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

24 F, 50 µm multimode (OM4)

CORNING

Corning Cable Systems 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 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.

Part Number: 024T8P-31190-A3

Cross Section of Part Number: 024T8P-31190-A3

- FR / UV-Resistant Outer Jacket
- Ripcord
- Dielectric Strength Yarns
- Dielectric Strength Yarns
- Dielectric Strength Yarns
- Tight-Buffered Fiber
- FR / UV-Resistant Inner Jacket
- Interlocking Armor

Features and Benefits

Waterblocking technology
OSP (outdoor) applications

Flexible, interlocking armor design
Seven times crush protection compared to unarmored cables

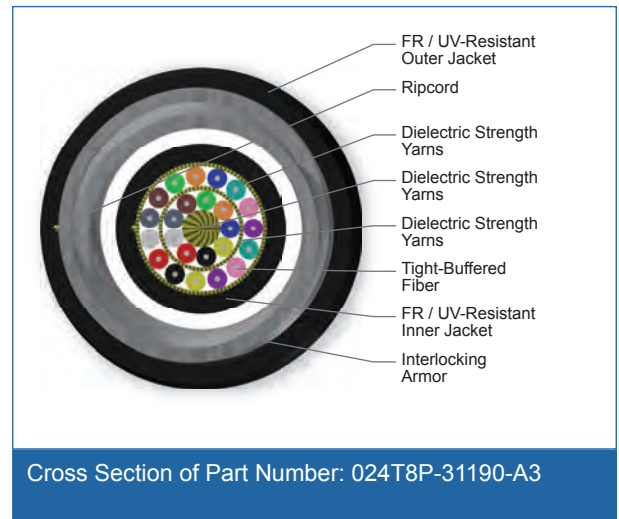**UV-resistant, flame-retardant jacket**
Rugged, durable and easy to strip

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)

CORNING

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

24 F, 50 µm multimode (OM4)

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	50 µm MM (OM4)

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	24
Tight Buffer Color	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua, Blue*, Orange*, Green*, Brown*, Slate*, White*
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	8.0 mm (0.31 in)
Nominal Outer Diameter	14.6 mm (.57 in)
Weight	188 kg/km (126 lb/1000 ft)
Min. Bend Radius Installation	120 mm (4.7 in)
Min. Bend Radius Operation	80 mm (3.1 in)
Max. Tensile Strengths, Short-Term	1350 N (300 lbf)
Max. Tensile Strengths, Long-Term	400 N (90 lbf)

CORNING

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

24 F, 50 µm multimode (OM4)

CORNING

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

Fiber Specifications

Optical Characteristics (cabled)	
Fiber Type	Multimode
Fiber Core Diameter	50 µm
Fiber Category	OM4
Fiber Code	T
Performance Option Code	90
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	2.8 dB/km / 1 dB/km
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	4700 MHz*km / -
Serial 1 Gigabit Ethernet	1100 m / 600 m
Serial 10 Gigabit Ethernet	550 m / -

* Assumes 1.0 dB maximum total connector/splice loss.

* Meets 0.75 ns optical skew when used in all Corning Cable Systems Plug & Play™/Pretium EDGE® Systems Solutions.

Notes: 1) *50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.*
       2) Improved attenuation and bandwidth options available.
       3) Bend-insensitive single-mode fibers available on request.
       4) *Contact a Corning Cable Systems Customer Care Representative for additional information.*

Ordering Information

Part Number	024T8P-31190-A3
Product Description	FREEDM® One Tight-Buffered, Interlocking Armored Cable, Plenum, 24 F, 50 µm multimode (OM4)

RoHS
COMPLIANT

CORNING