PROTOLON (SM-R)-LWL AWG (N)TSKCGEWOEU 5KV

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

CABLE DESIGN

Conductor	Very finely stranded copper, tinned (class FS) 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 one or 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

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
DIN EN 60811-404	Chemical behaviour
Reversed bending; roller bending; torsional stress	Mechanical parameters

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ELECTRICAL PARAMETERS

Test voltage [kV]	13
AC test voltage (control cores) [kV]	2
Nominal voltage U [V]	5,000

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

OPTICAL FIBER PROPERTIES

Fiber type	**G62,5/125 µm Multi-mode graded index**	**G50/125 µm Multi-mode graded index**	**E9/125 µm Single-mode graded index**
Cladding diameter	125 µm	125 µm	125 µm
Fiber diameter	250 µm	250 µm	250 µm
Attenuation at 850 nm	< 3,3 dB/km	< 2,8 dB/km	
Attenuation at 1310 nm	< 0,9 dB/km	< 0,8 dB/km	< 0,4 dB/km
Attenuation at 1550 nm			< 0,3 dB/km
Bandwidth at 850 nm	> 400 MHz	> 400 MHz	
Bandwidth at 1310 nm	> 600 MHz	> 1200 MHz	
Numerical Aperture	0,275 +/- 0,02	0,2 +/- 0,02	0,14 +/- 0,02
Chromatic Dispersion at 1300 nm			< 3,5 ps/nm km
Chromatic Dispersion at 1550 nm			< 18 ps/nm km

MECHANICAL PARAMETERS

Torsional stress +/- [°/m]	25
Permanent tensile strength (rule)	20 N/mm² static 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: 6 X D fixed installation 10 X D flexible operation 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+1XLWL		5DK8473	6.8	45.5	48.5	3,200
3x4AWG+1x5AWG+1x8AWG+1x(12E9LWL)	20389398	5DK8***	6.8	46.5	49.5	3,250
3X2AWG+2X6AWG+1XLWL		5DK8484	8.4	48.5	52.5	4,030
3X2AWG+1X4AWG+1X8AWG +1X(12E9LWL)	20315975	5DK8408	8.4	48.5	52.5	4,100
3X1AWG+2X5AWG+1XLWL		5DK8486	9.5	52.6	56.6	4,700
3X1AWG+1X2AWG+1x8AWG +1x(6G62,5LWL)	20360903	5DK8***	9.5	54.8	58.8	4,900
3X1/0AWG+2X4AWG+1X(24E9LWL)	20329162	5DK8437	10.6	56.8	60.8	5,600
3X1/0AWG+1X1AWG+1X8AWG +1X(24E9LWL)	20354093	5DK8433	10.6	56.8	60.8	5,700
3X2/0AWG+2X3AWG+1X(12G62,5LWL)	20038162	5DK8499	11.9	58.5	62.5	6,300
3X2/0AWG+1X1/0AWG+1X8AWG +1X(6G62,5LWL)	20094064	5DK8478	11.9	60.5	64.5	6,700
3X3/0AWG+2X2AWG+1X(6G62,5LWL)	20139249	5DK8429	13.5	62.7	66.7	7,600
3X3/0AWG+1X1AWG+1x8AWG +1X(24E9LWL)	20495834	5DK8***	13.5	63.3	67.3	7,800
3X4/0AWG+2X1AWG+1X(6G62,5LWL)	20070801	5DK8467	15	65.9	69.9	8,650
3X4/0AWG+1X1/0AWG+1x8AWG +1X(LWL)		5DK8***	15	66.5	70.5	8,800
3X250MCM+2X1/0AWG+1XLWL		5DK8***	16.4	75	79	10,400
3X250MCM+1X2/0AWG+1X8AWG +1X(12G62,5LWL)	20008520	5DK8443	16.4	75.5	79.5	10,600
3x300MCM+1x4/0AWG+1x8AWG +1x(12E9LWL)	20489757	5DK8***	17.8	80.5	84.5	12,700
3X350MCM+2X2/0AWG+1XLWL		5DK8***	19.1	83.9	87.9	14,250
3X350MCM+1X4/0AWG+1X8AWG +1X(LWL)		5DK8***	19.1	84	88	14,400
3X500MCM+2X4/0AWG+1XLWL		5DK8***	22	102	106	20,200
3X500MCM+1x250MCM+1X8AWG +1X(LWL)		5DK8***	22	102	106	20,400

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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+1XLWL		5DK8473	1,270	1,905	124
3x4AWG+1x5AWG+1x8AWG+1x(12E9LWL)	20389398	5DK8***	1,270	1,905	124
3X2AWG+2X6AWG+1XLWL		5DK8484	2,020	3,030	166
3X2AWG+1X4AWG+1X8AWG +1X(12E9LWL)	20315975	5DK8408	2,020	3,030	166
3X1AWG+2X5AWG+1XLWL		5DK8486	2,540	3,810	192
3X1AWG+1X2AWG+1x8AWG +1x(6G62,5LWL)	20360903	5DK8***	2,540	3,810	192
3X1/0AWG+2X4AWG+1X(24E9LWL)	20329162	5DK8437	3,210	4,815	222
3X1/0AWG+1X1AWG+1X8AWG +1X(24E9LWL)	20354093	5DK8433	3,210	4,815	222
3X2/0AWG+2X3AWG+1X(12G62,5LWL)	20038162	5DK8499	4,050	6,075	257
3X2/0AWG+1X1/0AWG+1X8AWG +1X(6G62,5LWL)	20094064	5DK8478	4,050	6,075	257
3X3/0AWG+2X2AWG+1X(6G62,5LWL)	20139249	5DK8429	5,100	7,650	298
3X3/0AWG+1X1AWG+1x8AWG +1X(24E9LWL)	20495834	5DK8***	5,100	7,650	298
3X4/0AWG+2X1AWG+1X(6G62,5LWL)	20070801	5DK8467	6,430	9,645	345
3X4/0AWG+1X1/0AWG+1x8AWG +1X(LWL)		5DK8***	6,430	9,645	345
3X250MCM+2X1/0AWG+1XLWL		5DK8***	7,600	11,400	383
3X250MCM+1X2/0AWG+1X8AWG +1X(12G62,5LWL)	20008520	5DK8443	7,600	11,400	383
3x300MCM+1x4/0AWG+1x8AWG +1x(12E9LWL)	20489757	5DK8***	9,000	13,500	430
3X350MCM+2X2/0AWG+1XLWL		5DK8***	10,640	15,960	474
3X350MCM+1X4/0AWG+1X8AWG +1X(LWL)		5DK8***	10,640	15,960	474
3X500MCM+2X4/0AWG+1XLWL		5DK8***	15,200	22,800	594
3X500MCM+1x250MCM+1X8AWG +1X(LWL)		5DK8***	15,200	22,800	594

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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