

## GMMT

### Mini-Breakout Cables (Distribution) Mobile, Tactical – Indoor/ Outdoor, A/I-VQ(ZN)11Y

Standard Rodent Protection

### Ordering Information

#### Belden European Part Numbers

Fibre type / count	4	6	8	12
62.5/125-OM1	GMMT104	GMMT106	GMMT112	GMMT112
50/125-OM2 BW 600/1200	GMMT204	GMMT206	GMMT212	GMMT212
50/125-OM3	GMMT304	GMMT306	GMMT312	GMMT312
50/125-OM2e	GMMT404	GMMT406	GMMT412	GMMT412
50/125-OM2 BW 500/500	GMMT504	GMMT506	GMMT512	GMMT512
50/125-OM4	GMMT604	GMMT606	GMMT612	GMMT612
9/125 ITU G.655	GMMT704	GMMT706	GMMT712	GMMT712
9/125 ITU G.652D	GMMT804	GMMT806	GMMT812	GMMT812
9.125 ITU G.657A	GMMTA04	GMMTA06	GMMTA12	GMMTA12
Std. plywood reel (non-returnable)	∅ 560 * 336 mm, 4.25 kg	∅ 800 * 475 mm, 7.65 kg		
Std. delivery length	2100 ± 100m			

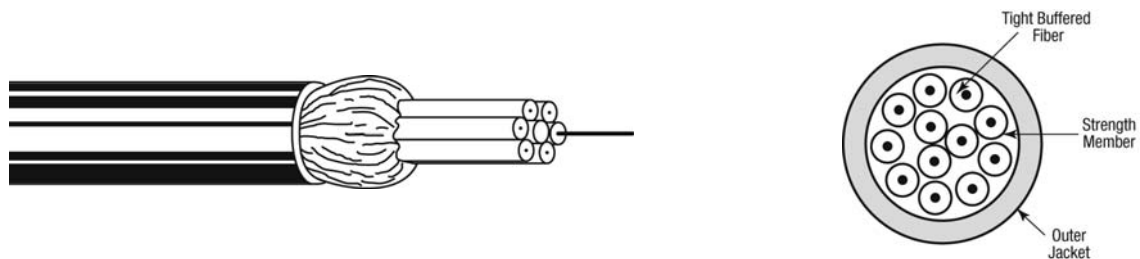
### Applications

- These metal-free mobile cables have been designed for de-spooling and re-spooling repeatedly.
- Support computer network applications such as FDDI, Gigabit Ethernet and ATM.
- **Easy to install.** Not recommended for direct burial.

### Features & Benefits

- These cables are flame retardant and watertight and therefore suitable for internal and external (= intex) use.
- These cables are all **dielectric** (metal-free).
- **Predicted lifetime > 30 years.**

## Construction & Dimensions



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

1. Primary coated optical fibres:  $\text{Ø } 280 \pm 15 \mu\text{m}$ .
2. 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.
3. Swellable reinforced yarns as common strength members and for the longitudinal watertightness.
4. **Orange or Black Polyurethane** outer jacket with (polyester) rip cord.  
Identification: BELDEN OFC – HEAVY DUTY TACTICAL CABLE – "number x type of fibre" +date-, meter- and P/N-marking.

### Mechanical Data

No. of fibres	4	6	8	12
Ø Outer jacket nom. (mm)	5.8	6.3	7.0	8.2
Max. pulling tension (N)				
Long term	800	950	1100	1100
Short term	1600	2000	2200	2200
Energy of flame (kJ/m)	580	725	890	1270
Weight (kg/km)	31	38	47	76

## 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 <sup>A</sup>	≤ 1260
A	9/125 G.657A	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	
<b>Temperature range</b> according to IEC 60794-1-2-F1 Transport/storage Installation Operation	-70 to + 85 °C -5 to + 50 °C -55 to + 85 °C
<b>Pulling tension</b> according to IEC 60794-1-2-E1	See table with dimensions
<b>Bending radii for fibres</b> Installation/operation (all fiber): Only for G657A:	>25 mm Max. increase 0.02 dB/turn @1550nm with 32 mm Max. increase 0.20 dB/turn @1550nm with 20 mm
<b>Strippability</b> Secondary coating only Secondary + primary coating	≤ 10 cm ≤ 10 mm
<b>Watertightness</b> according to IEC 60794-1-2-F5	Yes
<b>Crush resistance</b> according to IEC 60794-1-2-E3 Tight buffer Cable	≤ 4000 N/ m ≤ 4000 N/ m
<b>Bending radii cable</b> Static according to IEC 60794-1-2-E11 Dynamic according to IEC 60794-1-2-E6 Only for G657A:	15 x Ø 20 x Ø 8 x Ø 4 x Ø
<b>Flame retardancy</b> according to: IEC 60332-2 (EN 50265-2-2)	Pass
<b>Repeated bending</b> according to IEC 60794-1-2-E6	> 700.000 times

## 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 ≥ 0.3 mm must be prevented.
- It is advisable to cap the cable-ends during storage.

## Options

- 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.
02	OM3+ changed to OM4	13/10/09	JW
03	Increased temperature range	04/11/09	TvR
04	Increased temperature range	21/12/10	SN
05	Add 12f cable	15/08/11	SN
Date: 19/01/09		Page 1 of 1	
Orig.: SN		Review:	
			Part Number: <b>GMMT</b>