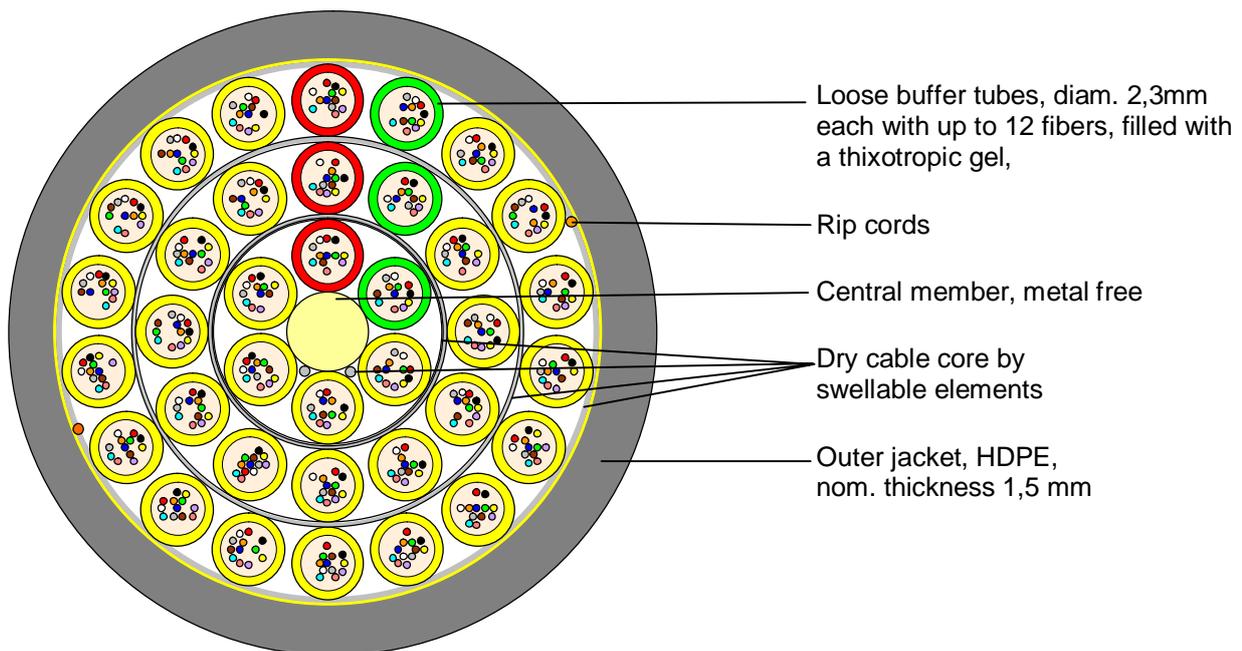


Non-metallic fiber optic duct cables with 12 to 432 single-mode fibers E9/125 SMF 28e+™



Principle drawing Example: A-DQ(ZN)2Y 36x12 E9/125 0.36F3.5 + 0.22H18 LG

A-DQ(ZN)2Y 12 to 432 E9/125 0.36F3.5 + 0.22H18 LG

Design and special properties

- Light, thin and robust cables
- Cables for pulling into duct systems, laying in concrete channels or on cable racks
- Optimized cable stiffness yields an excellent blowing performance
- Fully dielectric cable requires no grounding or potential equalization
- Dry cable core by swellable elements
- HDPE-jacket, UV-resistant
- Single-layer stranded construction up to 144 fibers
- Double-layer stranded construction for > 144 up to 288 fibers
- Triple-layer stranded construction for > 288 up to 432 fibers
- The used Corning[®] single-mode fibers SMF-28e[®] are fully compliant to standard ITU-T G.652.D (reduced OH- peak) showing low attenuation throughout the 1285 nm to 1625 nm wavelength range
- Customer standard for fiber and loose tube coloring
- Cable design according to Corning standard

Data sheet

Coloring

Fibers: white, red, yellow, green, blue, grey, brown, black, violet, turquoise, orange, pink
 Buffer tubes: all layers: red, green, following yellow
 Filling elements: natural, if required to fill up the cable core
 Outer jacket: black
 Cable printing: acc. customer specification
 Method: hot foil printing

Characteristics of single-mode fibers E9/125 SMF-28e+[®]

Optical and mechanical:

| | | |
|--|------------------------|-----------------|
| Mode-field diameter at 1310 nm | [μm] | 9.2 \pm 0.4 |
| Cladding diameter | [μm] | 125.0 \pm 0.7 |
| Coating diameter | [μm] | 242 \pm 5 |
| Max. attenuation at 1310 nm | [dB/km] | \leq 0.36 |
| Max. attenuation at 1550 nm | [dB/km] | \leq 0.22 |
| Typical attenuation at 1310 nm | [dB/km] | \leq 0.34 |
| Typical a attenuation at 1550 nm | [dB/km] | \leq 0.20 |
| Attenuation at 1383 nm | [dB/km] | \leq 0.36 |
| Dispersion in the range 1285 to 1330 nm | [ps/(nm*km)] | \leq 3.5 |
| Dispersion at 1550 nm | [ps/(nm*km)] | \leq 18 |
| Cable cutoff wavelength (λ_{cc}) | [nm] | \leq 1260 |
| PMD Link Design Value | Ps/ $\sqrt{\text{km}}$ | \leq 0.06* |

*) Complies with IEC 60794-3:2001, Section 5.5, Method 1 (m=20,Q=0,01%)
 The fibers are fully in compliance with ITU-T G.652.D and annexes

Technical cable characteristics

Mechanical and environmental:

| | | | |
|--|-------------------------|------------------------|-----------|
| Max. tensile load during installation | [N] | 2700 | |
| Crush (test methode acc. IEC 69794-1-2 E3) | [N/10 cm] | 2000 | |
| Impact (test methode acc. IEC 69794-1-2 E4, 5 J, r=300 mm) | impacts | 1 in 3 pos. | |
| Temperature range | Laying and installation | [$^{\circ}\text{C}$] | -5 to 50 |
| | Operation | | -40 to 70 |
| | Transport and storage | | -40 to 70 |
| Water penetration (0.1 bar / 24 h) | [m] | \leq 1 | |

| Cable type | No. of fibers | No. of tubes | No. of stranding elements | Outer \varnothing , approx. [mm] | Weight, approx. [kg/km] | Min. bending radius during install. [mm] |
|------------------------|---------------|--------------|---------------------------|------------------------------------|-------------------------|--|
| A-DQ(ZN)2Y ... | | | | | | |
| 1x12 to 6x12 | 12 - 72 | 1 - 6 | 6 | 10,5 | 80 | 180 |
| 8x12 | 96 | 8 | 8 | 11,9 | 103 | 205 |
| 12x12 | 144 | 12 | 12 | 14,9 | 163 | 240 |
| (4x12)+(12x12) | 192 | 16 | 18 | 15,1 | 160 | 250 |
| (5x12)+(15x12) | 240 | 20 | 24 | 17,2 | 213 | 295 |
| (9x12)+(15x12) | 288 | 24 | 24 | 17,2 | 213 | 295 |
| (11x12)+(17x12) | 336 | 28 | 28 | 19,9 | 275 | 358 |
| (6x12)+(12x12)+(18x12) | 432 | 36 | 36 | 19,9 | 275 | 358 |

Delivery length

Delivery length up to 6 km