ANHUI FEICHUN SPECIAL CABLE CO., LTD.

安徽飞纯特种电缆有限公司

PROTOLON （ST） NTSCGEWOEU

3 - 30 KV

Medium voltage flexible power supply cable engineered for submersible applications in water environments. Designed for connection to dredgers, floating docks, pumps, and other equipment where exceptional mechanical stresses are expected. Suitable for use in sewage, salt water, and brackish water at depths up to 500 meters.

STANDARDS & APPROVALS

DIN VDE 0250-813	General	**DIN VDE 0298-4**	Electrical parameters	**MSHA P-189-4**	Certifications / Approvals
DIN EN 60811-404	Chemical behaviour	**IEC 60811-404**	Chemical behaviour	**DIN EN 50525-2-21**	Chemical behaviour
GOST -R/-K/-B	Fire Certificate Russian Federation	**DIN EN 60332-1-2**	Fire performance	**IEC 60332-1-2**	Fire performance



TECHNICAL PARAMETERS

THERMAL PARAMETERS

MAX. CONDUCTOR TEMPERATURE **90 °C**	MAX. CONDUCTOR TEMP. AT SHORT CIRCUIT **250 °C**	AMBIENT TEMP. FIXED INSTALLATION (MIN) **-40 °C**
AMBIENT TEMP. FIXED INSTALLATION (MAX) **80 °C**	AMBIENT TEMP. FLEXIBLE INSTALLATION (MIN) **-25 °C**	AMBIENT TEMP. FLEXIBLE INSTALLATION (MAX) **60 °C**

CHEMICAL PARAMETERS

FLAME RETARDANT **EN/IEC 60332-1-2**	OIL RESISTANT **Yes**	OZONE RESISTANCE **Yes**
UV RESISTANT **Yes**	SEA WATER RESISTANCE **Excellent**	MAX. WATER DEPTH **500 m**

CABLE CONSTRUCTION

1 Conductor

Finely stranded copper, tinned, class 5. PE: Split into 3 in the outer interstices.

2 Inner Semi-conducting Layer

Semi-conductive EPR

3 Core Insulation

EPR rubber - Special compound 3GI3

4 Core Arrangement

Three main conductors laid-up with protective earth conductor split into 3 in the outer interstices

5 Earth Conductor

PE: Split into 3 in the outer interstices

6 Outer Semi-conducting Layer

Semi-conductive EPR

7 Inner Sheath

Special EPR compound - waterproof

8 Outer Sheath

Chlorinated polyethylene (CM/CPE) - Special compound 5GM3 - waterproof

MECHANICAL PARAMETERS

TORSIONAL STRESS	PERMANENT TENSILE STRENGTH
+/- 100 °/m	15 N/mm²
BENDING RADIUS (FIXED INSTALLATION)	**BENDING RADIUS (FLEXIBLE OPERATION)**
6 x D	10 x D

ELECTRICAL PARAMETERS

RATED VOLTAGE U_0/U (U_m)	TEST VOLTAGE	NOMINAL VOLTAGE U
3.6/6 (7.2) kV	11 kV	6,000 V
6/10 (12) kV	17 kV	10,000 V
8.7/15 (17.5) kV	24 kV	15,000 V
12/20 (24) kV	29 kV	20,000 V
14/25 (29) kV	36 kV	25,000 V
18/30 (36) kV	43 kV	30,000 V
20/35 (42) kV	50 kV	35,000 V

TECHNICAL SPECIFICATIONS

PROTOLON (ST) NTSCGEWOEU 3.6/6KV

CONSTRUCTION	COND Ø (MM)	CABLE Ø MIN (MM)	CABLE Ø MAX (MM)	WEIGHT (KG/KM)	MAX TENSILE (N)	CAP. (NF/KM)	IND. (MH/KM)	RES. (Ω/KM)	CURRENT (A)
3x16+3x16/3E	5.7	37.5	40.5	2,250	720	240	0.35	1.24	99
3x25+3x25/3	6.4	40.1	43.1	2,620	1,125	260	0.35	0.795	131
3x35+3x25/3	7.6	42.6	45.6	3,200	1,575	290	0.33	0.565	162
3x50+3x25/3	9	45.6	48.6	3,690	2,250	330	0.32	0.393	202
3x70+3x35/3	10.9	52.2	56.2	5,180	3,150	380	0.3	0.277	250
3x95+3x50/3	12.6	58.4	62.4	6,600	4,275	430	0.29	0.21	301
3x120+3x70/3	14.2	59.1	63.1	7,320	5,400	470	0.28	0.164	352
3x150+3x70/3	16	65.6	69.6	8,470	6,750	520	0.27	0.132	404
3x185+3x95/3	17.8	69.4	73.4	9,850	8,325	560	0.26	0.108	461
3x240+3x120/3	20.4	76.7	80.7	11,500	10,800	630	0.25	0.0817	540

PROTOLON (ST) NTSCGEWOEU 8.7/15KV

CONSTRUCTION	COND Ø (MM)	CABLE Ø MIN (MM)	CABLE Ø MAX (MM)	WEIGHT (KG/KM)	MAX TENSILE (N)	CAP. (NF/KM)	IND. (MH/KM)	RES. (Ω/KM)	CURRENT (A)
3x25+3x25/3	6.4	46.4	49.4	3,440	1,125	200	0.39	0.795	138
3x35+3x25/3	7.6	48.4	52.4	3,730	1,575	220	0.37	0.565	171
3x50+3x25/3	9	53.3	57.3	4,880	2,250	240	0.35	0.393	215
3x70+3x35/3	10.9	57.3	61.3	5,780	3,150	280	0.33	0.277	265
3x95+3x50/3	12.6	63.9	67.9	7,100	4,275	310	0.31	0.21	319
3x120+3x70/3	14.1	67.1	71.1	8,250	5,400	330	0.3	0.164	371
3x150+3x70/3	16	72	76	9,450	6,750	370	0.29	0.132	428
3x185+3x95/3	17.8	76.6	80.6	11,690	8,325	400	0.28	0.108	488
3x240+3x120/3	20.4	82.6	87.6	12,700	10,800	440	0.27	0.0817	574

PROTOLON (ST) NTSCGEWOEU 18/30KV

CONSTRUCTION	COND Ø (MM)	CABLE Ø MIN (MM)	CABLE Ø MAX (MM)	WEIGHT (KG/KM)	MAX TENSILE (N)	CAP. (NF/KM)	IND. (MH/KM)	RES. (Ω/KM)	CURRENT (A)
3x25+3x25/3	6.4	64.3	68.3	5,650	1,125	140	0.46	0.795	139
3x35+3x25/3	7.6	66.9	70.9	6,230	1,575	150	0.43	0.565	172
3x50+3x25/3	9	69.8	73.8	7,000	2,250	160	0.41	0.393	215
3x70+3x35/3	10.9	76.8	80.8	8,710	3,150	180	0.38	0.277	265
3x95+3x50/3	12.6	79.5	84.5	9,910	4,275	200	0.37	0.21	319
3x120+3x70/3	14.1	83.2	88.2	11,280	5,400	220	0.35	0.164	371
3x150+3x70/3	16	89	94	12,910	6,750	230	0.34	0.132	428
3x185+3x95/3	17.8	93.7	98.7	14,500	8,325	250	0.33	0.108	488
3x240+3x120/3	20.4	101	106	16,500	10,800	280	0.32	0.0817	574

CONTACT INFORMATION

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This document contains technical specifications for PROTOLON (ST) NTSCGEWOEU medium voltage cables.