

GUMV

Mini-Breakout Cables (Distribution)
Universal – Steel Wire Braid protection
A/I-VQ(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	GUMV104	GUMV106	GUMV108	GUMV112	GUMV116	GUMV124
50/125-OM2 BW 600/1200	GUMV204	GUMV206	GUMV208	GUMV212	GUMV216	GUMV224
50/125-OM3	GUMV304	GUMV306	GUMV308	GUMV312	GUMV316	GUMV324
50/125-OM2e	GUMV404	GUMV406	GUMV408	GUMV412	GUMV416	GUMV424
50/125-OM2 BW 500/500	GUMV504	GUMV506	GUMV508	GUMV512	GUMV516	GUMV524
50/125-OM4	GUMV604	GUMV606	GUMV608	GUMV612	GUMV616	GUMV624
9/125 ITU G.655	GUMV704	GUMV706	GUMV708	GUMV712	GUMV716	GUMV724
9/125 ITU G.652D	GUMV804	GUMV806	GUMV808	GUMV812	GUMV816	GUMV824
9.125 ITU G.657A1	GUMVA04	GUMVA06	GUMVA08	GUMVA12	GUMVA16	GUMVA24
Std. plywood reel (non-returnable)	Ø1000*530mm 18 kg					
Std. delivery length	2100 ± 100m					

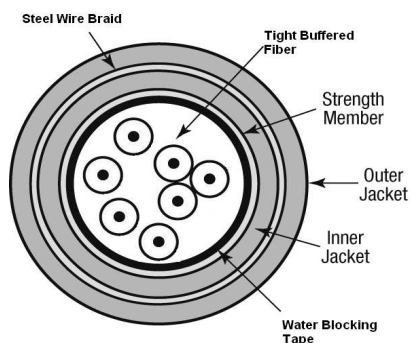
Applications

- Structured (premises) wiring systems: **campus and/or building backbone** (riser) and/or horizontal cabling.
- Support all computer network applications such as **FDDI, Gigabit Ethernet and ATM**.
- **Easy to install** in ducts, tunnels and trenches.

Features & Benefits

- These cables are **halogen-free** (= FRNC and LSNH) and watertight and therefore suitable for internal and external use. Consequently splicing can be avoided and the installation gets **more cost-effective**.
- **Predicted lifetime > 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: $\text{Ø } 280 \pm 15 \text{ }\mu\text{m}$.
3. Tight buffered fibres: $\text{Ø } 0.9 \pm 0.1 \text{ mm}$. Colour coding of the buffered fibres:
white – red – blue – yellow – green – violet – brown – black – orange – turquoise – pink – grey
The fibres 13 – 24 are ringmarked.
4. Swellable tape.
5. Halogen-free (FRNC/LSNH) outer jacket.
6. Steel Wire Braid, 0.25mm steel wires, 60% coverage.
7. Halogen-free (FRNC/LSNH) UV-resistant 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	16	24
Ø nom. (mm)	9.5	10	10	11.7	12.7	13.7
Max. pulling tension (N)						
Long term	400	450	450	500	500	600
Short term	800	900	900	1000	1000	1200
Energy of flame (kJ/m)	1120	1230	1250	1680	2000	2340
Weight (kg/km)	108	117	119	153	171	194

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 Patch cord quality	9.2 ± 0.4 125 ± 0.3	1310 1550	0.34 / 0.50 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
A	9/125 G.657A1	8.9 ± 0.4 125 ± 0.3	1310 1550 1625	0.35 / 0.5 0.21 / 0.3 0.24 / 0.4	≤ 3.5 ≤ 18	≤ 0.2	≤ 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	Core/ Cladding Diameter (um)	Wave-length (nm)	Attenuation average/ max. (dB/km)	Bandwidth (MHz•km)	Ethernet Performance (m)		Num. Apert. (µm)
						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
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
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
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
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
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

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 Installation Operation	-30 to + 70 °C -5 to + 50 °C -30 to + 70 °C
Pulling tension according to IEC 60794-1-2-E1	See table with dimensions
Bending radii for fibres and tubes Installation/operation	>25 mm
Strippability Secondary coating only Secondary + primary coating	≤ 10 cm ≤ 10 mm
Watertightness according to IEC 60794-1-2-F5	Yes
Crush resistance according to IEC 60794-1-2-E3 Tight buffer Cable	≤ 4000 N/ m ≤ 15 KN/ m
Bending radii cable Static according to IEC 60794-1-2-E11 Dynamic according to IEC 60794-1-2-E6	15 x Ø 20 x Ø
Flame retardancy according to: IEC 60332-3-24 (EN 50266-2-4)	Pass
Smoke density according to: IEC 61034-2 (EN 50268-2)	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 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.

Revision

Rev.	Description	Date	Init.
2.0	Change Crush resistance Cable	01/03/11	HB
3.0	Add UV resistance jacket	01/09/11	SN
Date: 01/03/2011		Page 1 of 1	
Orig.: HB		Review:	
			Part Number: GUMV