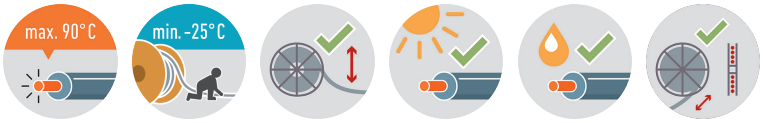
# Flexible medium voltage cable PRYSMIAN Protolon® (SMK-200)-LWL (N)TSKCGEWOEU

**Application**: Flexible medium voltage reeling cable with fiber optic wires, for high and extreme mechanical stress, e.g. torsional stress, deflection and high reeling speed. Other applications have to be agreed with Faber otherwise warranty may become void. The cables can be manufactured to order or project-specific with E9/125, 50/125 or 62.5/125 fibres.

- Min. bending radius: acc. to VDE 0298-3
- Max. Current carrying capacity: acc. to VDE 0298-4 table 15

**Construction and technical data:**

| | |
|---|---|
| **Standard:** | DIN VDE 0250-813 (with ref. to) |
| **Conductor material:** | copper, bare |
| **Conductor construction:** | Class 5 = fine stranded - DIN EN IEC 60228 (VDE 0295) |
| **Insulation:** | rubber (EPR) 3GI3 |
| **Electrical field control:** | inner and outer semiconducting rubber layer |
| **Arrangement of protective conductors:** | split in the outer interstices |
| **Material inner sheath:** | Gummi 5GM3 |
| **Torsion protection:** | synthetic braid |
| **Sheathing material:** | rubber 5GM5 |
| **Colour of outer sheath:** | red |
| **UV-resistant:** | yes |
| **Oil-resistant:** | DIN EN 60811-404 / VDE 0473-811-404 / IEC 60811-404 |
| **Ozone-resistant:** | yes |
| **Max. temperature at conductor, °C:** | 90 °C |
| **Max. short circuit temperature at conductor, °C:** | 250 °C |
| **Permitted outer cable temperature, fixed, °C:** | -40 - +80 °C |
| **Permitted outer cable temperature, moved, °C:** | -25 - +80 °C |
| **Operating speed monospiral (two ways), m/min.:** | 160 m/min. |
| **Operating speed monospiral (one way), m/min.:** | 200 m/min. |




*The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.*

## Protolon® (SMK-200) -LWL (N)TSKCGEWOEU 3.6/6 kV

**Nominal voltage Uo:** 3.6 kV

**Nominal voltage U:** 6 kV

**Maximum permitted operating voltage in three-phase systems:** 7.2 kV

**Test voltage:** 11 kV

| part no. | part name | Rl [Ohm/km] | Ibl [A] | Ik [kA] | Ø [mm] | Fzp [N] | Fzd [N] | Cu | G [kg] |
|---|---|---|---|---|---|---|---|---|---|
| 054373 | 03x120+2x70/2+1x(6E9/125) | 0.161 | 352 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |
| 054374 | 03x120+2x70/2+1x(6G50/125) | 0.161 | 352 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |
| 054375 | 03x120+2x70/2+1x(6G62.5/125) | 0.161 | 352 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |
| 053407 | 03x120+2x70/2+1x(12G62.5/125) | 0.161 | 352 | 17.16 | 45.5 | 7200 | 9000 | 1018 | 2800 |

## Protolon® (SMK-200) -LWL (N)TSKCGEWOEU 6/10 kV

**Nominal voltage Uo:** 6 kV

**Nominal voltage U:** 10 kV

**Maximum permitted operating voltage in three-phase systems:** 12 kV

**Test voltage:** 17 kV

| part no. | part name | Rl [Ohm/km] | Ibl [A] | Ik [kA] | Ø [mm] | Fzp [N] | Fzd [N] | Cu | G [kg] |
|---|---|---|---|---|---|---|---|---|---|
| 054428 | 03x25+2x25/2+1x(24E9/125) | 0.78 | 131 | 3.575 | 42.2 | 1500 | 1875 | 960 | 2506 |
| 054429 | 03x25+2x25/2+1x(24G50/125) | 0.78 | 131 | 3.575 | 42.2 | 1500 | 1875 | 960 | 2506 |
| 054430 | 03x25+2x25/2+1x(24G62.5/125) | 0.78 | 131 | 3.575 | 42.2 | 1500 | 1875 | 960 | 2506 |
| 054100 | 03x25+2x25/2+1x(12E9/125)+ 1x(12G62.5/125) | 0.78 | 131 | 3.575 | 43.7 | 1500 | 1875 | 960 | 2737 |
| 053095 | 03x50+2x25/2+1x(12G62.5/125) | 0.386 | 202 | 7.15 | 46.8 | 3000 | 3750 | 1680 | 3500 |
| 054705 | 03X35 + 2X25/2 + 1X(24E9/125) | 0.554 | 162 | 5.01 | 44.2 | 2100 | 2625 | 1248 | 2834 |
| 054706 | 03X35 + 2X25/2 + 1X(24G50/125) | 0.554 | 162 | 5.01 | 44.2 | 2100 | 2625 | 1248 | 2834 |
| 054707 | 03X35 + 2X25/2 + 1x(24G62.5/125) | 0.554 | 162 | 5.01 | 44.2 | 2100 | 2625 | 1248 | 2834 |
| 054117 | 03x70+2x35/2+1x(18E9/125) | 0.272 | 250 | 10.01 | 55.1 | 4200 | 5250 | 2470 | 5007 |
| 054118 | 03x70+2x35/2+1x(18G50/125) | 0.272 | 250 | 10.01 | 55.1 | 4200 | 5250 | 2470 | 5007 |
| 054119 | 03x70+2x35/2+1x(18G62.5/125) | 0.272 | 250 | 10.01 | 55.1 | 4200 | 5250 | 2470 | 5007 |
| 054337 | 03X95 + 2X50/2 + 1X(12 E9/125) | 0.206 | 301 | 13.59 | 55.1 | 5700 | 7125 | 3216 | 5470 |
| 054338 | 03X95 + 2X50/2 + 1X(12G50/125) | 0.206 | 301 | 13.59 | 55.1 | 5700 | 7125 | 3216 | 5470 |
| 054339 | 03X95 + 2X50/2 + 1X(12G62.5/125) | 0.206 | 301 | 13.59 | 55.1 | 5700 | 7125 | 3216 | 5470 |
| 054834 | 03x150 + 2x70/2 + 1x(18G62.5/125) | 0.129 | 404 | 21.45 | 65.8 | 9000 | 11250 | 4992 | 8032 |
| 054888 | 03X150 + 2X70/2 + 1X(24G62.5/125) | 0.129 | 404 | 21.45 | 65.8 | 9000 | 11250 | 4992 | 8032 |

## Protolon® (SMK-200) -LWL (N)TSKCGEWOEU 8,7/15 kV

**Nominal voltage Uo:** 8.7 kV

**Nominal voltage U:** 15 kV

**Maximum permitted operating voltage in three-phase systems:** 18 kV

**Test voltage:** 24 kV

| part no. | part name | Rl [Ohm/km] | Ibl [A] | Ik [kA] | Ø [mm] | Fzp [N] | Fzd [N] | Cu | G [kg] |
|---|---|---|---|---|---|---|---|---|---|
| 053984 | 3x25+2x25/2+1x(12E9/125)+ 1x(12G62.5/125) | 0.78 | 139 | 3.575 | 44.5 | 1500 | 1875 | 960 | 2743 |
| 053096 | 3x50+2x25/2+1x(12G62.5/125) | 0.386 | 215 | 7.15 | 48.5 | 3000 | 3750 | 1680 | 3640 |

Protolon® (SMK-200) -LWL (N)TSKCGEWOEU 12/20 kV

**Nominal voltage Uo:** 12 kV

**Nominal voltage U:** 20 kV

**Maximum permitted operating voltage in three-phase systems:** 24 kV

**Test voltage:** 29 kV

| part no. | part name | Rl [Ohm/km] | Ibl [A] | Ik [kA] | Ø [mm] | Fzp [N] | Fzd [N] | Cu | G [kg] |
|---|---|---|---|---|---|---|---|---|---|
| 053097 | 3x35+2x25/2+1x(12G62.5/125) | 0.554 | 172 | 5.01 | 48.3 | 2100 | 2625 | 1248 | 3260 |
| 054657 | 3X35 + 2X25/2 + 1X(24 E9/125) | 0.554 | 172 | 5.01 | 48.3 | 2100 | 2625 | 1248 | 3271 |
| 053254 | 3x35+2x25/2+1x(24G50/125) | 0.554 | 172 | 5.01 | 48.3 | 2100 | 2625 | 1248 | 3260 |
| 054658 | 3X35 + 2X25/2 + 1X(24G62.5/125) | 0.554 | 172 | 5.01 | 48.3 | 2100 | 2625 | 1248 | 3260 |
| 054923 | 3x95+2x50/2+1x(12E9/125) | 0.206 | 319 | 13.59 | 61.6 | 5700 | 7125 | 3216 | 6150 |
| 054224 | 3X120 + 2X70/2 + 1X(6E9/125) | 0.161 | 371 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |
| 054225 | 3X120 + 2X70/2 + 1X(6G50/125) | 0.161 | 371 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |
| 054226 | 3X120 + 2X70/2 + 1X(6G62.5/125) | 0.161 | 371 | 17.16 | 67.1 | 7200 | 9000 | 4128 | 7400 |

| | |
|---|---|
| Rl | Conductor resistance |
| Ibl | Ampacity in air (30 °C) |
| Ik | Short-circuit current (1 s) |
| Ø | outer diameter approx. |
| Fzp | Tensile strength (permanent) |
| Fzd | Tensile strength (dynamic) |
| Cu | Copper weight (GER) |
| G | net weight per 1000 |