

GUDB

Central Loose Tube Cables

Universal – Indoor / Outdoor - Corrugated Steel Tape Armor (CST)

A/I-DQ(ZN)H(SR)H

Full Rodent Protection

Ordering Information

Belden European Part Numbers

Fibre type / count	4	6	8	12	16	24
62.5/125-OM1	GUDB104	GUDB106	GUDB108	GUDB112	GUDB116	GUDB124
50/125-OM2 BW 600/1200	GUDB204	GUDB206	GUDB208	GUDB212	GUDB216	GUDB224
50/125-OM3	GUDB304	GUDB306	GUDB308	GUDB312	GUDB316	GUDB324
50/125-OM2e	GUDB404	GUDB406	GUDB408	GUDB412	GUDB416	GUDB424
50/125-OM2 BW 500/500	GUDB504	GUDB506	GUDB508	GUDB512	GUDB516	GUDB524
50/125-OM4	GUDB604	GUDB606	GUDB608	GUDB612	GUDB616	GUDB624
9/125 ITU G.655	GUDB704	GUDB706	GUDB708	GUDB712	GUDB716	GUDB724
9/125 ITU G.652D-OS2	GUDB804	GUDB806	GUDB808	GUDB812	GUDB816	GUDB824
Std. plywood reel (non-returnable)	Ø 1000 * 588 mm 50 kg					
Std. delivery length	2100 ± 100m					

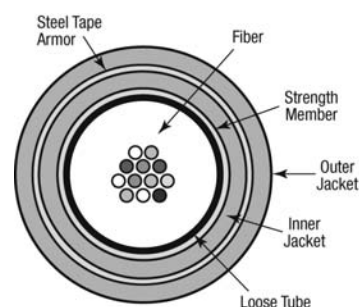
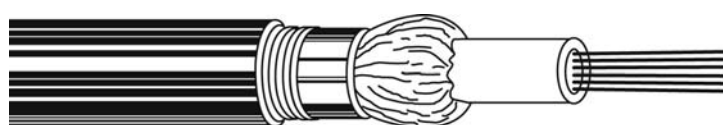
Applications

- For **outdoor and indoor** use in structured (data) wiring systems such as (**campus backbone**).
- For **outdoor and indoor** use in networks for telecom, cable TV and/or broadcast.
- Easy to install in ducts, tunnels and trenches. Suitable for direct burial.

Features & Benefits

- A simple cable construction and consequently **more cost-effective up to 24 fibres** than multi-tube cables.
- **High mechanical and full rodent protection** provided by corrugated steel tape (CST) armor.
- **Predicted lifetime > 30 years.**

Construction & Dimensions



Cable Specifications (construction in accordance with IEC 60794)

1. Primary coated optical fibres: $\text{Ø } 250 \pm 15 \text{ }\mu\text{m}$.
2. Central tube, jelly filled (**non-dripping and silicon-free**) with **up to 24 fibres**.
Individually colour coded optical fibres:
 - 1 – 12: red – natural – yellow – blue – green – violet – brown – black – orange – turquoise – pink and white.
 - 13 – 24: red – natural – yellow – blue – green – violet – brown – grey – orange – turquoise – pink and white with rings.
3. Water swellable E-glass yarns as strength members and for the **longitudinal watertightness**.
4. Black UV resistant FRNC/LSNH inner jacket.
5. Corrugated Steel Tape Armoring (CST): longitudinally applied steel tape (0.155 mm).
6. Black UV resistant FRNC/LSNH outer jacket.
Identification: BELDEN OFC – “cable type” – “number x fibre type” + date-, meter- and P/N marking.

Mechanical Data

No. of fibres	Max. 24
Ø Central tube (mm)	4.0
Ø nom./max. (mm)	13.0 / 13.3
Energy of flame (kJ/m)	2919
Weight (kg/km)	233

Optical Characteristics

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

European Partnumber Coding, Position 5	Fibre-Type	Mode-Field /Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Dispersion (ps/(nm-km))	PMD (ps/km)	Cable Cut-off Wave-length (nm)
8	9/125 G.652D OS2	9.2 ± 0.4 125 ± 0.7	1310 1550	0.32 / 0.40 0.21 / 0.30	≤ 3.5 ≤ 18	≤ 0.2	≤ 1260
7	9/125 G.655	8.4 ± 0.6 125 ± 1	1550	0.25 / 0.30	3.5 – 8.5	≤ 0.1 ^A	≤ 1260

Note A- Link design value

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

European Partnumber Coding, Position 5	Fibre-Type	Mode-Field Diameter (um)	Wave-length (nm)	Attenuation average/ max. (db/km)	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (µm)	Refr. Index
						1GBE	10 GBE		
1	62.5/125 OM1	62.5 ± 2.5 125 ± 1	850 1300	2.7 / 3.2 0.6 / 1.1	≥ 200 ≥ 600	275 550	33 n.a.	0.275 ± 0.015	1.495 1.490
5	50/125 OM2	50 ± 2.5 125 ± 1	850 1300	2.4 / 3.0 0.7 / 1.0	≥ 500 ≥ 500	600 600	82 n.a.	0.20 ± 0.015	1.481 1.476
2	50/125 OM2	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	600 600	82 n.a.	0.20 ± 0.015	1.481 1.476
4	50/125 OM2e	50 ± 2.5 125 ± 1	850 1300	2.3 / 2.8 0.6 / 0.9	≥ 600 ≥ 1200	750 2000	110 na	0.20 ± 0.015	1.481 1.476
3	50/125 OM3	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 1500 ≥ 500	900 550	300 n.a.	0.20 ± 0.015	1.482 1.477
6	50/125 OM4	50 ± 2.5 125 ± 1	850 1300	2.5 / 3.0 0.5 / 1.0	≥ 6000 ≥ 500	900 550	550 n.a.	0.20 ± 0.015	1.482 1.477

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

Mechanical, Physical and/or Environmental Characteristics

Requirements		
Temperature range according to IEC 60794-1-2-F1	Transport/storage	-30 to + 70 °C
	Installation	-5 to + 50 °C
	Operation	-30 to + 70 °C
Pulling tension according to IEC 60794-1-2-E1	Long term	≤ 2000 N
	Short term	≤ 4000 N
Bending radii for fibres and tubes	Installation/operation	>25 mm
Watertightness (core + inner jacket)	according to IEC 60794-1-2-F5	Pass
Crush resistance according to IEC 60794-1-2-E3	Armoured Central Loose Tube Cable	≤ 40 KN/m
Bending radii cable	Static according to IEC 60794-1-2-E11	10 x Ø
	Dynamic according to IEC 60794-1-2-E6	20 x Ø
Flame retardancy according to	IEC 60332-3-22 (EN 50266-2-2)	Pass
	IEC 61034 (EN 50268)	Pass
	IEC 60331-25	Pass
Halogen-free	according to IEC 60754-2 (EN 50267-2-2) Corrosivity	pH ≥ 3.5 - µS/cm ≤ 100

Guide to installation and handling

- When laying and installing optical fibre cables it is **vitaly 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 by means of compressed air or pulling wire, 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.
- The jelly filling inside the tubes can be removed using a tissue soaked in turpentine.
- It is advisable to cap the cable-ends during storage.

Options

- Cables for outdoor use only.
- **Non-standard cable constructions**, colours, details and/or additional information regarding specifications are available on request.

Revision

Rev.	Description	Date	Init.
02	OM3+ changed to OM4	12/10/09	JW
03	OS2 added	25/11/09	JW
04	Extended description watertightness	22/03/10	SN
Date: 15/08/08		Page 1 of 1	
Orig.: SN		Review:	
			Part Number: GUDB