# PROTOLON (SM-R) AWG (N)TSCGEWOEU 8KV

## Portable Power Reeling Cable

Portable Power Reeling Cable, EP Insulation, Semiconductive EP Shield, Neoprene Jacket with reinforcement, Jacket Thickness to ICEA, 90°C
Flexible H.V. reeling cable for extreme mechanical stresses, e.g. high travel speeds.
- Stacker/Reclaimer Reels
- Container Crane Reels
- Log handling Crane Reels
- Ship-unloader Reels
- Ship-loader Reels

## STANDARDS / APPROVALS

| | |
|---|---|
| **UL file E251483** | General |
| **Based on DIN VDE 0250-813** | General |
| **MSHA P-189-4** | Certifications / Approvals |
| **DIN VDE 0298-4** | Electrical parameters |
| **IEC 60811-404** | Chemical behaviour |
| **Reversed bending; roller bending; torsional stress** | Mechanical parameters |

## CABLE DESIGN

| | |
|---|---|
| Conductor | Very finely stranded copper, tinned (class FS)<br>PE: Very finely stranded copper, tinned (class FS) |
| Inner semi-conducting layer | Yes |
| - | Semi-conductive EPR |
| Core insulation material | EPR rubber |
| - | PROTOLON |
| - | Special compound > 3GI3 |
| Outer semi-conducting layer | Yes |
| - | Semi-conductive NBR easy-strip |
| Core arrangement | Three power cores layed up with earth conductor splitted in two and additional ground check conductor |
| Material inner sheath | Rubber - polychloroprene (PCP) |
| - | Special compound 5GM3 |
| Armouring/reinforcement | Braiding |
| Armouring/reinforcement material | Polyester |
| Material outer sheath | Rubber - polychloroprene (PCP) |
| - | PROTOFIRM |
| - | Special compound > 5GM5 |

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## ELECTRICAL PARAMETERS

| | |
|---|---|
| Test voltage [kV] | 18 |
| AC test voltage (control cores) [kV] | 2 |
| Nominal voltage U [V] | 8,000 |

## THERMAL PARAMETERS

| | |
|---|---|
| Max. conductor temperature [°C] | 90 |
| Max. conductor temperature at short circuit [°C] | 250 |
| Ambient temperature fix installation (min) [°C] | -40 |
| Ambient temperature fix installation (max) [°C] | 80 |
| Ambient temperature flexible installation (min) [°C] | -35 |
| Ambient temperature flexible installation (max) [°C] | 60 |

## CHEMICAL PARAMETERS

| | |
|---|---|
| Flame retardant | In accordance with EN/IEC 60332-1-2 |
| Oil resistant | acc. IEC/EN 60811-404 |
| Ozone resistance | Yes |
| Resistant to UV | Yes |
| Sea water resistance | Yes |

## MECHANICAL PARAMETERS

| | |
|---|---|
| Torsional stress +/- [°/m] | 25 |
| Permanent tensile strength (rule) | 20 N/mm² static<br>30 N/mm² dynamic |
| Travel speed | - Gantry (reeling operation): no restriction. For speeds beyond 240 m/min it is recommended to consult the cable manufacturer |
| Bending radius (rule) | Acc. to VDE 0298-3:<br>6 X D fixed installation<br>10 X D flexible operation<br>20 X D min distance with S-type directional changes |

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## CABLE PROPERTIES

| Basic construction | SAP code | External code | Diameter conductor [mm] | Cable diameter (min) [mm] | Cable diameter (max) [mm] | Cable weight [kg/km] |
|---|---|---|---|---|---|---|
| 3X4AWG+2X8AWG+1X8AWG | | 5DK84060 | 6.8 | 46.7 | 50.7 | 3,600 |
| 3X2AWG+2X6AWG+1X8AWG | | 5DK8*** | 8.4 | 52 | 56 | 4,550 |
| 3X1AWG+2X5AWG+1X8AWG | | 5DK8*** | 9.5 | 54.5 | 58.5 | 5,130 |
| 3X1/0AWG+2X4AWG+1X8AWG* RED | 20160691 | 5DK8*** | 10.6 | 57 | 61 | 5,600 |
| 3X2/0AWG+2X3AWG+1X8AWG | | 5DK8*** | 11.8 | 59.5 | 63.5 | 6,680 |
| 3X3/0AWG+2X2AWG+1X8AWG | 20004762 | 5DK84360 | 13.5 | 64.7 | 68.7 | 7,500 |
| 3X4/0AWG+2X1AWG+1X8AWG | | 5DK8*** | 15 | 68.3 | 72.3 | 8,850 |

## CABLE PROPERTIES ELECTRICAL / MECHNICAL

| Basic construction | SAP code | External code | Max. tensile strength [N] | Max. tensile strength during acceleration [N] | Current carrying capacity [A] |
|---|---|---|---|---|---|
| 3X4AWG+2X8AWG+1X8AWG | | 5DK84060 | 1,270 | 1,905 | 132 |
| 3X2AWG+2X6AWG+1X8AWG | | 5DK8*** | 2,020 | 3,030 | 176 |
| 3X1AWG+2X5AWG+1X8AWG | | 5DK8*** | 2,540 | 3,810 | 204 |
| 3X1/0AWG+2X4AWG+1X8AWG* RED | 20160691 | 5DK8*** | 3,210 | 4,815 | 236 |
| 3X2/0AWG+2X3AWG+1X8AWG | | 5DK8*** | 4,050 | 6,075 | 273 |
| 3X3/0AWG+2X2AWG+1X8AWG | 20004762 | 5DK84360 | 5,100 | 7,650 | 315 |
| 3X4/0AWG+2X1AWG+1X8AWG | | 5DK8*** | 6,430 | 9,645 | 364 |

## SUSTAINABILITY COMMITMENT

Our commitment to a low-carbon future remains unwavering as we strive to create sustainable solutions while upholding quality standards. We prioritize sustainability and environmental protection in our daily operations, collaborating with local communities to ensure workplace safety and safeguard the areas we operate in.

Sustainability and environmental responsibility is evident also in our **packaging** solutions across the CEE region. We use fully recyclable drum cover foils to minimize environmental impact. Our packaging for rings is made from 30% recycled materials, supporting a circular economy. Additionally, our boxes are made from recyclable, environment-friendly cardboard, promoting eco-conscious choices. By choosing Prysmian, you are not only selecting high-quality products but also contributing to a greener future.

Check for more details about our sustainability commitment here: Sustainability: report and responsibility.

Current carrying capacity acc. VDE 0298-4, installed free in air at 30°C ambient temperature

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