

NEW



RADIO FREQUENCY SYSTEMS

RADIAFLEX® RCF 1/2" Radiating Cable

Specially designed for underground mining telecommunications applications



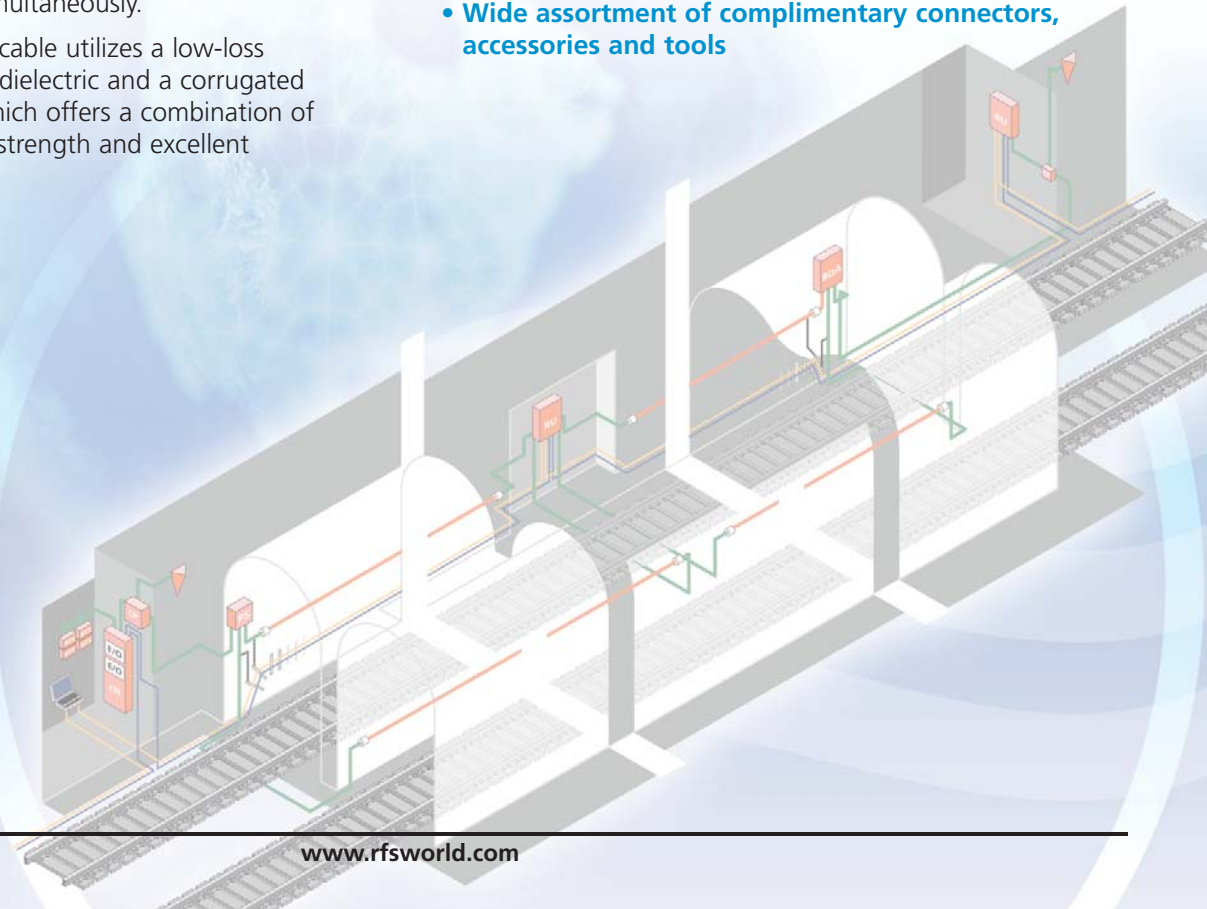
RADIAFLEX® radiating cables function as distributed antennas to provide communications in tunnels, mines and large building complexes and is the solution for any application in confined areas.

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.

RADIAFLEX® is used for both one-way and two-way communication systems and, because of its broadband capability, a single radiating cable can handle multiple communication systems simultaneously.

This RADIAFLEX® radiating cable utilizes a low-loss cellular polyethylene foam-dielectric and a corrugated copper outer conductor which offers a combination of remarkable flexibility, high strength and excellent electrical performance.

- **Meets MSHA requirements for US mining applications**
- **Broadband Communication from 30 to 6000MHz**
Supports FM, UHF, VHF, Cellular, PCS, WiFi, WiMAX, 3G and 4G technologies
- **Low coupling loss and no stop bands**
Excellent underground signal radiation
- **Typically deployed in mines, vehicles and in-building**
Designed for broad application
- **Used for both one- and two-way communication systems**
- **Best combination of flexibility, high strength and excellent electrical performance**
Rugged for harsh environments
- **Low bending radii**
- **Wide assortment of complimentary connectors, accessories and tools**





RADIAFLEX® RCF 1/2" Radiating Cable

Product Specifications

Model Number	RCF12-50JFN
Size	1/2"
Maximum Frequency, MHz	6000
Jacket	Flame Retardant
Slot Design	Milled (Two-Row)
Impedance, ohm	50 +/-2
Velocity of Propagation, %	88
Inner Conductor dc Resistance, ohm/1000 m (1000 ft)	1.57 (0.48)
Outer Conductor dc Resistance, ohm/1000 m (1000 ft)	2.23 (0.68)
Outer Conductor Material	Corrugated Copper Tube
Inner Conductor Material	Copper Clad Aluminum Wire
Diameter over Jacket, mm (in)	16.2 (0.64)
Diameter Outer Conductor, mm (in)	13.8 (0.54)
Diameter Inner Conductor, mm (in)	4.8 (0.19)
Minimum Bending Radius, Single Bend, mm (in)	125 (4.9)
Cable Weight, kg/m (lb/ft)	0.26 (0.17)
Tensile Force, N (lb)	1000 (225)
Indication of Slot Alignment	None
Storage Temperature, °C (°F)	-70 to +85 (-94 to +185)
Installation Temperature, °C (°F)	-25 to +60 (-13 to +140)
Operation Temperature, °C (°F)	-50 to +85 (-58 to +185)
Stop bands, MHz	None
Recommended Clamp Spacing, m (ft)	0.6 (2.0)
Minimum Distance to Wall, mm (in)	50 (2)

Connectors

Model Number	Description	Sealing Method	Plating Outer/Inner	Contact Inner	Attachment Outer	Trimming Tool	Length, mm (in)	Outer Dia., mm (in)	Weight, kg (lb)
716F-LCF12-070	7-16 DIN Female RAPID FIT	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	57.0 (2.3)	29.0 (1.2)	0.15 (0.34)
716F-LCF12-072	7-16 DIN Female Bulkhead	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	57.0 (2.3)	48 (1.9)	0.15 (0.34)
716M-LCF12-070	7-16 DIN Male RAPID FIT	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	58.0 (2.3)	37.0 (1.5)	0.15 (0.34)
716M-LCF12-071	7-16 DIN Male Right angle	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	43.2 (1.7)	37.0 (1.5)	0.19 (0.42)
NF-LCF12-070	N Female RAPID FIT	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	50.0 (2.0)	22.0 (0.9)	0.11 (0.25)
NM-LCF12-070	N Male RAPID FIT	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	58.6 (2.3)	22.0 (0.9)	0.11 (0.25)
NM-LCF12-071	N Male Right angle	O-ring	Silver/Silver	Basket	Spring Finger	TRIM-Series-A	45.4 (1.8)	22.0 (0.9)	0.18 (0.40)
78EIA-LCF12-002	7/8" EIA	O-ring	Brass/Silver	Basket	Self Flare	TRIM-Series-B	86.4 (3.4)	25.4 (1.0)	0.17 (0.38)
C-LCF12-002	Splice	O-ring	Brass/Silver	Basket	Self Flare	TRIM-Series-B	91.4 (3.6)	25.4 (1.0)	0.18 (0.40)
C-LCF12-011	Splice, Indoor	N/A	Silver/Silver	Basket	Spring Finger	TRIM-Series-B	81 (3.2)	23.8 (0.9)	0.42 (0.93)

RADIO FREQUENCY SYSTEMS



200 Pondview Drive, Meriden, CT 06450 • (203) 630-3311 • Fax (203) 634-2272

www.rfsworld.com

PMP 1/11/07