Intex (for internal & external use) Mini-Breakout (Distribution) Optical Fibre Cables

halogen-free, metal-free

Application

- Structured (premises) wiring systems: **campus and/or building backbone (riser) and/or horizontal cabling**.
- Support all current and future Categories (5, 6, 7 and …) and all computer network applications such as FDDI, Gigabit Ethernet and ATM.
- **Easy to install** in ducts, tunnels and trenches. Not recommended for direct burial.

Key features

- These cables are **halogen-free** (= FRNC and LSNH) and watertight and therefore suitable for internal and external (= intex) use. Consequently splicing can be avoided and the installation gets more cost-effective.
- These cables are **all dielectric** (metal-free).
- **Predicted life time > 30 years**.

Construction & dimensions

Cable specifications (construction in accordance with IEC 60794)

1. Swellable reinforced yarns as common strength members and for the longitudinal watertightness.
2. Primary coated optical fibres: Ø 280 ± 15 µm.
3. Tight buffered fibres: Ø 0.9 ± 0.1 mm. Colour coding of the buffered fibres:
   white – red – blue – yellow – green – violet – brown – black – orange – turquoise – pink – grey
   of the fibres 1 – 12 the secondary coating is coloured
   of the fibres 13 – 24 the primary coating is coloured and the secondary coating is transparent.
4. Swellable tape.
5. **Orange** halogen-free (FRNC/LSNH) outer jacket.
   Identification: BELDEN OFC – “cable type” – ”number x type of fibre” +date-, meter- and P/N-marking.

Mechanical data

No. of fibres	**4**	**6**	**8**	**12**	**24**
Ø nom. (mm)	5.4	5.9	5.9	7.6	9.6
Max. pulling tension (N)	400	450	450	500	600
Energy of flame (kJ/m)	296	347	371	622	1082
Weight (kg/km)	26	30	32	45	65

Ordering information

Belden Europe code

Fibre-type/-count	**4**	**6**	**8**	**12**	**24**
9/125	available on request				
50/125	49485	49486	49487	49488	49489
62.5/125	49480	49481	49482	49483	49484
Colour code (orange)	3090	3090	3090	3090	3090
Reel code	241	025	025	042	042
Std. del. length	2100 ± 100 m				

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Optical characteristics

Characteristics (cabled) Multi-Mode - Graded-Index optical fibres according to IEC 60793

Fibre-type	Size (µm)	Wavelength (nm)	Attenuation average/max. (dB/km)	Bandwidth (MHz•km)	Gigabit Ethernet Performance (m)	Refractive Index
50/125	50 ± 2.5 125 ± 2	850 1300	2.6 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	550 550	1.481 1.476
62.5/125	62.5 ± 2.5 125 ± 2	850 1300	3.0 / 3.2 0.7 / 0.9	≥ 200 ≥ 600	220 550	1.495 1.490

Fibres with improved Gigabit Ethernet performance on request available.

Characteristics (cabled) Single-Mode - Matched-Cladded optical fibres according to ITU-G.652

Fibre-type	Size (µm)	Wavelength (nm)	Attenuation average/max. (dB/km)	Dispersion (ps/(nm•km))	PMD (ps/√km)	Refractive Index
9/125 patchcord quality	9.3 ± 0.5 125 ± 1	1310 1550	0.35 / 0.5 0.21 / 0.3	≤ 3.5 ≤ 18	≤ 0.5	1.467 1.467

A test report (attenuation) is supplied with each delivery.

Mechanical, physical and/or environmental

Temperature range according to IEC 60794-1-2-F1

Transport/storage	- 30 to + 70 ºC
Installation	- 5 to + 50 ºC
Operation	- 30 to + 70 ºC

Pulling tension according to IEC 60794-1-2-E1
See table with dimensions

Bending radii for fibres and tubes
Installation/operation > 25 mm

Halogen-free according to HD 602 (IEC 60754-2)
Corrosivity pH ≥ 3.5 - µS/cm ≤ 100

Strippability

Secondary coating only	≤ 10 cm
Secondary + primary coating	≤ 10 mm

Watertightness according to IEC 60794-1-2-F5

Crush resistance according to IEC 60794-1-2-E3

Tight buffer	≤ 4000 N /m
Cable	≤ 4000 N /m

Bending radii cable
Static according to IEC 60794-1-2-E11 – 15 x Ø
Dynamic according to IEC 60794-1-2-E6 – 20 x Ø

Flame retardancy according to IEC 60332-2

Guide to installation and handling

- When laying and installing optical fibre cables **it is vitally important not to exceed the specified values** set for pulling tension, bending radii and temperature. The installation methods have to be in accordance with the common standards.
- To ease insertion into tubes certified lubricants (e.g. paraffin) may be used. The use of soap or similar substances as lubricants is strictly prohibited.
- If a cable needs to be fastened, constrictions ≥ 0.3 mm must be prevented.
- It is advisable to cap the cable-ends during storage.

Options

- Indoor Mini-Breakout cables with tight buffered fibres or with excellent strippable dry semi-tight buffered fibres.
- Non-standard cable constructions with improved rodent protection, colours, details and/or additional information regarding specifications are available on request.

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