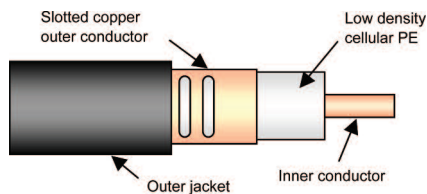


# LSC 78-75 (75 Ohm)

## PRODUCT DESCRIPTION

### LSC 78-75-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

Optional: Acc. to IEC 61034<sup>(2)</sup>, circuit integrity under fire conditions acc. to IEC 60331.

Flame temperature = 750°C / voltage = 150 V / flame application = 180 min.

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

- 75 Ohm impedance
- Broadband from 30 MHz to 1.9 GHz
- Robust Cable, with low bending radius
- No Resonant Frequencies
- No Cable Orientation Required
- Main Applications: Tunnel - FM, TETRA, GSM, GSM-R, DCS-1800
- Only for use in Tunnels - Not suitable for use in Buildings

## TECHNICAL FEATURES

• Size		7/8"
• Previous Model Number		722RC8R-HLFR
• Frequency Range	MHz	30 - 2000
• Recommended for Frequency	MHz	N.A.
• Cable Type		LSC (Leaky Section Cable)
• Jacket		HLFR (Halogen Free Low Smoke Flame Retardant)
• Slot Design		Groups of Slots at longer intervals
• Impedance	Ω	75 +/- 2
• Velocity Ratio	%	88
• Capacitance	pF/m	50
• Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	0.66 (0.20)
• Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.40 (0.43)
• Inner Conductor Material		Copper wire
• Dielectric Material		Cellular polyethylene
• Outer Conductor Material		Overlapping copper foil, with slot groups, bonded to the jacket



# TECHNICAL DATA SHEET

## Radiating Cables

Kabelwerk

**EUPEN** AG

Rev.: 07/2010-03-15

**cable**

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# LSC 78-75 (75 Ohm)

### TECHNICAL FEATURES (continued)

• Diameter Inner Conductor	mm (in)	5.7 (0.22)		
• Diameter Dielectric	mm (in)	23.5 (0.93)		
• Diameter over Jacket	mm (in)	27.0 (1.06)		
• Minimum Bending Radius, Single Bend	mm (in)	350 (13.8)		
• Cable Weight	kg/m (lb/ft)	0.621 (0.42) HLF		
• Tensile Strength	daN (lb)	180 (397)		
• Indication of Slot Alignment		N.A.		
• 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	0.86 (0.26)	67	79
	150 MHz	1.33 (0.41)	65	77
	225 MHz	1.73 (0.53)	65	77
	450 MHz	2.82 (0.86)	64	76
	900 MHz	4.73 (1.44)	65	77
	1800 MHz	9.47 (2.89)	69	81
	1900 MHz	10.40 (3.17)	69	81
	2200 MHz	-	-	-
	2400 MHz	-	-	-
• Resonant Frequencies	MHz	None		
• 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.

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

These Radiating Cables have been especially developed for use in Tunnels. Due to the Cables inherent design, based on Groups of Slots at longer intervals, these Radiating Cables are not suitable for In-Building use.