

FREEDM® One Tight-Buffered, Interlocking Armored Cables, Riser

CORNING

Features and Benefits

Waterblocking technology

Outside Plant (OSP) applications

Flexible, interlocking armor design

Up to seven times crush protection compared to unarmored cables

UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip

Standards

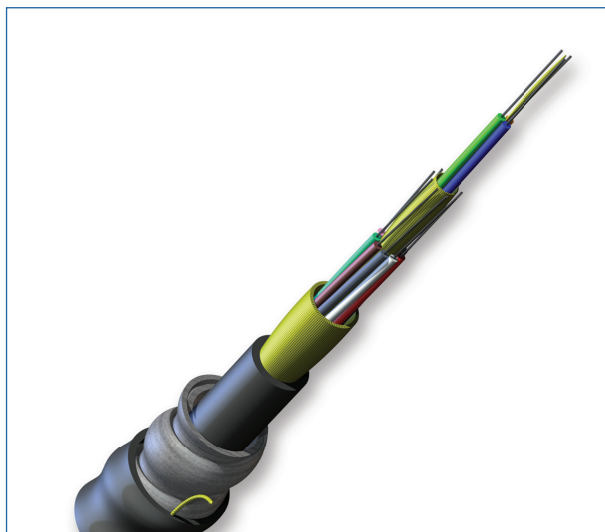
Listings

National Electrical Code®
(NEC®) OFCR, FT-4

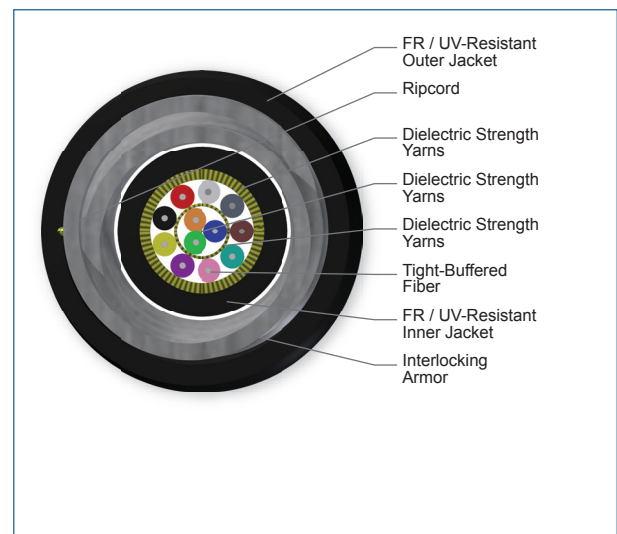
Design and Test Criteria

UL-1666 and CSA FT-4 (for riser and general building applications); ICEA S-104-696

Corning FREEDM® One interlocking armored cables are flame-retardant, indoor/outdoor cables designed for interbuilding and intrabuilding backbone installations that eliminate the need for a transition splice when entering the building. Encased in a spirally wrapped, aluminum interlocking armor for ruggedness and superior crush resistance, these cables are ideal for industrial and heavy traffic areas and installations requiring extra protection for optical cables. These cables are protected against water penetration by innovative waterblocking technology, making them ideal for OSP applications. The flexible, interlocking armored design offers up to seven times the crush protection compared to unarmored cables (as characterized to ICEA-696) and allows easy one-step installation, thereby reducing overall installation costs. The UV-resistant, flame-retardant jacket is rugged, durable and easy to strip.



FREEDM One Interlocking Armored Riser Cables,
12 Fibers

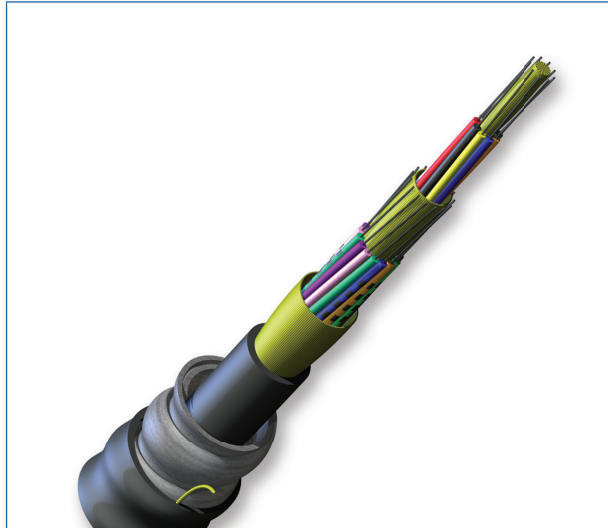


FREEDM One Interlocking Armored Riser Cables,
12 Fibers

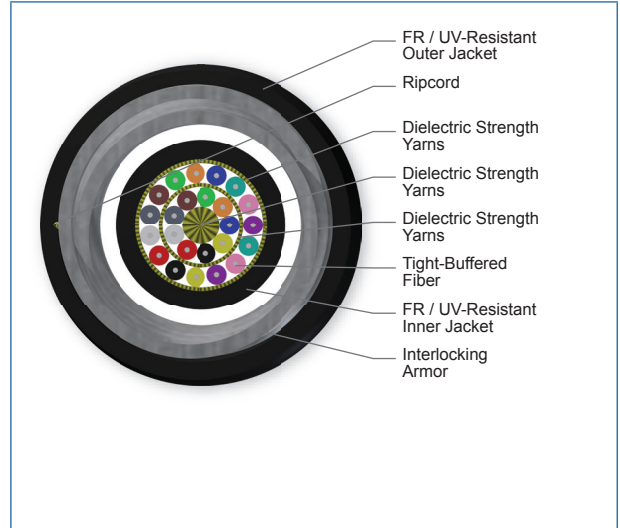
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FREEDM One Interlocking Armored Riser Cables, 24 Fibers



FREEDM One Interlocking Armored Riser Cables, 24 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 indoor/outdoor 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						
Fiber Count	Nominal Outer Diameter	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
2	11.3 mm (0.44 in)	675 N (150 lbf)	200 N (45 lbf)	169.5 mm (6.7 in)	113 mm (4.4 in)	95.4 kg/km (64.1 lb/1000 ft)
4	11.3 mm (0.44 in)	675 N (150 lbf)	200 N (45 lbf)	169.5 mm (6.7 in)	113 mm (4.4 in)	98.5 kg/km (66.2 lb/1000 ft)
6	11.3 mm (0.44 in)	675 N (150 lbf)	200 N (45 lbf)	169.5 mm (6.7 in)	113 mm (4.4 in)	100.6 kg/km (67.6 lb/1000 ft)
12	11.8 mm (0.46 in)	675 N (150 lbf)	200 N (45 lbf)	177.0 mm (7.0 in)	118 mm (4.6 in)	114.3 kg/km (76.8 lb/1000 ft)

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Mechanical Characteristics Cable

Fiber Count	Nominal Outer Diameter	Max. Tensile Strength, Short-Term	Max. Tensile Strength, Long-Term	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight
18	12.6 mm (0.50 in)	1350 N (300 lbf)	400 N (90 lbf)	189.0 mm (7.4 in)	126 mm (5.0 in)	133.3 kg/km (89.6 lb/1000 ft)
24	13.7 mm (0.54 in)	1350 N (300 lbf)	400 N (90 lbf)	205.5 mm (8.1 in)	137 mm (5.4 in)	150.3 kg/km (100.0 lb/1000 ft)

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
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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	2.8/1.0	2.8/1.0	2.8/1.0	2.8/1.0
Serial 1 Gigabit Ethernet (m)	300/550	750/600	1000/600	1000/600	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 (OM3/OM4/OM4+) meets 0.75 ns optical skew when used in all Corning Plug and Play™/EDGE™ systems solutions.

* 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.

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Single-mode		
Fiber Name	SMF-28e® fiber	SMF-28® Ultra fiber
Fiber Category	G.652.D	G.652.D/G.657.A1
Fiber Code	E	Z
Performance Option Code	31	31
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.65/0.65/0.50	0.65/0.65/0.50

* Improved attenuation and bandwidth options available.

* Bend-insensitive single-mode fibers available on request.

* Contact a Corning Customer Care Representative for additional information.

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

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

1 Select fiber count.

Standard offerings:

002 006 018
004 012 024

2 Select fiber code.

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

3 Defines cable type.

8 = FREEDM® One cable

4 Defines outer jacket.

F = Indoor/outdoor riser

5 Defines fiber placement.

3 = Standard for FREEDM
One riser cable

6 Defines length markings.

1 = Markings in ft (standard) for single-layer design.

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+)
31 = Single-mode (OS2)
(Max. attenuation .65 / .65 / 0.5 dB/km)

9 Defines cable type.

- = FREEDM® One cable

10 Defines special requirements.

A1 = Aluminum interlocking armor with riser-rated jacket

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.

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Notes



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