 | 1.0 | 1.8 | 26.0 |
| 35 ^b | 1.2 | 1.0 | 1.8 | 28.0 |
| 50 ^b | 1.4 | 1.0 | 1.9 | 30.2 |
| 70 ^b | 1.4 | 1.2 | 2.0 | 34.6 |
| 95 ^b | 1.6 | 1.2 | 2.1 | 38.5 |
| 120 ^b | 1.6 | 1.2 | 2.1 | 41.0 |
| 150 ^b | 1.8 | 1.2 | 2.2 | 44.3 |
| 185 ^b | 2.0 | 1.4 | 2.4 | 48.9 |
| 240 ^b | 2.2 | 1.4 | 2.5 | 53.9 |



PVC INSULATED MULTICORE UNARMoured CABLES FOR VOLTAGES OF 600/1000V
IEC 60502-1 (CON'TD)



| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm |
| FOUR-CORE CABLES | | | | |
| 1.5 ^a | 0.8 | 1.0 | 1.8 | 18.2 |
| 2.5 ^a | 0.8 | 1.0 | 1.8 | 19.3 |
| 4 ^a | 1.0 | 1.0 | 1.8 | 21.6 |
| 6 ^a | 1.0 | 1.0 | 1.8 | 23.0 |
| 10 ^a | 1.0 | 1.0 | 1.8 | 25.2 |
| 16 ^a | 1.0 | 1.0 | 1.8 | 28.0 |
| 25 ^b | 1.2 | 1.0 | 1.8 | 28.9 |
| 35 ^b | 1.2 | 1.0 | 1.8 | 31.2 |
| 50 ^b | 1.4 | 1.2 | 1.9 | 34.9 |
| 70 ^b | 1.4 | 1.2 | 2.1 | 39.1 |
| 95 ^b | 1.6 | 1.2 | 2.2 | 43.7 |
| 120 ^b | 1.6 | 1.2 | 1.9 | 46.9 |
| 150 ^b | 1.8 | 1.4 | 2.0 | 51.5 |
| 185 ^b | 2.0 | 1.4 | 2.1 | 56.2 |
| 240 ^b | 2.2 | 1.6 | 2.3 | 62.8 |
| FIVE-CORE CABLES | | | | |
| 1.5 ^a | 0.8 | 1.0 | 1.8 | 19.1 |
| 2.5 ^a | 0.8 | 1.0 | 1.8 | 20.4 |
| 4 ^a | 1.0 | 1.0 | 1.8 | 22.9 |
| 6 ^a | 1.0 | 1.0 | 1.8 | 23.0 |
| 10 ^a | 1.0 | 1.0 | 1.8 | 26.9 |
| 16 ^a | 1.0 | 1.0 | 1.8 | 29.8 |
| 25 ^a | 1.2 | 1.0 | 1.9 | 34.6 |
| 35 ^a | 1.2 | 1.0 | 1.9 | 37.7 |
| 50 ^a | 1.4 | 1.2 | 2.1 | 44.1 |

a circular stranded conductor (class 2)
b sector shaped stranded conductor (class 2)



CONTROL CABLES FOR VOLTAGES OF 600/1000V

IEC 60502-1



Conductor : class 1&2 (annealed plain copper)
 Insulation: PVC
 Inner & outer sheath: PVC
 Identification of cores: five core - green-yellow, blue, brown, black, grey
 above 5-core - number printing on white/black insulation, one is green-yellow

| Number of cores and nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm |
| 7 x 1.5 | 0.8 | 1.0 | 1.8 | 20.1 |
| 8 x 1.5 | 0.8 | 1.0 | 1.8 | 21.2 |
| 9 x 1.5 | 0.8 | 1.0 | 1.8 | 22.2 |
| 11 x 1.5 | 0.8 | 1.0 | 1.8 | 23.7 |
| 12 x 1.5 | 0.8 | 1.0 | 1.8 | 23.7 |
| 13 x 1.5 | 0.8 | 1.0 | 1.8 | 24.2 |
| 16 x 1.5 | 0.8 | 1.0 | 1.8 | 25.5 |
| 18 x 1.5 | 0.8 | 1.0 | 1.8 | 26.4 |
| 19 x 1.5 | 0.8 | 1.0 | 1.8 | 26.4 |
| 21 x 1.5 | 0.8 | 1.0 | 1.8 | 27.5 |
| 31 x 1.5 | 0.8 | 1.0 | 1.8 | 31.5 |
| 41 x 1.5 | 0.8 | 1.0 | 1.9 | 35.1 |
| 48 x 1.5 | 0.8 | 1.2 | 2.0 | 37.2 |
| 7 x 2.5 | 0.8 | 1.0 | 1.8 | 21.4 |
| 12 x 2.5 | 0.8 | 1.0 | 1.8 | 25.6 |
| 13 x 2.5 | 0.8 | 1.0 | 1.8 | 26.1 |
| 19 x 2.5 | 0.8 | 1.0 | 1.8 | 28.7 |
| 61 x 2.5 | 0.8 | 1.2 | 2.2 | 44.3 |
| 6 x 4 | 1.0 | 1.0 | 1.8 | 24.3 |
| 7 x 4 | 1.0 | 1.0 | 1.8 | 24.3 |
| 12 x 4 | 1.0 | 1.0 | 1.8 | 29.5 |
| 14 x 4 | 1.0 | 1.0 | 1.8 | 30.7 |
| 16 x 4 | 1.0 | 1.0 | 1.8 | 32.0 |
| 19 x 4 | 1.0 | 1.0 | 1.9 | 33.6 |
| 24 x 4 | 1.0 | 1.2 | 2.0 | 38.7 |
| 30 x 4 | 1.0 | 1.2 | 2.1 | 40.8 |
| 37 x 4 | 1.0 | 1.0 | 2.2 | 43.7 |
| 6 x 6 | 1.0 | 1.0 | 1.8 | 26.0 |

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ARMoured ELECTRIC Cables WITH THERMOSETTING INSULATION (XLPE) 600/1000V IEC 60502-1



Conductor : class 2 (annealed plain copper/aluminium)
 Insulation: XLPE
 Inner and outer sheath: PVC
 Identification of core: black/red
 Armouring: Aluminium wire amour

SINGLE-CORE Cables WITH CIRCULAR STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of inner sheath | Nominal Aluminium armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|--|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 50 | 1.0 | 1.0 | 1.7 | 1.8 | 24.9 |
| 70 | 1.1 | 1.0 | 1.7 | 1.8 | 26.9 |
| 95 | 1.1 | 1.0 | 1.7 | 1.8 | 28.8 |
| 120 | 1.2 | 1.0 | 1.7 | 1.8 | 30.6 |
| 150 | 1.4 | 1.0 | 1.7 | 1.8 | 32.6 |
| 185 | 1.6 | 1.0 | 1.7 | 1.9 | 35.0 |
| 240 | 1.7 | 1.0 | 2.0 | 2.0 | 38.6 |
| 300 | 1.8 | 1.2 | 2.0 | 2.1 | 41.9 |
| 400 | 2.0 | 1.2 | 2.5 | 2.3 | 46.7 |
| 500 | 2.2 | 1.2 | 2.5 | 2.4 | 50.4 |
| 630 | 2.4 | 1.4 | 2.5 | 2.6 | 55.6 |

a circular stranded conductor (class 2).

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ARMoured ELECTRIC CABLES WITH THERMOSETTING INSULATION (XLPE) 600/1000V IEC 60502-1

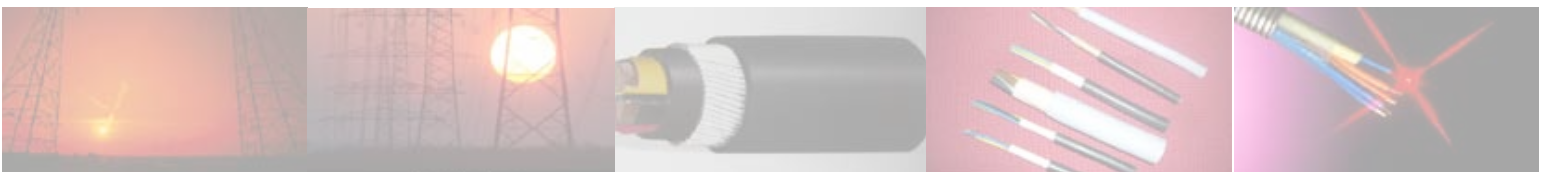


| | |
|--------------------------|---|
| Conductor : | class 2 (annealed plain copper/aluminium) |
| Insulation: | XLPE |
| Inner and outer sheath: | PVC |
| Identification of cores: | brown, blue/ red, black |
| Armouring: | Steel wire armour |

TWO-CORE CABLES WITH STRANDED COPPER /ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 4 | 0.7 | 1.0 | 0.9 | 1.8 | 20.3 |
| 6 | 0.7 | 1.0 | 1.25 | 1.8 | 22.1 |
| 10 | 0.7 | 1.0 | 1.25 | 1.8 | 24.0 |
| 16 | 0.7 | 1.0 | 1.6 | 1.8 | 26.8 |
| 25 | 0.9 | 1.0 | 1.6 | 1.8 | 30.2 |
| 35 | 0.9 | 1.0 | 1.6 | 1.8 | 32.5 |
| 50 | 1.0 | 1.0 | 1.6 | 2.0 | 36.0 |
| 70 | 1.1 | 1.2 | 2.0 | 2.2 | 41.6 |
| 95 | 1.1 | 1.2 | 2.0 | 2.2 | 45.4 |

Up to 240mm²



ARMoured ELECTRIC CABLES WITH THERMOSETTING INSULATION (XLPE) 600/1000V
IEC 60502-1



Conductor : class 2 (annealed plain copper, aluminium) BS 6360
 Insulation: XLPE
 Inner and outer sheath: PVC
 Identification of cores: brown, black, grey/ red, yellow, blue
 Armouring: Steel wire armour

THREE-CORE CABLES WITH STRANDED COPPER/ ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 4 ^a | 0.7 | 1.0 | 1.25 | 1.8 | 21.6 |
| 6 ^a | 0.7 | 1.0 | 1.25 | 1.8 | 22.9 |
| 10 ^a | 0.7 | 1.0 | 1.25 | 1.8 | 24.9 |
| 16 ^a | 0.7 | 1.0 | 1.6 | 1.8 | 27.8 |
| 25 ^b | 0.9 | 1.0 | 1.6 | 1.8 | 27.9 |
| 35 ^b | 0.9 | 1.0 | 1.6 | 1.8 | 29.9 |
| 50 ^b | 1.0 | 1.0 | 1.6 | 1.8 | 31.5 |
| 70 ^b | 1.1 | 1.0 | 1.6 | 2.0 | 36.1 |
| 95 ^b | 1.1 | 1.0 | 2.0 | 2.1 | 40.0 |
| 120 ^b | 1.2 | 1.2 | 2.0 | 2.2 | 43.5 |
| 150 | 1.4 | 1.2 | 2.5 | 2.3 | 47.8 |
| 185 | 1.6 | 1.4 | 2.5 | 2.5 | 52.4 |
| 240 | 1.7 | 1.4 | 2.5 | 2.6 | 57.0 |

a circular stranded conductor (class 2)
 b sector shaped stranded conductor (class 2)

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ARMoured ELECTRIC CABLES WITH THERMOSETTING INSULATION (XLPE) 600/1000V IEC 60502-1



| | |
|--------------------------|--|
| Conductor : | class 2 (annealed plain copper/aluminium) |
| Insulation: | XLPE |
| Inner, outer sheath: | PVC |
| Identification of cores: | blue, brown, black, grey/ red, yellow, blue, black |
| Armouring: | Steel wire armour |

FOUR-CORE CABLES WITH STRANDED COPPER/ ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor | Thickness of insulation | Thickness of inner sheath | Nominal steel armour wire diameter | Thickness of outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm | mm | mm |
| 4 ^a | 0.7 | 1.0 | 1.25 | 1.8 | 22.7 |
| 6 ^a | 0.7 | 1.0 | 1.25 | 1.8 | 24.0 |
| 10 ^a | 0.7 | 1.0 | 1.6 | 1.8 | 27.0 |
| 16 ^a | 0.7 | 1.0 | 1.6 | 1.8 | 29.5 |
| 25 ^b | 0.9 | 1.0 | 1.6 | 1.8 | 30.7 |
| 35 ^b | 0.9 | 1.0 | 1.6 | 1.9 | 33.2 |
| 50 ^b | 1.0 | 1.0 | 1.6 | 1.9 | 35.9 |
| 70 ^b | 1.1 | 1.2 | 2.0 | 2.1 | 41.7 |
| 95 ^b | 1.1 | 1.2 | 2.0 | 2.3 | 45.6 |
| 120 | 1.2 | 1.2 | 2.5 | 2.4 | 50.3 |
| 150 | 1.4 | 1.4 | 2.5 | 2.6 | 54.8 |
| 185 | 1.6 | 1.4 | 2.5 | 2.7 | 59.5 |
| 240 | 1.7 | 1.6 | 2.5 | 2.9 | 65.7 |

a circular stranded conductor (class 2)

b sector shaped stranded conductor (class 2)

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**THERMOSETTING INSULATED (XLPE), UNARMoured CABLES FOR A VOLTAGE OF 600/1000V
BS 7889**



Conductor : class2 (annealed plain copper / Aluminium)
 Insulation: XLPE
 Outer sheath: PVC
 Identification of cores: Red

SINGLE CORE CABLES WITH CIRCULAR STRANDED COPPER/ALUMINIUM CONDUCTOR

| Nominal cross sectional area of conductor ^a | Thickness of insulation | Thickness of outer sheath | Approximate overall diameter |
|--|-------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm |
| 50 | 1.0 | 1.4 | 14.2 |
| 70 | 1.1 | 1.4 | 16.2 |
| 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 | 2.2 | 1.9 | 34.2 |
| 500 | 2.2 | 2.0 | 38.0 |
| 630 | 2.4 | 2.2 | 42.9 |

a circular stranded conductor (class 2).

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SINGLE-CORE PVC INSULATED UNARMoured CABLE 600/1000V IEC 60502-1

Conductor: class 2 annealed plain copper/aluminium
Outer sheath: PVC

Insulation: PVC
Identification of cores: Red/ Customer requirement

| Nominal cross sectional area of conductor | Thickness of Insulation | Thickness of Outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm |
| 10 | 1.0 | 1.4 | 12.0 |
| 16 | 1.0 | 1.4 | 13.0 |
| 25 | 1.2 | 1.4 | 14.6 |
| 50 | 1.4 | 1.4 | 17.5 |
| 70 | 1.4 | 1.4 | 19.3 |
| 95 | 1.6 | 1.4 | 21.6 |
| 120 | 1.6 | 1.4 | 23.2 |
| 150 | 1.8 | 1.4 | 25.2 |
| 185 | 2.0 | 1.4 | 27.4 |
| 240 | 2.2 | 1.4 | 30.5 |
| 300 | 2.4 | 1.4 | 33.3 |
| 400 | 2.6 | 1.4 | 36.7 |
| 500 | 2.8 | 1.4 | 40.2 |
| 630 | 2.8 | 1.4 | 44.2 |

SINGLE-CORE XLPE INSULATED UNARMoured CABLE 600/1000V IEC 60502-1

Conductor: class 2 annealed plain copper/aluminium
Outer sheath: PVC

Insulation: XLPE
Identification of cores: Red/ Customer requirement

| Nominal cross sectional area of conductor | Thickness of Insulation | Thickness of Outer sheath | Approximate overall diameter |
|---|-------------------------|---------------------------|------------------------------|
| mm ² | mm | mm | mm |
| 50 | 1.0 | 1.4 | 16.7 |
| 70 | 1.1 | 1.4 | 18.7 |
| 95 | 1.1 | 1.4 | 20.6 |
| 120 | 1.2 | 1.4 | 22.4 |
| 150 | 1.4 | 1.4 | 24.4 |
| 185 | 1.6 | 1.4 | 26.6 |
| 240 | 1.7 | 1.4 | 29.5 |
| 300 | 1.8 | 1.4 | 32.1 |
| 400 | 2.0 | 1.4 | 35.5 |
| 500 | 2.2 | 1.4 | 39.0 |
| 630 | 2.4 | 1.4 | 43.4 |

