

Control cables for vertical application

Cable type

PANZERLITE 0,6/1 kV
Polyurethane double sheathed cables

Main application

Extra heavy duty control cables. For application with high mechanical stresses (i.e.: tensile and torsion simultaneously applied). This cable has been developed and designed in order to meet special conditions of application, in particular where small dimensions and light weight are mandatory.

Among its main features we can define:

- . small dimension
- . lighter weight
- . excellent flexibility
- . high operating speed (up to 240m/1')
- . excellent mechanical performances

Construction

| | |
|---------------------------------|---|
| Conductor: | Plain copper conductor, extra flexible better than cl. 6 IEC 60228 Specially designed for mobile application |
| Insulation: | Thin thickness made of special tecnopolymer Special compound with improved electrical and mechanical characteristics |
| Cores identification: | White with printed numbers |
| Central strainer: | Made of aramidic yarns To be used as support element |
| Laying-up: | Short lay length for better flexibility In maximum 3 layers |
| Separation (if any): | Tape(s) |
| Inner sheath: | Made of special polyurethane A combination of high flexibility characteristics with improved abrasion and tear resistance characteristics |
| Antitwisting protection: | Textile braid of synthetic yarns Firmly bonded between inner and outer sheath |
| Outer sheath: | Made of Yellow special polyurethane A combination of high flexibility characteristics with improved abrasion and tear resistance characteristics |
| Marking: | PALAZZO - PANZERLITE 0,6/1 kV n. of cores x cross section |

Parameters

| | | |
|-------------------|--|---|
| Electrical | Rated voltage | U ₀ /U = 0,6/1 kV |
| | Maximum permissible operating voltage in AC systems | U _m = 1,2 kV |
| | AC test voltage over 5 minutes | 2,5 kV |
| | Current Carrying Capacity | According to DIN VDE 0298 part 4 |
| Thermal | Fully flexible operation | - 30 °C |
| | Fixed installation | - 40 °C |
| | Maximum permissible operating temperature of the conductor | 90 °C |
| | Short-circuit temperature of the conductor | 200 °C |
| Mechanical | Tensile load | from 2000 N to 4000 N |
| | Minimum bending radii | According to DIN VDE 0298 part 3 |
| | Reeling operation | No restriction. Consult the manufacturer if speed exceeds 240 m/min |
| | | |
| | | |
| Chemical | Resistance to oil | According to VDE / IEC standard |
| | Weather resistance | Unrestricted use outdoor and indoor, UV resistant, moisture resistant. |



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Table 1: PANZERLITE 0,6/1 kV

| N. of cores and nominal section (n-mm ²) | D.C. resist. at 20 °C Ohm/km | Conductor nom. diam. mm | Overall diameter | | Net weight approx. kg/km | Maximum permissible tensile force N | Current carrying capacity at 30 °C* | | | | | Short circuit current 80 ° to 200 °C kA·1 sec. |
|--|------------------------------|-------------------------|------------------|---------|--------------------------|-------------------------------------|-------------------------------------|---------------------------|---------------------|------------|------------|--|
| | | | min. mm | max. mm | | | Laid straight A | (Suspended) in free air A | Spiral or 1 layer A | 2 layers A | 3 layers A | |
| 18x2,5 | 7,98 | 2,2 | 20,5 | 23,0 | 805 | 2.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 24x2,5 | 7,98 | 2,2 | 25,0 | 28,0 | 1.070 | 3.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 30x2,5 | 7,98 | 2,2 | 28,5 | 31,5 | 1.340 | 3.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 37x2,5 | 7,98 | 2,2 | 29,5 | 32,5 | 1.540 | 3.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 44x2,5 | 7,98 | 2,2 | 32,5 | 35,5 | 1.780 | 4.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 50x2,5 | 7,98 | 2,2 | 34,5 | 38,0 | 2.040 | 4.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |
| 54x2,5 | 7,98 | 2,2 | 36,0 | 39,0 | 2.275 | 4.000 | 30 | 32 | 24 | 18 | 15 | 0,32 |

* Tabulated values are valid up to three loaded conductors with or without earth.

Derating factor shall be used for multicore cables depending on loaded conductors. See page 57.

Other sizes or configurations are available on specific request.