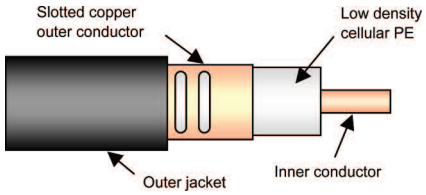
RMC 12

PRODUCT DESCRIPTION

RMC 12-HLFR

Reference suffix [1] : -HLFR



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 2.6 GHz with resonant frequencies
- Robust Cable, with low bending radius
- Main Applications: Tunnel - GSM, GSM-R, DCS-1800, WLAN & in building

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
- Reaction to fire according to EN50399 E_{ca}
- Compliant to EN 50575

TECHNICAL FEATURES

• Size		1/2"
• Previous Model Number		512RC8RM-HLFR
• Frequency Range	MHz	30 - 2600
• Recommended for Frequency	MHz	900 and above
• 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)	2.90 (0.88)
• Inner Conductor Material		Copper clad aluminium (HLFR)
• Dielectric Material		Cellular polyethylene
• Outer Conductor Material		Overlapping copper foil, with slot groups, bonded to the jacket

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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)	0.232 (0.16) HLFR
• 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 [2]

Frequency	Longitudinal Loss	Coupling Loss	
	dB/100 m (dB/100 ft)	C50% [dB]	C95% [dB]
75 MHz	2.35 (0.72)	52	66
150 MHz	3.25 (0.99)	62	74
225 MHz	3.70 (1.13)	72	82
450 MHz	5.00 (1.53)	79	88
900 MHz	7.70 (2.36)	60	63
1800 MHz	12.25 (3.76)	60	70
1900 MHz	12.70 (3.90)	60	70
2200 MHz	14.80 (4.54)	61	70
2400 MHz	16.50 (5.07)	60	68

• Resonant Frequencies	MHz	547, 1641, 2734
• 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)

[1] Must be specified in case of order - standard PE jacket available on request.
[2] 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.

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

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