

# LANmark-OF ENSPACE Indoor MPO-MPO Pre-Term

LANMARK-OF ENSPACE INDOOR METHOD B PRE-TERM SM X12F MPO/M-MPO/M LOW LOSS FAN OUT C XM LSZH CCA YELLOW

**Aginode Ref:** N154.BI12AACxxx-YC

- Factory terminated MPO-MPO fibre assembly
- Pre-Term cable with high CPR rating: Cca s1,d1,a1
- Pre-Term with cable glands
- Small cable diameter reduces required data centre space
- Flexible fan-out for ease of installation in patch panels
- Method B polarity Pre-Term
- Fibre count: 12F
- Fibre type: Singlemode (OS2)

## MPO-MPO Pre-Term characteristics

The MPO-MPO Pre-Term has pinned (male) connectors. This matches with the un-pinned (female) connectors in the ENSPACE modules and the female Plug&Play modules.

The MPO-MPO Pre-Terms have PG-13 cable glands on both sides that provide a solid fixing in the LANmark-OF ENSPACE and Plug&Play patch panel slots.

The Pre-Terms are installed by laying. For longer lengths a detachable pulling eye can be used for installations by pulling.

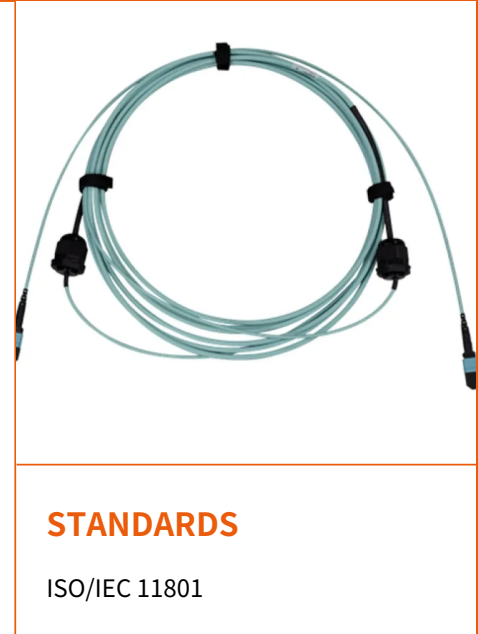
The "xxx" in the N-number is the length in metre between the cable glands, i.e. the Pre-Term length between the rear of the patch panels.

In order to reduce overlengths in data centers the Pre-Terms are custom made and available with 1m increments.

## Cable characteristics

The cable used for the Pre-Term is the "LANmark-OF Double Jacket Indoor Cable Cca" and is optimized indoor installations. The cable has an inner and outer jacket and 2 layers of Aramid yarns.

The double jacket makes the Pre-Term more robust between the racks.



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Inside the panel the outer jacket is removed and the inner jacket allows for a flexible fan-out for installation inside the patch panel.

The cable has been tested for fire performance according to the new Construction Product Regulation: EN50575:2014 +A1:2016. It has a very high fire performance with minimal fire load and spread, smoke density, droplets and acidity: Cca-s1,d1,a1.

### **Polarity and optical performance**

The Pre-Terms are available with a method B or C polarity according to standard TIA-568.3-D-2016.

For a duplex transmission like for 10GBase-SR (10G) the transmit-receive polarity in the channel is maintained with one of the following approaches:

1. Straight cassette on side A + Method C Pre-Term + straight cassette on side B.
2. Straight cassette on side A + Method B Pre-Term + crossed cassette on side B.

Both approaches use the same duplex LC patch cords on both sides.

For parallel optics for multimode like for 100GBase-SR4 (100G) method B Pre-Terms can be used with key up/key down adaptors on both sides of the channel. The same straight female-female patch cords can be used on both sides.

The insertion loss of a MPO-MPO connection is measured according to standard IEC61300-3-45.

The return loss of a MPO connection is measured according to IEC 61300-3-6.

# LANmark-OF ENSPACE Indoor Method B Pre-Term SM x12F MPO/M-MPO/M Low Loss fan out C xm LSZH Cca Yellow

## Characteristics

### Construction characteristics

Fiber optic type	SM (G657.A1)
Wiring type	Polarity Method B

### Dimensional characteristics

Inner diameter	3 mm
Outer Diameter	4.5 mm
Number of optical fibres	12
Approximate net weight	20 kg/km

### Mechanical characteristics

Mechanical resistance to impacts	10 impacts of 3 N.m
Crush resistance (IEC 60794-1-E3)	100 N/cm

### Transmission characteristics

Insertion Loss, maximum, dB	0.5 dB
Return Loss, Minimum, dB	45 dB

### Usage characteristics

Operating temperature, range	-10...60 °C
Fire retardant	IEC 60332-3
Minimum dynamic operating bending radius	90.0 mm
Minimum static operating bending radius	45 mm
Flame retardant	IEC 60332-1
Storage temperature, range	-20...60 °C
Ambient installation temperature, range	0...40 °C