

# FREEDM® One Tight-Buffered, Interlocking Armored Cable, Plenum

12 F, 62.5 µm multimode (OM1)

CORNING

Corning Cable Systems FREEDM® One Interlocking Armored Cables are flame-retardant, indoor/outdoor, cables designed for interbuilding and intrabuilding back-bone 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 water-blocking technology, making it ideal for OSP applications. The flexible, interlocking armored design offers over seven times the crush protection compared to unarmored cables (as characterized to ICEA-696) and allows easy one step installation, thereby reducing the overall installation costs. The UV-resistant, flame-retardant jacket is rugged, durable and easy to strip.

This cable is available in 12 different jacket colors - blue, orange, green, brown, slate, white, red, black, yellow, purple, 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 standard part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.

## Features and Benefits

### Waterblocking technology

OSP (outdoor) applications

### Flexible, interlocking armor design

Seven times crush protection compared to unarmored cables

### UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip

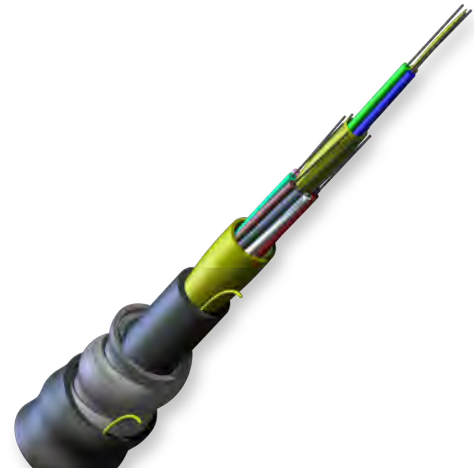
## Standards

### Approval and Listings

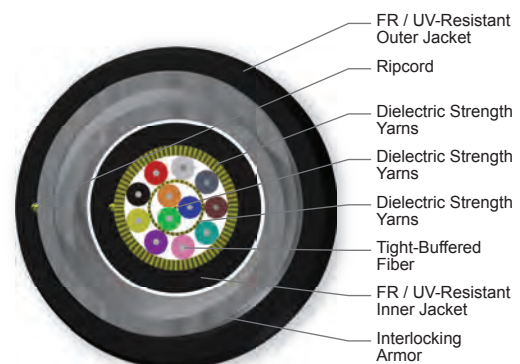
National Electrical Code® (NEC®) OFCP, CSA FT-4, ICEA S-104-696

### Flame Resistance

NFPA 262 (for plenum, riser and general building applications)



Part Number: 012K8P-31130-A3



Cross Section of Part Number: 012K8P-31130-A3

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## General Specifications

Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser, Plenum)
Cable Type	Tight-Buffered
Product Type	Interlocking armor
Flame Rating	Plenum (OFCP)
Fiber Category	62.5 µm MM (OM1)

## 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)

## Cable Design

Central Element	Dielectric
Fiber Count	12
Tight Buffer Color	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Tensile Strength Elements and/or Armoring - Layer 1	Water-swellable strength members
Inner Jacket Material	Flame-Retardant, UV-Resistant
Tensile Strength Elements and/or Armoring - Layer 2	Interlocking armor
Number of Ripcords	2
Outer Jacket Material	Flame-Retardant, UV-Resistant
Outer Jacket Color	Black

## Mechanical Characteristics Cable

Nominal Inner Cable Diameter	6.3 mm (0.25 in)
Nominal Outer Diameter	12.5 mm (.49 in)
Weight	140 kg/km (94 lb/1000 ft)
Min. Bend Radius Installation	95 mm (3.7 in)
Min. Bend Radius Operation	63 mm (2.5 in)
Max. Tensile Strengths, Short-Term	675 N (150 lbf)
Max. Tensile Strengths, Long-Term	200 N (45 lbf)

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## Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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## Fiber Specifications

### Optical Characteristics (cabled)

Fiber Core Diameter	62.5 µm
Fiber Type	Multimode
Fiber Category	OM1
Fiber Code	K
Performance Option Code	30
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.4 dB/km / 1.0 dB/km
Min. Overfilled Launch (OFL) Bandwidth	200 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	220 MHz*km / -
Serial 1 Gigabit Ethernet	300 m / 550 m
Serial 10 Gigabit Ethernet	33 m / -

Notes: 1) Improved attenuation and bandwidth options available.  
2) Bend-insensitive single-mode fibers available on request.  
3) Contact a Corning Cable Systems Customer Care Representative for additional information.

## Ordering Information

Part Number	012K8P-31130-A3
Product Description	FREEDM® One Tight-Buffered, Interlocking Armored Cable, Plenum, 12 F, 62.5 µm multimode (OM1)



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