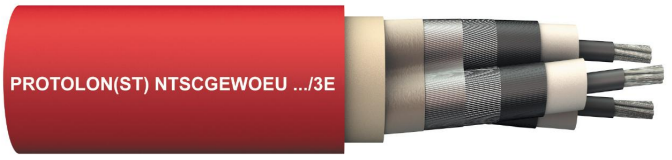
PROTOLON(ST) NTSCGEWOEU 6/10 kV: Medium voltage flexible cables for use in water with copper core shield



Application

Power supply cable for use in water, e.g. for connection to dredgers, floating docks, pumps, etc., in applications where high mechanical stresses are to be expected. Also suitable for use in sewage, salt water and brackish water at water depths of up to 500 m. This screened cable design is suitable for the use with dredging equipment acc. VDE 0168.

Global data

Brand	PROTOLON(ST)
Type designation	NTSCGEWOEU
Standard	DIN VDE 0250-813
Certifications / Approvals	MSHA P-189-4 Fire Certificate of Russian Federation GOST K GOST B

Notes on installation

Notes on installation	Suitable material sets for self-assembly or termination at manufacturer's factory workshop.

Design features

Conductor	Electrolytic copper, tinned, finely stranded (class 5)
Insulation	Basic material EPR, Compound type: 3GI3
Electrical field control	Inner and outer layer of semiconductive rubber compound and metallic concentric screen on each core
Core identification	Natural coloring with black semiconductive rubber
Core arrangement	Three main conductor laid-up with individual concentric protective-earth conductors distributed over the insulation of the three main cores
Inner sheath	EPR inner sheath with special characteristics with respect to water proofing and prevention of formation of water bubbles, Compound type: GM1B
Outer sheath	Basic material: synthetic elastomer compound e.g. CM (particularly water-proof), Compound type: 5GM3, Color: Red

Electrical parameters

Rated voltage	6/10 kV
Max. permissible operating voltage AC	6,9/12 kV
Max. permissible operating voltage DC	9/18 kV
AC test voltage	17 kV

Chemical parameters

Reaction to fire	EN 60332-1-2; IEC 60332-1-2
Resistance to oil	EN 60811-404, IEC 60811-404
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture
Water resistance	EN50525-2-21

Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Ambient temperature for fixed installation	min -40 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -25 °C ; max +60 °C

Mechanical parameters

Max. tensile load on the conductor	15 N/mm²
Torsional stress +/-	25 °/m
Min. bending radius	Acc. to DIN VDE 0298 part 3

Number of cores x cross section	Part number	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Weight (approx.) kg/km	Conductor resistance at 20°C max. Ω/km	Nominal operating capacitance µF/km	Inductance nom. mH/km	Current carrying capacity (1) A	Short Circuit Current (conductor) max. (1s) kA
3x25+3x16/3E	20007441	6.4	43.9	46.9	2950	0.795	0.24	0.36	131	3.58
3x25+3x25/3E		6.4	44.1	47.1	3100	0.795	0.24	0.36	131	3.58
3x35+3x16/3E	20004604	7.6	49.8	52.8	3670	0.565	0.27	0.34	162	5.01
3x35+3x25/3E	20230975	7.6	46.7	49.7	3500	0.565	0.27	0.34	162	5.01
3x50+3x25/3E	20004597	9	51.9	55.9	4450	0.393	0.3	0.32	202	7.15
3x70+3x35/3E	20004598	10.9	57.3	61.3	5580	0.277	0.34	0.31	250	10.01
3x95+3x50/3E	20035932	12.6	63.2	67.2	6960	0.21	0.38	0.29	301	13.53
3x120+3x70/3E	20164605	14.1	66.9	70.9	8200	0.164	0.42	0.29	352	17.16
3x150+3x70/3E		16	71.9	75.9	9400	0.132	0.46	0.28	404	21.45
3x185+3x95/3E		17.8	77.6	81.6	11300	0.108	0.5	0.27	461	26.46