Flexible medium voltage cable
PROTOLON SMRT-LWL (N)TSCGEWOEU

Application: Medium-voltage cable assembly with integrated fibre optics (FO).
Suitable for medium mechanical loads, such as reeling operation, deflection in multiple planes, and torsion. Fibre types: made to order / project-specific: 9/125 µm (SM), 50/125 µm or 62.5/125 µm (MM)

- 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:	EPR
Torsion protection:	polyester braid
Torsion:	+/- 25 °/m
Sheathing material:	rubber (PCP) 5GM5
Colour of outer sheath:	red
Flame-retardant:	VDE 0482-332-1-2/IEC 60332-1-2
UV-resistant:	yes
Oil-resistant:	DIN EN 60811-404 / VDE 0473-811-404 / IEC 60811-404
Ozone-resistant:	yes
Water-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
Min. bending radius, fixed installation:	6 x Ø
Min. distance with S-type diretional changes:	20 x Ø
Bending radius, moving application:	10 x Ø
Operating speed monospiral (two ways), m/min.:	160 m/min.

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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 SMRT-LWL (N)TSCGEWOEUL 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]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
055131	3x25+2x25/2+1x(24E9/125)	0.784	131	40.6	1500	1875	960	2195
055118	3x25+2x25/2+1x(12E9/125 LWL+ 12G62,5/125 LWL)	0.784	131	42.2	1500	1875	960	2527
055052	3x35+2x25/2+1x(12G62,5/125 LWL)	0.554	162	44.2	2100	2625	1248	2896
055119	3x35+2x25/2+1x(12E9/125 LWL+ 12G62,5/125 LWL)	0.554	162	42.4	2100	2625	1248	2564
054993	3x50+2x25/2+1x(12E9/125 LWL)	0.386	202	46.8	3000	3750	1680	3500

PROTOLON SMRT-LWL (N)TSCGEWÖU 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]	Ø [mm]	Fzp [N]	Fzd [N]	Cu	G [kg]
054964	3x25+2x25/2+1x(24E9/125 LWL)	0.784	139	45.5	1500	1875	960	2710
055029	3x25+2x25/2+1x(12G62,5/125 LWL)	0.784	139	44.5	1500	1875	960	2714
055134	3x35+2x25/2+1x(12E9/125 LWL)	0.554	172	47.1	2100	2625	1248	3168
054991	3x35+2x25/2+1x(12G62,5/125 LWL)	0.554	172	47.1	2100	2625	1248	3168
055120	3x35+2x25/2+1x(12E9/125 LWL+ 12G62,5/125 LWL)	0.554	172	47.1	2100	2625	1248	3183
054989	3x50+2x25/2+1x(12G50/125 LWL)	0.386	215	48.5	3000	3750	1680	3640
054990	3x120+2x70/2+1x(12G62,5/125 LWL)	0.161	371	62.3	7200	9000	4128	6820
055024	3x300+2x150/2+1x(12E9/125 LWL)	0.0641		86.4	18000	22500	10080	14950

Rl	Conductor resistance
Ibl	Ampacity in air (30 °C)
Ø	outer diameter approx.
Fzp	Tensile strength (permanent)
Fzd	Tensile strength (dynamic)
Cu	Copper weight (GER)
G	net weight per 1000

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