

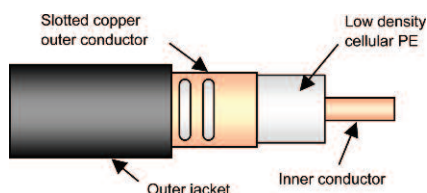


# RMC 12-T

## PRODUCT DESCRIPTION

### RMC 12-T-HLFR

Reference suffix <sup>(1)</sup> : -HLFR



#### Fire behaviour

Halogen free and flame retardant outer sheath, Low corrosive gas emission acc. to IEC 60754-2

Flame retardant acc. to IEC 60332-1 and IEC 60332-3 cat. C, Low smoke emission acc. to IEC 61034

Slots in the copper outer conductor allow a controlled portion of the internal RF energy to be radiated into the surrounding environment. Conversely, a signal transmitted near the cable will couple into the slots and be carried along the cable length.

## FEATURES and BENEFITS

- From 30 MHz to 1 GHz with resonant frequencies
- Robust Cable, with low bending radius
- Main Applications: Tunnel - FM, TETRA
- Reaction to fire according to EN50399 E<sub>ca</sub>
- Compliant to EN 50575

## TECHNICAL FEATURES

|                                 |                      |                                                                 |
|---------------------------------|----------------------|-----------------------------------------------------------------|
| • Size                          |                      | 1/2"                                                            |
| • Previous Model Number         |                      | 512RC8RMT-HLFR                                                  |
| • Frequency Range               | MHz                  | 30 - 1000                                                       |
| • Recommended for Frequency     | MHz                  | 450                                                             |
| • Cable Type                    |                      | RMC (Radiated Mode Cable)                                       |
| • Jacket                        |                      | HLFR (Halogen Free Low Smoke Flame Retardant)                   |
| • Slot Design                   |                      | Groups of Slots at short intervals                              |
| • Impedance                     | Ω                    | 50 +/- 3                                                        |
| • Velocity Ratio                | %                    | 88                                                              |
| • Capacitance                   | pF/m                 | 76                                                              |
| • Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.48 (0.45) HLFR                                                |
| • Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 3.00 (0.91)                                                     |
| • Inner Conductor Material      |                      | Copper clad aluminium (HLFR)                                    |
| • Dielectric Material           |                      | Cellular polyethylene                                           |
| • Outer Conductor Material      |                      | Overlapping copper foil, with slot groups, bonded to the jacket |



# RMC 12-T

## TECHNICAL FEATURES (continued)

|                                                      |              |                                                                      |               |           |
|------------------------------------------------------|--------------|----------------------------------------------------------------------|---------------|-----------|
| • Diameter Inner Conductor                           | mm (in)      | 4.8 (0.19)                                                           |               |           |
| • Diameter Dielectric                                | mm (in)      | 12.4 (0.49)                                                          |               |           |
| • Diameter over Jacket                               | mm (in)      | 15.5 (0.61)                                                          |               |           |
| • Minimum Bending Radius, Single Bend                | mm (in)      | 200 (7.87)                                                           |               |           |
| • Cable Weight                                       | kg/m (lb/ft) | 0.220 (0.15) HLF                                                     |               |           |
| • Tensile Strength                                   | daN (lb)     | 110 (243)                                                            |               |           |
| • Indication of Slot Alignment                       |              | embossed line 180° opposite                                          |               |           |
| • Storage Temperature                                | °C (°F)      | -70 to +85 (-94 to +185)                                             |               |           |
| • Installation Temperature                           | °C (°F)      | -25 to +60 (-13 to +140)                                             |               |           |
| • Operation Temperature                              | °C (°F)      | -40 to +85 (-40 to +185)                                             |               |           |
| • Longitudinal Loss and Coupling Loss <sup>(2)</sup> |              |                                                                      |               |           |
|                                                      | Frequency    | Longitudinal Loss                                                    | Coupling Loss |           |
|                                                      |              | dB/100 m (dB/100 ft)                                                 | C50% [dB]     | C95% [dB] |
|                                                      | 75 MHz       | 2.2 (0.67)                                                           | 55            | 67        |
|                                                      | 150 MHz      | 3.0 (0.91)                                                           | 59            | 70        |
|                                                      | 225 MHz      | 3.8 (1.16)                                                           | 56            | 63        |
|                                                      | 400 MHz      | 5.4 (1.65)                                                           | 55            | 57        |
|                                                      | 450 MHz      | 5.9 (1.80)                                                           | 53            | 56        |
|                                                      | 900 MHz      | 10.6 (3.23)                                                          | 63            | 74        |
|                                                      | 1800 MHz     | -                                                                    | -             | -         |
|                                                      | 1900 MHz     | -                                                                    | -             | -         |
|                                                      | 2200 MHz     | -                                                                    | -             | -         |
|                                                      | 2400 MHz     | -                                                                    | -             | -         |
| • Resonant Frequencies                               | MHz          | 37, 111, 185, 259, 334, 408, 482, 556, 630, 704, 778, 853, 927, 1001 |               |           |
| • Clamp Spacing Recommended / Maximum                | m (ft)       | 0.5 (1.64) / 1.20 (3.90)                                             |               |           |
| • Distance to Wall Recommended / Minimum             | mm (in)      | 80 - 180 (3.15 - 7.00) / 50 (1.96)                                   |               |           |

<sup>(1)</sup> Must be specified in case of order - standard PE jacket available on request.

<sup>(2)</sup> Measured in tunnel according to **IEC 61196-4 - Ground Level Method**.

Distance = 2m. C50 & (C95) are the average coupling losses with 50% (95%) probability calculated in accordance with the standard. All Values are going to be confirmed by independent Test Centre soonest.

The above stated values are nominal values and subject to manufacturing tolerances as follows: Longitudinal Loss +/- 5 % and Coupling Loss +/- 3dB.

As with any radiating cable, the performance in building or tunnel may deviate from figures measured according to the IEC 61196-4 standard.

Coupling loss measurements taken in accordance with IEC 61196-4 - Free Space Method are available on request