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Iec 60502-2 cable specification

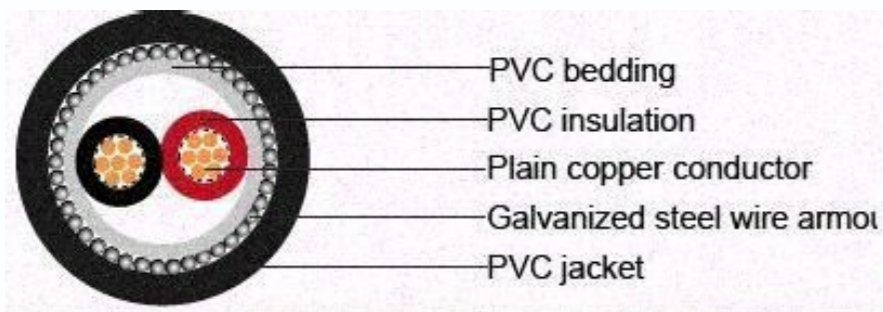
International Standard IEC 60502 from the International Electrotechnical Commission sets out the specification for power cables with extruded insulation with a voltage rating of 1kV to 30kV. This standard also covers their accessories. The cables must have an extruded solid insulation and may contain longitudinal water-blocking properties such as swellable tapes and powders if the installation conditions demand it. Many of the cables manufactured in accordance with IEC 60502 are designed for local power distribution, and for power and auxiliary controls. Where additional mechanical protection is provided, the cables are suitable for installation in masonry and concrete. The water-blocking properties are important to prevent water ingress when used in wet conditions. Note: a redline version of this publication exists IEC 60502-2:2014 RLV Preview Abstract IEC 60502-2:2014 is available as IEC 60502-2:2014 RLV which contains the International Standard and its Redline version, showing all changes of the technical content compared to the previous edition.



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1.8/3(3.6) kV CV **VENIN**

1 CORE CROSSLINKED POLYETHYLENE POWER CABLE 8 10 12 15 18 20 25 30 35 40

CONSTRUCTION

- 1. Conductor: Copper conductor with optional conductor screen
- 2. Insulation: Crosslinked polyethylene (XLPE)
- 3. Bedding: Polyvinyl chloride (PVC)
- 4. Armoured: Galvanized steel wire armour (SWA)
- 5. Sheath: Polyvinyl chloride (PVC)
- 6. Optional: Water blocking compound (WBC)

CLASSIFICATION

APPLICATION

REFERENCE STANDARDS

U _m (kV)	U ₀ /U _m	U _i (kV)	U _{0i} /U _i	U ₀ (kV)	U _{0i} (kV)	U ₀ /U _{0i}	U ₀ (kV)	U _{0i} (kV)	U ₀ /U _{0i}
1.8	0.9	2.7	1.35	1.8	1.8	1.0	1.8	1.8	1.0
3	1.5	4.5	2.25	3	3	1.0	3	3	1.0
6	3	9	4.5	6	6	1.0	6	6	1.0
10	5	15	7.5	10	10	1.0	10	10	1.0
15	7.5	22.5	11.25	15	15	1.0	15	15	1.0
20	10	30	15	20	20	1.0	20	20	1.0
25	12.5	37.5	18.75	25	25	1.0	25	25	1.0
30	15	45	22.5	30	30	1.0	30	30	1.0
35	17.5	52.5	26.25	35	35	1.0	35	35	1.0
40	20	60	30	40	40	1.0	40	40	1.0
45	22.5	67.5	33.75	45	45	1.0	45	45	1.0
50	25	75	37.5	50	50	1.0	50	50	1.0
55	27.5	82.5	41.25	55	55	1.0	55	55	1.0
60	30	90	45	60	60	1.0	60	60	1.0

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Types of conductors include Class 1 (solid) or Class 2 (stranded) of plain or metal-coated annealed copper, plain aluminium or aluminium alloy in accordance with IEC 60228. Class 2 stranded conductors can be water blocked if required. Insulation types covered include PVC (3.6 kV/6 kV only), EPR, HEPR and XLPE. Conductor and insulation screens are included. Thermoplastic sheathing compounds covered include PVC, Polyethylene and Halogen free, Elastomeric (cross-linked) sheath compounds covered include Polychloroprene, chlorosulfonated polyethylene or similar polymers. Single and multicore cables are included as well as cables with concentric conductors, metal sheaths, armoured or unarmoured. See the BSI or IEC web Page for the list of all parts of IEC 60502 - Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) - Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV) - Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV) Preview Abstract Specifies the construction, dimensions and test requirements of power cables with extruded solid insulation from 6 kV up to 30 kV for fixed installations such as distribution networks or industrial installations. Energy Cables / Medium Voltage Cables - MV / MV Energy Cables IEC Special Cables / Oil & Gas Cables / Petrochemical Cables Special Cables / Renewable Energy Cables Special Cables / Submarine Cables Tratos AGL (Airfield Ground Lighting) cables are designed and manufactured to comply with International Standards and Recommended Best Practices.

Conductor	Number of Strands	Strand Diameter	Strand Pitch	Strand Spacing	Strand Spacing	Strand Spacing	Strand Spacing	Strand Spacing	Strand Spacing	Strand Spacing
3x1mm	3	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x1.5mm	3	1.5	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x2.5mm	3	2.5	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x4mm	3	4.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x6mm	3	6.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x10mm	3	10.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x16mm	3	16.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x25mm	3	25.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x35mm	3	35.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x50mm	3	50.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x70mm	3	70.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x95mm	3	95.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x120mm	3	120.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x150mm	3	150.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x185mm	3	185.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x240mm	3	240.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3x300mm	3	300.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0

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