



- 1** ≤ 12 fibres
- 2** Flame retardant protective coating
- 3** Glass armour
- 4** Ripcord
- 5** FR/LS0H sheath



## DESCRIPTION

Metal-free fibre optic safety cable with one central loose tube, up to 12 fibres.

The optimal combination of flame retardant fibre coating and flame-inhibiting stabilizing elements ensures enhanced functional integrity (System Circuit Integrity) in case of fire for 30 minutes (transmission of audio, video and 1Gbit/s signals approved by a certified test report).

## APPLICATION

Safety applications in tunnels, underground railways, banks, insurance companies, large-scale industry.

LAN backbone.

Indoor and outdoor cabling.

Can be installed in cable platforms, trays, ducts and vertical shafts.

Can be spliced in FO distributors.

## OPTICAL PROPERTIES

The cables are available with different types of optical fibre (see fibre data sheets).

## MECHANICAL PROPERTIES

|                      |                      |             |                  |
|----------------------|----------------------|-------------|------------------|
| Temperature range    | storage:             | -25 / +70°C | IEC 60794-1-2 F1 |
|                      | during installation: | -10 / +50°C |                  |
|                      | in operation:        | -25 / +60°C |                  |
| Tensile performance: | IEC 60794-1-2 E1     |             |                  |
| Crush resistance:    | IEC 60794-1-2 E3     |             |                  |
| Impact:              | IEC 60794-1-2 E4     |             |                  |
| Repeated bending:    | IEC 60794-1-2 E6     |             |                  |
| Torsion:             | IEC 60794-1-2 E7     |             |                  |
| Bend:                | IEC 60794-1-2 E11    |             |                  |
| Water penetration:   | IEC 60794-1-2 F5     |             |                  |

## STANDARDS

Imprint DATWYLER «cable type» «Datwyler designation» «DIN designation» «no. of fibres» «fibre type» «add. text» «batch no.» «meter marks»

|                                  |   |
|----------------------------------|---|
| Zero halogen, no corrosive gases | IEC 60754-1/-2, EN 50267-2-1/-2-2, VDE 0482-267-2-1/-2-2  |
| Flame propagation                | IEC 60332-1/-2, EN 60332-1-2, VDE 0482-332-1-2  |
| Flame spread                     | IEC 60332.3 C, EN 50266-2-4, VDE 0482-266-2-4   |
| Smoke density                    | IEC 61034-1/-2, EN 61034-1/-2 (EN 50268-1/-2), VDE 0482-1034-1/-2 (VDE 0482-268-1/-2)               |
| Circuit Integrity (FE180)        | IEC 60331-11, IEC 60331-25, VDE 0472 part 814, EN 50200 PH 90, EN 50362, VDE 0482-200, VDE 0482-362 |
| System circuit integrity         | according to DIN 4102 part 12, VKF Fire Safety Application No. 24176                                |

### VERSIONS

| Article Number | Product             | Fibres number | Sheath colour | Fibre type     | Loose Tubes | Sheath Ø [mm] | Weight [kg/km] | Bending radius [mm] | Tensile load [N] | Crush resistance continuous [N] | Crush resistance short term [N] | Fire load [kWh/km] | Fire load [MJ/km] |
|----------------|---------------------|---------------|---------------|----------------|-------------|---------------|----------------|---------------------|------------------|---------------------------------|---------------------------------|--------------------|-------------------|
| 187288         | ZGGFR Safety 1 x 4  | 4             | red           | E9/125 G.652.D | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 186363         | ZGGFR Safety 1 x 4  | 4             | red           | G50/125 OM2    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 190604         | ZGGFR Safety 1 x 4  | 4             | red           | G50/125 OM3    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 193447         | ZGGFR Safety 1 x 4  | 4             | red           | G50/125 OM4    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 186638         | ZGGFR Safety 1 x 4  | 4             | red           | G62.5/125 OM1  | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 191867         | ZGGFR Safety 1 x 6  | 6             | red           | E9/125 G.652.D | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 186639         | ZGGFR Safety 1 x 6  | 6             | red           | G50/125 OM2    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 191851         | ZGGFR Safety 1 x 6  | 6             | red           | G50/125 OM3    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 193448         | ZGGFR Safety 1 x 6  | 6             | red           | G50/125 OM4    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 190792         | ZGGFR Safety 1 x 6  | 6             | red           | G62.5/125 OM1  | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| on request     | ZGGFR Safety 1 x 8  | 8             | red           | E9/125 G.652.D | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 190621         | ZGGFR Safety 1 x 8  | 8             | red           | G50/125 OM2    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| on request     | ZGGFR Safety 1 x 8  | 8             | red           | G50/125 OM3    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 193449         | ZGGFR Safety 1 x 8  | 8             | red           | G50/125 OM4    | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| on request     | ZGGFR Safety 1 x 8  | 8             | red           | G62.5/125 OM1  | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |
| 190719         | ZGGFR Safety 1 x 12 | 12            | red           | E9/125 G.652.D | 1           | 7.8           | 72             | 120                 | 1000             | 2000                            | 5000                            | 301                | 1084              |

# FO Universal ZGGFR Safety / U-DQ(ZN)BH

Safety cable E30



|        |                           |    |     |                  |   |     |    |     |      |      |      |     |      |
|--------|---------------------------|----|-----|------------------|---|-----|----|-----|------|------|------|-----|------|
| 187293 | ZGGFR<br>Safety 1 x<br>12 | 12 | red | G50/125<br>OM2   | 1 | 7.8 | 72 | 120 | 1000 | 2000 | 5000 | 301 | 1084 |
| 191796 | ZGGFR<br>Safety 1 x<br>12 | 12 | red | G50/125<br>OM3   | 1 | 7.8 | 72 | 120 | 1000 | 2000 | 5000 | 301 | 1084 |
| 193450 | ZGGFR<br>Safety 1 x<br>12 | 12 | red | G50/125<br>OM4   | 1 | 7.8 | 72 | 120 | 1000 | 2000 | 5000 | 301 | 1084 |
| 187305 | ZGGFR<br>Safety 1 x<br>12 | 12 | red | G62.5/125<br>OM1 | 1 | 7.8 | 72 | 120 | 1000 | 2000 | 5000 | 301 | 1084 |