

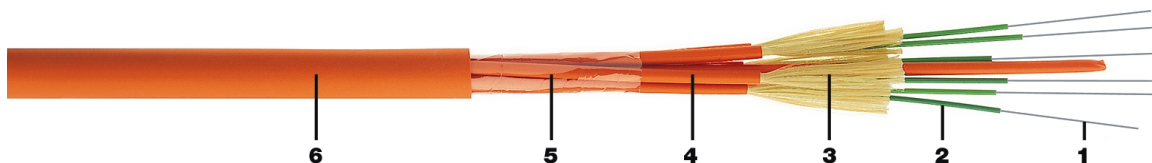
Application

- Structured (premises) wiring systems: **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.

Key features

- The individual single fibre units (of which these metal-free breakout cables are composed) permit direct **(detensioned) terminations with separate single-way connectors**, which eliminate splicing of pigtails and/or breakout kits.
- These cables are **halogen-free** (= FRNC and LSNH) and **metal-free** (all dielectric).
- **Predicted life time > 30 years**.

Construction & dimensions



Cable specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\text{Ø } 280 \pm 15 \text{ }\mu\text{m}$.
2. Tight buffered fibres: $\text{Ø } 0.9 \pm 0.1 \text{ mm}$.
3. Reinforced yarns as strength members.
4. **Orange** halogen-free (FRNC/LSNH), numbered jacket ($\text{Ø } 2.1 \pm 0.2 \text{ mm}$).
5. Tape.
6. **Orange** halogen-free (FRNC/LSNH) outer jacket with rip cord.
Identification: BELDEN OFC – “cable type” – “number x type of fibre” + date-,meter- and P/N-marking.

Mechanical data

No. of fibres	2	4	6	8	12	24
Cable core	2+ 2BE	CE+4	CE+6	CE+8	3+9	2+8+14
Ø nom. (mm)	5.3	6.2	8.0	9.4	10.5	14.3
Max. pulling tension (N)	400	400	600	800	1200	2400
Energy of flame (kJ/m)	379	507	928	1235	1424	2677
Weight (kg/km)	25	31	59	77	87	175

BE = Blind Element, CE = Central Element

Ordering information

Belden Europe code

Fibre-type/-count	2	4	6	8	12	24
9/125		49355		49470	49908	46994
50/125	49918	49851	49910	49852	49853	46993
62.5/125	49850	49900	49911	49917	49892	46995
Colour code (orange)	3130	3130	3130	3130	3130	3130
Reel code	025	025	042	042	043	043
Std. delivery length	2100 ± 100 m					



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 \pm 2.5	850	2.6 / 2.8	\geq 600	550	1.481
	125 \pm 2	1300	0.6 / 0.9	\geq 1200	550	1.476
62.5/125	62.5 \pm 2.5	850	3.0 / 3.2	\geq 200	220	1.495
	125 \pm 2	1300	0.7 / 0.9	\geq 600	550	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/ $\sqrt{\text{km}}$)	Refractive Index
9/125 patchcord quality	9.3 \pm 0.5	1310	0.35 / 0.5	\leq 3.5		1.467
	125 \pm 1	1550	0.21 / 0.3	\leq 18	\leq 0.5	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 °C
Installation	- 5 to + 50 °C
Operation	- 5 to + 55 °C

Strippability

Secondary coating only	\leq 10 cm
Secondary coating + primary coating	\leq 10 mm

Pulling tension according to IEC 60794-1-2-E1

Single fibre unit	\leq 110 N
Cables: see table with dimensions	

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

Tight buffer	\leq 4000 N/m
Single fibre unit	\leq 4000 N/m
Cable	\leq 7500 N/m

Bending radii for fibres and tight buffers

Installation/operation	$>$ 25 mm
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Bending radii cable

Static according to IEC 60794-1-2-E11	10 x \emptyset
Dynamic according to IEC 60794-1-2-E6	20 x \emptyset

Halogen-free according to HD 602 (IEC 60754-2)

Corrosivity	pH \geq 3.5 - $\mu\text{S/cm}$ \leq 100
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Flame retardancy according to IEC 60332-1

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.
- If a cable needs to be fastened, constrictions must be avoided.
- To ease insertion certified lubricants (e.g. paraffin) may be used. The use of soap or similar substances as lubricants is strictly prohibited.
- Indoor optical fibre cables have been designed for use inside buildings. Consequently they are not longitudinal watertight.
- It is advisable to cap the cable-ends during storage.

Options

- Mixed fibre types.
- Breakout cables with excellent strippable dry semi-tight buffered fibres.
- **Non-standard cable constructions**, colours, details and/or additional information regarding specifications are available on request.