FREEDM® Ribbon, Indoor/Outdoor, Gel-Filled, Interlocking Armored Cables, Riser

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Features and Benefits

Precise fiber and ribbon geometries
Excellent mass splicing yields

Waterblocked cable
Enables use of cables for outdoor applications

12-fiber ribbons with ribbon IDs
Easy identification

UV-resistant, flame-retardant jacket
Rugged, durable and easy to strip

Flexible interlocking armor
Up to seven times the crush protection compared to non-armored cables

Common installations
Outdoor aerial and duct; indoor general purpose horizontal according to NEC Article 770

Standards

Listings	National Electrical Code® (NEC®) OFNR
Design and Test Criteria	ANSI/ICEA S-104-696, CSA OFN FT-4

Corning FREEDM® ribbon interlocking armored, gel-filled riser cables continue the innovative breakthrough in indoor/outdoor cable technology with a new generation of high-fiber-count single tube cables. These cables are designed to maximize the use of critical duct space with excellent installation results. Encased in spirally-wrapped aluminum interlocking armor for ruggedness and superior crush resistance, the cables are ideal for industrial and heavy traffic areas and installations requiring extra protection for optical cables. The UV-resistant, flame-retardant jacket allows this cable to be installed outdoors or in indoor general purpose horizontal and riser applications. The cable employs a single buffer tube containing a stack of 12 fiber ribbons within a gel-filled central buffer tube.

Note: This cable is available in 12 different jacket colors – blue, orange, green, brown, slate, white, red, black, yellow, violet, rose and aqua. The colored jacket allows for easy visual identification of the cables while still providing all of the required environmental protection of an indoor/outdoor cable jacket. Black is the standard jacket color using the part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.

FREEDM Ribbon Interlocking Armored Gel-Filled Cable, Riser, 72 Fibers

FREEDM Ribbon Interlocking Armored Gel-Filled Cable, Riser, 144 Fibers

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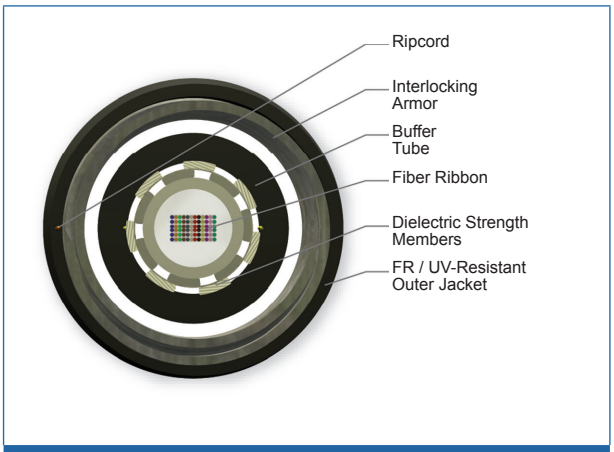
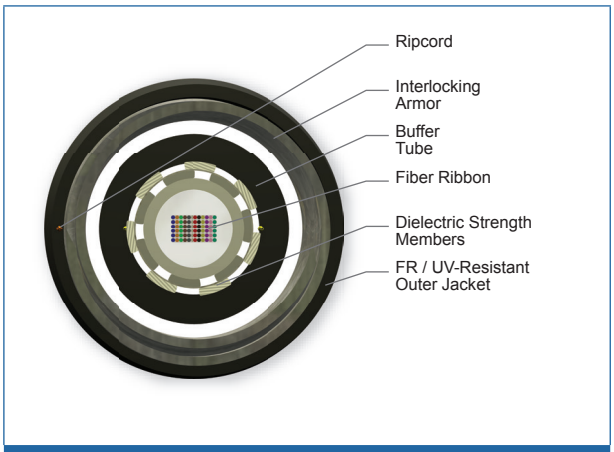


FREEDM Ribbon Interlocking Armored Gel-Filled Cable, Riser, 72 Fibers



FREEDM Ribbon Interlocking Armored Gel-Filled Cable, Riser, 144 Fibers

Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-10 °C to 60 °C (14 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

** Note: Corning recommends storing cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.*

Mechanical Characteristics Cable	
Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	600 N (135 lbf)

Fiber Count	Nominal Outer Diameter	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
12 - 48	19.3 mm (0.76 in)	2700 N (600 lbf)	600 N (135 lbf)	289.5 mm (11.4 in)	193 mm (7.6 in)	277 kg/km (185.59 lb/1000 ft)
72 - 96	19.3 mm (0.76 in)	2700 N (600 lbf)	600 N (135 lbf)	289.5 mm (11.4 in)	193 mm (7.6 in)	291.7 kg/km (195.4 lb/1000 ft)
144	20.2 mm (0.80 in)	2700 N (600 lbf)	600 N (135 lbf)	303.0 mm (12.0 in)	202.0 mm (8.0 in)	365.0 kg/km (244.55 lb/1000 ft)
216	25.1 mm (0.99 in)	2700 N (600 lbf)	600 N (135 lbf)	376.5 mm (14.9 in)	251.0 mm (9.9 in)	517.0 kg/km (346.39 lb/1000 ft)

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Chemical Characteristics	
RoHS	Free of hazardous substances according to RoHS 2002/95/EG

Transmission Performance

Multimode					
Fiber Core Diameter (µm)	62.5	50	50	50	50
Fiber Category	OM1	OM2	OM3	OM4	OM4 Extended Distance
Fiber Code	K	T	T	T	T
Performance Option Code	30	31	80	90	91
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	850/1300
Maximum Attenuation (dB/km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
Serial 1 Gigabit Ethernet (m)	300/550	750/500	1000/600	1100/600	1100/600
Serial 10 Gigabit Ethernet (m)	33/-	150/-	300/-	550/-	600/-
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	200/500	700/500	1500/500	3500/500	3500/500
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	220/-	950/-	2000/-	4700/-	5350/-

** 50 µm multimode fiber (OM4) T90 10 Gigabit Ethernet distance assumes 1.0 dB maximum total connector/splice loss.*
** 50 µm multimode fiber (OM4) T91 10 Gigabit Ethernet Distance assumes 0.7 dB maximum total connector/splice loss.*
** 50 µm multimode fiber (OM3/OM4) meets 0.75 ns optical skew when used in all Corning Plug & Play™/EDGE™ systems solutions.*

Single-mode		
Fiber Name	Single-mode (OS2)	SMF-28® Ultra fiber
Fiber Category	G.652.D	G.657.A1
Fiber Code	E	Z
Performance Option Code	01	01
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3	0.4/0.4/0.3
Typical Attenuation* (dB/km)	-	0.33/0.33/0.19

** Improved attenuation and bandwidth options available.*
** Bend-insensitive single-mode fibers available on request.*
** 50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.*
** Contact a Corning Customer Care Representative for additional information.*

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Ordering Information | *Note: Contact Customer Care at 1-800-743-2675 for other options.*

□	□	□	□	C	F	-	1	4	1	□	□	-	A	1
1			2	3	4		5	6	7	8	9		10	

1 Select fiber count.
Standard offerings:
012 036 072 144
024 048 096 216

2 Select fiber code.
K = 62.5 µm multimode (OM1)
T = 50 µm multimode (OM2/OM3/OM4/OM4+)
E = Single-mode (OS2) SMF-28e+®
Z = Single-mode (OS2) SMF-28® Ultra fiber

3 Defines cable type.
C = FREEDM ribbon cable

4 Defines outer jacket.
F = Indoor/outdoor riser

5 Defines fiber placement.
1 = 24 fibers/ribbon

6 Defines length markings.
4 = Markings in ft (standard)

7 Defines tensile strength.
1 = See specifications

8 Select performance option code.
30 = 62.5 µm multimode (OM1)
31 = 50 µm multimode (OM2)
80 = 50 µm multimode (OM3)
90 = 50 µm multimode (OM4)
91 = 50 µm multimode (OM4+)
01 = Single-mode (OS2)
(Max. attenuation 0.4/0.4/0.3 dB/km)

9 Defines cable type.
– = Gel-filled cable

10 Defines special manufacturing code.
A1 = Interlocking armored riser

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