

## GUCN

### Central Loose Tube Cables

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

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

Full Rodent Protection

### Ordering Information

#### Belden European Part Numbers

Fibre type / count	4	6	8	12	16	24
62.5/125-OM1	GUCN104	GUCN106	GUCN108	GUCN112	GUCN116	GUCN124
50/125-OM2 BW 600/1200	GUCN204	GUCN206	GUCN208	GUCN212	GUCN216	GUCN224
50/125-OM3	GUCN304	GUCN306	GUCN308	GUCN312	GUCN316	GUCN324
50/125-OM2e	GUCN404	GUCN406	GUCN408	GUCN412	GUCN416	GUCN424
50/125-OM2 BW 500/500	GUCN504	GUCN506	GUCN508	GUCN512	GUCN516	GUCN524
50/125-OM4	GUCN604	GUCN606	GUCN608	GUCN612	GUCN616	GUCN624
9/125 ITU G.655	GUCN704	GUCN706	GUCN708	GUCN712	GUCN716	GUCN724
9/125 ITU G.652D	GUCN804	GUCN806	GUCN808	GUCN812	GUCN816	GUCN824
Std. plywood reel (non-returnable)	Ø 1000 * 588 mm 50 kg					
Std. delivery length	2100 ± 100m					

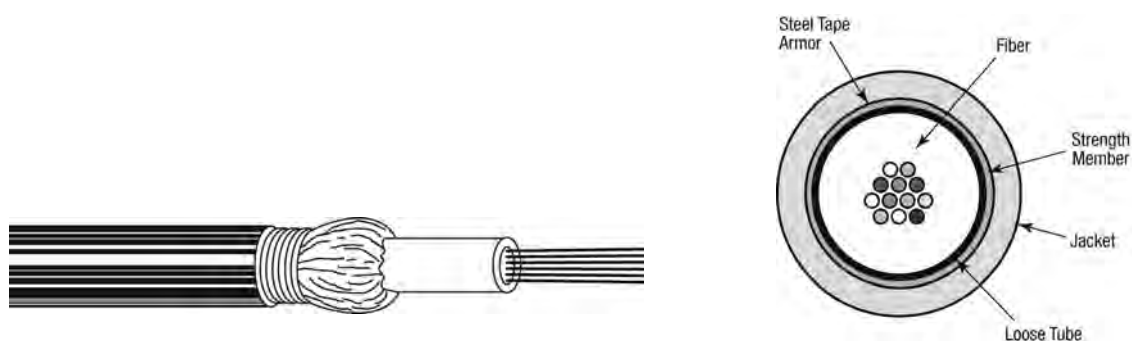
### Applications

- 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**) armour.
- **Predicted lifetime > 30 years.**

## Construction & Dimensions



### Cable Specifications (construction in accordance with IEC 60794)

- Primary coated optical fibres:  $\varnothing 250 \pm 15 \mu\text{m}$ .
- 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.
- Water swellable E-glass yarns as strength members and for the **longitudinal watertightness**.
- Corrugated Steel Tape Armouring (CST): longitudinally applied steel tape (0.155 mm).
- 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
$\varnothing$ Central tube (mm)	3.3
$\varnothing$ nom./max. (mm)	9.0/9.3
Energy of flame (kJ/m)	<b>1045</b>
Weight (kg/km)	103

## 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	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 <sup>A</sup>	≤ 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
						1 GBE	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	
<b>Temperature range</b> according to IEC 60794-1-2-F1 Transport/storage Installation Operation	-30 to + 70 °C -5 to + 50 °C -30 to + 70 °C
<b>Pulling tension</b> according to IEC 60794-1-2-E1 Long term Short term	≤ 800 N ≤ 1600 N
<b>Bending radii for fibres and tubes</b> Installation/operation	>25 mm
<b>Watertightness</b> according to IEC 60794-1-2-F5	Yes
<b>Crush resistance</b> according to IEC 60794-1-2-E3 Armoured Central Loose Tube Cable	≤ 30 KN/m
<b>Bending radii cable</b> Static according to IEC 60794-1-2-E11 Dynamic according to IEC 60794-1-2-E6	10 x Ø 20 x Ø
<b>Flame retardancy</b> according to IEC 60332-3-22 (EN 50266-2-2) IEC 61034 (EN 50268-2)	Pass Pass
<b>Circuit Integrity</b> according to IEC 60331-25 (E120) EN 50200	Pass Pass
<b>Halogen-free</b> 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	Add Circuit Integrity	21/02/12	SN
Date: 23/11/2010		Page 1 of 1	Part Number: <b>GUCN</b>
Orig.: SN		Review:	