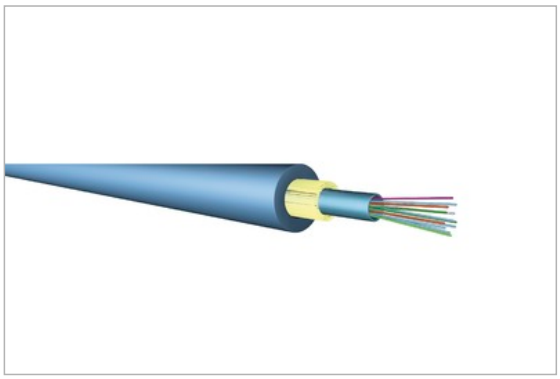
# FO Universal Cable 12G50/125µm OM2 1.5kN with non-metallic rodent protection

trans data elektronik GmbH

## Description

This cable can be used for LAN and WAN backbones, telecom access lines, fiber to business and fiber to the building drop connections as well as fiber to the home drop and access connections. With its FireBur® LSHF sheathing this cable is ideal for mixed indoor and outdoor installation. This cable features a high tensile strength and a degree of rodent protection, effective in many cases. It is equally suited for installation in ducts and on trays. The cable is suited for installation in tubes by blowing and flooding. The cable may be used for direct burial with proper sand back filling.



## Technical Data

### Standards

ISO 11801 2nd edition

EN 50173-1:2002

IEC 60794-1

### Construction

| | |
|---|---|
| Cabletype | Universal U-DQ(ZN)BH for indoor and outdoor use |
| Lose tube | ø2.8 mm jelly filled loose tube |
| Strengh Member | Waterblocked E-Glass fiber elements |
| Sheath | 1.5 mm blue FireBur® sheath, UV stabilised, IEC 50290-2-27 |

### Fire rating

| | |
|---|---|
| IEC 60332-1-2 | Single vertical wire test |
| IEC 60754-1 | No halogens |
| IEC 60754-2 | No acid matters |
| IEC 61034-2 | No dense smoke |

### Heat of combustion

| Fiber count | MJ/km | KWh/m |
|---|---|---|

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Network components,
Cable technology and Fibre optics

ISO 9001, TL 9000
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| | | |
|---|---|---|
| 2-16 | 1100 | 0.31 |

Mechanical properties

| | | |
|---|---|---|
| Maximum installation tensile strength | E1 | 1500 N (fiber strain less than 1/2 of proof test level) |
| Short term tensile strength | E1 | 1000 N (fiber strain less than 1/3 of proof test level) |
| Permanent tensile strength | E1 | 700 N (no attenuation change, fiber strain less than 1/4 of proof test level) |
| Compressive strength (crush) | E3 | 2000N |
| Impact | E4 | 20 Nm (no attenuation change, no broken cable elements) |
| Torsion | E7 | 5 cycles ± 1 turn |
| Kink | E10 | The cables do not form a kink when a loop is drawn together to a diameter of 200 mm |
| Min. Bending radius, unloaded | E11 | R = 60 mm |
| Min. Bending radius, loaded | - | R = 100 mm |
| Temperature range | F1 | Storage: -40°C to +60°C (short term up to 70 °C)<br>Installation: -15°C to +40°C<br>Operation: -30°C to +70°C |
| Water penetration | F5B | No water on free end |
| Nominal outer diameter | - | 2 - 16 fibers: 7.5 mm |
| Nominal weight | - | 2 - 16 fibers: 55 kg/km |

**FO Fiber**

| | |
|---|---|
| Type | Draka OM2 50/125µm multimode fiber (C23) |

| | | |
|---|---|---|
| Standards and Norms | IEC 60793-2-10 Category A1a | EN 50173-1:2007 category OM2 |
| | EN 60793-2-10: type A1a | ISO/IEC 11801:2002 category OM2 |
| | ITU Recommendations G.651 | IEEE 802.3 - 2002. with amendment 802.3ae – 2002 |
| | TIA/EIA-492 AAAB | ANSI/TIA/EIA-568.B.3 – 2000 |

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Attenuation (of cable with fibers) according to IEC 60793-1-40

| | |
|---|---|
| 850 nm | ≤ 2.7 dB/km |
| 1300 nm | ≤ 0.8 dB/km |
| Inhomogeneity of OTDR trace for any two 1000 metre fiber lengths | Max. 0.2 dB/km |

Bandwidth according to IEC 60793-1-41

| | |
|---|---|
| 850 nm | 500 MHz*km |
| 1300 nm | 500 MHz*km |

Group index of refraction according to IEC 60793-1-22

| | |
|---|---|
| Group index of refraction at 850 nm | 1.482 |
| Group index of refraction at 1300 nm | 1.477 |

Other properties according to IEC 60793-1-xx

| Attribute | Measurement method | Limits |
|---|---|---|
| Core diameter | IEC/EN 60793-1-20 | 50 ± 2.5 µm |
| Cladding diameter | IEC/EN 60793-1-20 | 125.0 ± 1.0 µm |
| Cladding non-circularity | IEC/EN 60793-1-20 | ≤ 1.0% |
| Core non-circularity | IEC/EN 60793-1-20 | ≤ 5% |
| Core -cladding concentricity error | IEC/EN 60793-1-20 | ≤ 1.5 µm |
| Primary coating diameter - uncoloured | IEC/EN 60793-1-21 | 242 ± 7 µm |
| Primary coating diameter - coloured | IEC/EN 60793-1-21 | 250 ± 15 µm |
| Primary coating non-circularity | IEC/EN 60793-1-21 | ≤ 5% |
| Primary coating-cladding concentricity error | IEC/EN 60793-1-21 | ≤ 10 µm |
| Proof stress level | IEC/EN 60793-1-30 | ≥ 0.7 (≈ 1 %) |
| Typical average strip force | IEC/EN 60793-1-32 | 1.7 N |
| Strip force (peak) | IEC/EN 60793-1-32 | 1.3 N ≤ Fpeak.strip ≤ 8.9 N |
| Numerical aperture | IEC/EN 60793-1-43 | 0.200 ± 0.015 |

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| Art.-No. | Description |
|---|---|
| L-U-DQ(ZN)BH012G50 | FO Universal Cable 12G50/125µm OM2 1.5kN with non-metallic rodent protection |

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