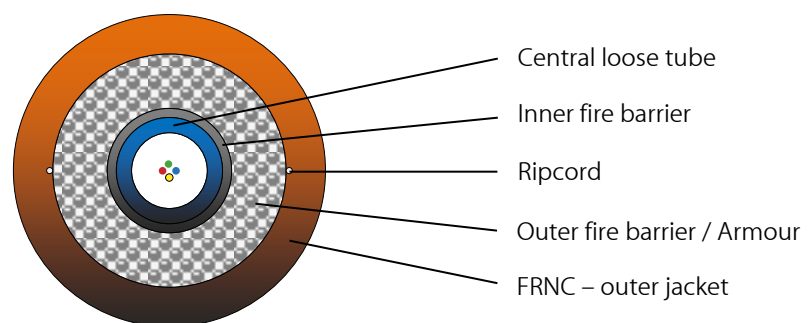


Part No.: **84040#### 222 ZGELO (marine applications)**

FiberConnect® U-D(ZN)BH n ... FS ZB
Universal cable with circuit integrity and resistance to fire
for use in emergency circuits

Profile view:



Design:

Cable core:

- Gel-filled loose tube outer diameter 3.5 mm with 2-12 optical fibres and outer diameter 4.0 mm with 14-24 optical fibres
Tube colour: yellow (E9/125), green (G50/125), blue (G62.5/125)
- Fibre colours (1-12): red, green, blue, yellow, white, grey, brown, violet, turquoise, black, orange, pink
(13-24): red, green, blue, yellow, white, grey, brown, violet, turquoise, transparent, orange, pink (with black ring-marking, except transparent)
- Inner fire barrier: Fire protection tape made of woven glass

Armour:

- Outer fire barrier: Multifunctional E-glass yarns, two layers (S and Z), as strain relief element and non-metallic rodent protection

Outer jacket:

- Halogen-free and flame-retardant material FRNC (SHF1, IEC 60092 Part 360), with approx. 1.2 mm wall, colour: orange
- Outer diameter see table below
- Two diametrically opposite ripcords
- Inkjet-marking black:
LEONI - FO - FiberConnect® fire resistant DNV GL U-D(ZN)BH *n fibre type* FS ZB (alternating current symbol twice) - IEC 60332-3-22 – IEC 60331-25 - Dca s2 d2 a1 DoP:CDERF0000005 (reel no.) (sequential length in metres)

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Fibres max.	Outer diam. mm	Weight kg/km	Fire load MJ/m
12	10.3	127	1,03
24	10.8	134	1.28

Application/Installation:

- Fiber optic universal cable with circuit integrity with a non-metallic armour and for enhanced tensile load
- For fixed installation in ships in cable ducts and in tubes

Transmission characteristics:

- Transmission characteristics see separate fibre data-sheet

Mechanical characteristics:

- Min. bending radius (IEC 60794-1-2, G1)
 - static 15 x outside diameter
 - dynamic 20 x outside diameter
- Max. pull force (IEC 60794-1-2, E1) 2500 N
- Max. crush resistance (IEC 60794-1-2, E3) 3000 N/dm

Thermal characteristics:

- Transport and storage - 40 °C to + 70 °C
- Installation - 5 °C to + 50 °C
- In use - 40 °C to + 60 °C

Fire performance:

- Flame retardancy acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat.A
- Smoke density acc. to IEC 61034
- Acidity of the combustion gases acc. to IEC 60754-1
- Halogen-free acc. to IEC 60754-2
- Circuit integrity 90 min. acc. to IEC 60331-11 and -25
max. change of attenuation 2,0 dB
VDE test report 111100-9020-0001/11291
- Resistance to fire for use in emergency circuits test acc. to EN 50200:2015 (830 +40/-0°C, 180 min)
 - max. change of attenuation:
 - Single Mode
 - max. 1.0 dB at 1310 nm
 - max. 1.0 dB at 1550 nm
 - Multi Mode
 - max. 2.0 dB at 850 nm
 - max. 2.0 dB at 1300 nm
 - VDE test report:
5005019-9601-0001/249341-TL6-1,
5005019-9601-0001/249341-TL6-2
Date: 2018-07-23

Part No.: **84040#### 222 ZGELO (marine applications)**

- No corrosive and toxic fumes
- Fire Class according EN 13501-6 $D_{ca-s2, d2, a1}$

Chemical characteristics:

- Oil resistance acc. to IEC 60811-2-1 with test-oil IRM 902 (acc. to ISO 1817) at +70°C; 4 h; pulling rate 50 mm/min relative change of the elongation at break and tensile strength max. +/- 40 %

Standardisation:

- IEC 60794-2
- DNV-GL Type Approval Certificate No. TAE0000156
- EN 50575 : 2014 + A1 : 2016
No. of Declaration of Performance $CDERF0000005 - V2$

Notes:

- Packaging:
Disposable drums, wooden drums of KTG