GUBT

Intex Breakout Cables
Universal Indoor/Outdoor
A/I-VQ(ZN)HH

29-06-2016 v10.0

Ordering Information

Belden European Part Numbers

Fibre Description / count	2	4	6	8
62.5/125-OM1	GUBT102	GUBT104	GUBT106	GUBT108
50/125-OM2 BI	GUBT202	GUBT204	GUBT206	GUBT208
50/125-OM3 BI	GUBTD02	GUBTD04	GUBTD06	GUBTD08
50/125-OM4 BI	GUBTE02	GUBTE04	GUBTE06	GUBTE08
9/125 ITU G.657A1 BI	GUBTA02	GUBTA04	GUBTA06	GUBTA08
9/125 ITU G.657A2 BI	GUBTF02	GUBTF04	GUBTF06	GUBTF08
9/125 ITU G.657B3 BI	GUBTI02	GUBTI04	GUBTI06	GUBTI08
Std. reel (non-returnable)	∅ 800 * 475 mm weight 7.65 kg		∅ 1000 * 530 mm weight 18 kg	
Std. delivery length	2100 ± 105m			

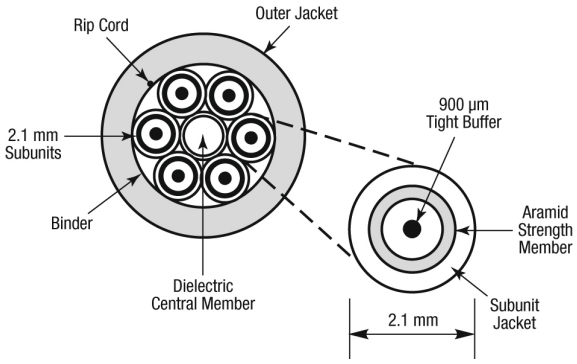
Applications

- For **outdoor and indoor** use in structured (data) wiring systems **(backbone)** and/or in networks for telecom, cable TV and/or broadcast.
- Support all computer network applications such as FDDI, Gigabit Ethernet and ATM.
- **Easy to install** in ducts, tunnels and trenches.

Features & Benefits

- 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 lifetime > 30 years**.

Construction & Dimensions



Cable Specifications (construction in accordance with IEC 60794)

1. Dielectric central element of glass reinforced plastic (GRP), also as protection against kinks, with water blocking tape
2. Primary coated optical fibres: Ø 280 ± 10 µm.
3. Tight buffered fibres: Ø 0.90 ± 0.1 mm.
4. Waterblocking aramid yarns as strength members.
5. **Yellow** (SM fibre) or **Orange** (MM fibre) halogen-free (FRNC/LSNH) numbered jacket (Ø 2.1 ± 0.2mm).
6. Waterblocking tape.
7. **Yellow** (SM fibre) or **Orange** (MM fibre) 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
Cable core	CE+2+2BE	CE+4	CE+6	CE+8
Ø nom. (mm)	7.2	7.2	8.0	10.0
Max. pulling tension (N) Short term	420	420	590	770
Weight (kg/km)	42	40	59	81
Energy of Flame (kJ/m)	975	507	928	1235

CE = Central Element, BE = Blind Element (filler)

Optical Characteristics

Characteristics Single-Mode – Matched-Cladded optical fibres according to ITU.

European P/N Coding, Position 5	Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Attenuation[B] typical/ max. (dB/km))	Dispersion (ps/(nm-km)	PMD[A] (ps/km)	Cable Cut-off Wave-length (nm)
A	**9/125 G.657A1 BI**	8.9 ± 0.4 124.8 ± 0.3	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.24	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
F	**9/125 G.657A2 BI**	8.9 ± 0.4 124.8 ± 0.3	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.24	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260
I	**9/125 G.657B3 BI**	8.8 ± 0.4 125 ± 0.4	1310 1550 1625	0.34 / 0.35 0.19 / 0.21 0.20 / 0.23	≤ 3.5 ≤ 18	≤ 0.06	≤ 1260

Note A- Link design value

Note B- Due to cabling the optical attenuation values can increase with max 0.15 dB/km (1310 nm), max. 0.09 dB/km (1550 nm) and max. 0.27 dB/km (1625 nm)

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

European P/N Coding, Position 5	Fibre-Type	Core/ Cladding Diameter (um)	Wave-length (nm)	Attenuation[C] typical/ max. (dB/km))	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (µm)
						1 GBE	10 GBE	
1	**62.5/125 OM1**	62.5 ± 2.5 125 ± 1	850 1300	2.7 / 3.0 0.7 / 0.8	≥ 200 ≥ 600	220 550	33 300	0.275 ± 0.015
2	**50/125 OM2 BI**	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 500 ≥ 500	600 600	83 300	0.20 ± 0.015
D	**50/125 OM3 BI**	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 1500 ≥ 500	1000 550	300 300	0.20 ± 0.015
E	**50/125 OM4 BI**	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.5 0.5 / 0.6	≥ 3500 ≥ 500	1100 550	550 300	0.20 ± 0.015

Note C- Due to cabling the optical attenuation values can increase with max. 0.4 dB/km

Macro Bending Performance Fibers

Maximum attenuation increase for Bend Insensitive Single Mode fibers in dB depending on turns and radius.

European P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 25 mm (dB)	Turns 10 Radius 15 mm (dB)	Turn 1 Radius 10 mm (dB)	Turn 1 Radius 7.5 mm (dB)	Turn 1 Radius 5 mm (dB))
A	**9/125 G.657A1**	1550 1625	0.01 0.05	0.2 0.5	0.2 0.5		
F	**9/125 G.657A2**	1550 1625		0.03 0.1	0.1 0.2	0.5 1.0	
I	**9/125 G.657B3**	1550 1625			0.03 0.10	0.08 0.25	0.15 0.45

Maximum attenuation increase for Bend Insensitive Multi Mode fibers in dB depending on turns and radius.

European P/N Coding, Position 5	Fibre-Type	Wave-length (nm)	Turns 100 Radius 37.5 mm (dB)	Turns 2 Radius 15 mm (dB))	Turns 2 Radius 7.5 mm (dB)
1	**62.5/125 OM1**	850 1300	0.5 0.5		
2	**50/125 OM2 BI**	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
D	**50/125 OM3 BI**	850 1300	0.5 0.5	0.1 0.3	0.2 0.5
E	**50/125 OM4 BI**	850 1300	0.5 0.5	0.1 0.3	0.2 0.5

Mechanical, Physical and/or Environmental Characteristics

Description:	Tested according to:	Requirement:	According to Family specification:
Storage Temperature Range Installation Temperature Range Operating Temperature Range	IEC 60794-1-22-F1	-30 to +70 °C -5 to +50 °C -30 to +70 °C	IEC 60794-2-20
Strippability Secondary coating only Secondary + primary coating		 ≤ 10 cm ≤ 10 mm	
Bending radii for fibres and tight buffers Installation/operation For Bend Insensitive fibres		 >25 mm See Optical Characteristics	
Cable Water Blocking	IEC 60794-1-22-F5	Pass	
Cable Min. Bend Radius Operation (Long Term) Cable Min. Bend Radius Installation (Short Term)	IEC 60794-1-21-E11 IEC 60794-1-21-E6	10 x Cable Diam. 20 x Cable Diam.	IEC 60794-2-20
Cable Max. Tensile Strength Operation (Short Term)	IEC 60794-1-21-E1	See table with dimensions	IEC 60794-2-20
Cable Max. Crush Resistance Operation (Long Term) Cable Max. Crush Resistance Installation (Short Term)	IEC 60794-1-21-E3	3 kN/m 5 kN/m	IEC 60794-2-20

Safety

	Testing standard	Description / Value
Reaction to fire	IEC 60332-1	
Smoke density	IEC 61034-2	
Halogen acid gas content	IEC 60754-1	Zero
Degree of acidity of gases	IEC 60754-2 IEC 60754-2	Min. 4.3 pH Max. 10 µS/mm

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.
- It is advisable to cap the cable-ends during storage