Technical Data

TermoGea

**VDE 0812**

# Modbus Cable

**For standard applications, flame retardant.**

**EN 50575:2016 CPR Class Eca**

## Single-Pair, PVC-Insulation, Collective Screen, PVC-Sheath

**Code:** BUS-CABLET PVC/CAM/PVC

**Application**

These cables are used for power supply and control signal transmission in mechanical engineering for tooling machinery, for production lines and transport equipment, as well as in industrial installations. They meet the requirements of the EEC directive concerning electromagnetic compatibility (EMC) and ensure interference-free transmission providing protection against external pulses.

| **Construction** | **2x0,5 mm2** | | |
|---|---|---|---|
| | | | Nominal |
| Formation | 2 Cores | Unit | Value |
| Section | 0,5 mm2 | | |
| Conductor | Plain annealed copper wire, 7 strand | mm | 0,9 |
| Insulation | Polyvinyl chloride - PVC | mm | 1,5 |
| Colour Code | Black, Red | | |

| **Construction** | **1x2x0,22 mm2** | | |
|---|---|---|---|
| | | | Nominal |
| Formation | 1 Pair | Unit | Value |
| Section | 0,22 mm2 | | |
| Conductor | Plain annealed copper wire, 7 strand | mm | 0,6 |
| Insulation | Polyvinyl chloride - PVC | mm | 1,1 |
| Colour Code | White + Yellow | | |
| Individual Screen | N.A. | | |
| Wrapping | at least 1 layer of plastic tape | | |
| Collective Screen | Aluminium / PET tape over tinned copper drain wire | | |

| **Construction** | **2x0.50 mm2 + 1x2x0,22 mm2** | | |
|---|---|---|---|
| TOTAL Wrapping | | | |
| Armour | N.A. | | |
| Outer Sheath | Polyvinyl chloride - PVC - Black | mm | 5,5 |
| Cable Printing | RAMCRO COMPOSITE - LiY(St)Y 2X0,50 + 1x2x0,22 mm2 - 300V - VDE 0812 - IEC 60332-1 - EN 50575: 2014+A1:2016 CPR Class Eca + BATCH + METER MARKING | | |

## Technical Data & Standard References

| | |
|---|---|
| Fire Propagation: | |
| - Test on single cable | IEC 60332-1 |
| - Test on bunched cables | IEC 60332-3 |
| Limiting Oxygen Index (LOI) | (min 30%) |
| Smoke Density | IEC 61034 |
| Amount of halogen acid gas | IEC 60754-1 (max 15%) |
| Acidity (ph value) and conductivity | IEC 60754-2 |

| | |
|---|---|
| CPR Class Eca | EN 50575:2016 |
| Construction Reference Standard: | VDE 0812 |
| Type of Cable: | Control Cable |
| Low Voltage Directive | 2014/35/UE |
| Other References: | |
| - IEC 60228 | |
| - IEC 60332-1 | |
| - IEC 60332-3-24 | |
| - NF C 32-020 | |

## Electrical & Mechanical Data

| | | |
|---|---|---|
| Conductor Cross-section | Nom. | 0,22 mm2 |
| DC Resistance per core at 20° C | max Ω/km | 93,6 |
| Conductor Cross-section | Nom. | 0,5 mm2 |
| DC Resistance per core at 20° C | max Ω/km | 37,5 |
| Insulation Resistance at 20° C | min MΩ*km | 25 |
| Mutual Capacitance | max nF/km | 250 |
| Inductance | max mH/km | 1 |
| Test Voltage - Core/Core | V | 2000 |
| Test Voltage - Core/Screen | V | 2000 |
| L/R Ratio | max µH/Ω | 25 |
| Operating Voltage | V | 300 |

| | | |
|---|---|---|
| Temperature Range: | | |
| During Installation | ° C | -5° C up to +50°C |
| Fixed Installation | ° C | -30° C up to +80°C |
| Insulation Operation | ° C | -30° C up to +80°C |
| Min. Bending Radius | mm | 8 x cable diameter |
| Max Pulling Tension | N | 19 |
| Weight Approx | kg/km | 48 |

| **Impedenza Nominale** | 10KHz | 20KHz | 50KHz |
|---|---|---|---|
| | 180Ω | 140Ω | 105Ω |

RoHS 2002/95/EC