

## Technical Data

### Document Reference

20/03653R1


**UL 13**

UL Listed

PLTC

### RAMCROil - INSTRUMENTATION Cable

For standard applications, low smoke, Halogen Free

Single-Pair, XLPE-Insulation, Collective Screen, LSZH-Sheath

**Code:** MAS0107HEEXN-UL13

XLPE/CAM/LSZH

### Application

These cables are designed to connect electronic instrumentation, analog and digital signal circuits. This cable does not spread flame to the top of the tray in the Vertical-Tray Flame Test in UL 1685.

### Construction 1x2x22AWG

|                   |                                                                                                   | Unit | Nominal Value |
|-------------------|---------------------------------------------------------------------------------------------------|------|---------------|
| Formation         | 1 Pair                                                                                            |      |               |
| Section           | 22AWG                                                                                             |      |               |
| Conductor         | Plain annealed copper wire, 7 strand                                                              | mm   | 0,8           |
| Insulation        | Cross Linked Polyethylene - XLPE                                                                  | mm   | 1,6           |
| Colour Code       | White, Black                                                                                      |      |               |
| Individual Screen | N.A.                                                                                              |      |               |
| Wrapping          | at least 1 layer of plastic tape 0,023 mm                                                         |      |               |
| Collective Screen | 0,026 mm Aluminium / PETP tape over tinned copper drain wire                                      |      |               |
| Inner Sheath      | N.A.                                                                                              |      |               |
| Armour            | N.A.                                                                                              |      |               |
| Outer Sheath      | Thermoplastic Low Smoke, Halogen Free - LSZH - Black                                              | mm   | 5,4           |
| Cable Printing    | RAMCRO S.p.A. - (UL) Listed E345186 Type PLTC - 1 pr 22 - Shielded - 75°C + BATCH + METER MARKING |      |               |

### Technical Data & Standard References

|                                     |                        |                                  |            |
|-------------------------------------|------------------------|----------------------------------|------------|
| Fire Propagation:                   |                        | Construction Reference Standard: | UL 13      |
| - Test on single cable              | IEC 60332-1            | Type of Cable:                   | PLTC Cable |
| - Test on bunched cables            | IEC 60332-3            | Low Voltage Directive            | 2014/35/UE |
| - Vertical Tray Flame Test          | UL1685                 | Other References:                |            |
| Limiting Oxygen Index (LOI)         | (min 37%)              | - NEC code, sec. 725 PLTC,       |            |
| Smoke Density                       | IEC 61034              | - NEC code, sec. 727 ITC,        |            |
| Amount of halogen acid gas          | IEC 60754-1 (max 0,5%) | - UL 1685                        |            |
| Acidity (ph value) and conductivity | IEC 60754-2            | - ASTM D 1239                    |            |
| Notes                               |                        | - NF C 32-020                    |            |
|                                     |                        | - IRAM IAP                       |            |

### Electrical & Mechanical Data

|                                 |                    |       |                      |                         |
|---------------------------------|--------------------|-------|----------------------|-------------------------|
| Conductor Cross-section         | Nom.               | 22AWG | Temperature Range:   |                         |
| DC Resistance per core at 20° C | max $\Omega$ /km   | 70,7  | During Installation  | ° C -5° C up to +50° C  |
| Insulation Resistance at 20° C  | min $M\Omega$ *km  | 1000  | Fixed Installation   | ° C -40° C up to +75° C |
| Mutual Capacitance              | max nF/km          | 115   | Insulation Operation | ° C -40° C up to +90° C |
| Inductance                      | max mH/km          | 1     | Min. Bending Radius  | mm 8 x cable diameter   |
| Test Voltage - Core/Core        | V                  | 2000  | Max Pulling Tension  | N/mm2 34                |
| Test Voltage - Core/Screen      | V                  | 2000  | Weight Approx        | kg/km 42                |
| L/R Ratio                       | max $\mu H/\Omega$ | 25    |                      |                         |
| Operating Voltage               | V                  | 300   |                      |                         |



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