

PROTOLON(SMK) (N)TSCGEWOEU 1,8/3 kV: medium voltage reeling cables



Application

Flexible medium voltage reeling cable for application under high to extreme mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes, churning on running over rollers and torsional stresses. Mainly for mobile equipment, e.g. fast-moving container cranes and large moving equipment.

Global data

Brand	PROTOLON(SMK)
Type designation	(N)TSCGEWOEU
Standard	Based on DIN VDE 0250-813
Certifications / Approvals	GOST-R

Design features

Conductor	Conductor and earth conductor made of electrolytic copper tinned, very finely stranded, class FS (refer also to DIN VDE 0295)
Insulation	PROTOLON HS High grade special compound based on high-quality EPR (at least 3GI3); improved mechanical and electrical characteristics (refer also to DIN VDE 0207, Part 20)
Electrical field control	Inner semiconductive layer of EPR, outer semiconductive layer of modified NBR, capable of being stripped when cold and thus extremely easy to prepare (Easy Strip design)
Core identification	Natural coloured insulation with black semiconductive layer
Core arrangement	Three-core design, with earth conductor split into 3 parts positioned in the interstices
Sheath system	- PROTOFIRM Sandwich - double layer inner sheath: Special compound based on EPR, quality at least 5GM3, also served as water barrier, color: red; - Anti-torsion braid: Reinforced braid made of polyester threads, in a vulcanized bond between the sheaths, resulting in high strength of the sheath system; - PROTOFIRM Sandwich - double layer outer sheath: A sheath system with a unique combination of flexibility and robustness has been achieved through the use of a new sandwich structure. Abrasion and tear-proof high grade rubber compounds based on PCP, quality at least 5GM5, colour: bright red/red.
Marking	PROTOLON (SMK) (N)TSCGEWOEU (number of cores)x(ross-section) (rated voltage) (year of manufacture) (serial number)

Electrical parameters

Rated voltage	1.8/3 kV
Max. permissible operating voltage AC	2.1/3.6 kV
Max. permissible operating voltage DC	2.7/5.4 kV
AC test voltage	6 kV
EMC	This design exhibits an extremely low interference level as a result of use of a symmetrical three-core design with very narrow manufacturing tolerances.
Data transmission	Special designs with Twisted Shielded Pairs or Individually Screened control elements available on request. A special cable design with fibre optics can be found in the product range PROTOLON(SMK)-LWL.
Current Carrying Capacity description	According to DIN VDE 0298, Part 4. Higher values are permissible in specific cases (please consult the manufacturer)

Chemical parameters

Resistance to oil	Acc. to DIN EN 60811-404 and DIN VDE 0473-811-404, paragraph 10
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture
Water resistance	According to HD 2216

Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Ambient temperature for fixed installation	min -50 °C ; max +80 °C
Ambient temperature in fully flexible operation	min -35 °C ; max +80 °C

PROTOLON(SMK) (N)TSCGEWOEU 1,8/3 kV: medium voltage reeling cables



Mechanical parameters

Max. tensile load on the conductor	20 N/mm ²
Max. tensile load on the conductor during acceleration	Up to 30 (acc. to DIN VDE 0298 part 3: 15 N/mm ²) N/mm ²
Torsional stress	± 25 °/m
Min. bending radius	Acc. to DIN VDE 0298 part 3
Min. distance with S-type directional changes	20 x D (D = cable diameter)
Travel speed	- Gantry (reeling operation): no restriction. For speeds beyond 240 m/min it is recommended to consult the cable manufacturer.
Additional tests	Reversed bending test, torsional stress test

Number of cores x cross section	Part number	MLFB Number	Conductor diameter max. mm	Earth conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Bending radius free moving min. mm	Weight (ca.) kg/km	Permissible tensile force max. N	Dynamic tensile force max. N	Conductor resistance at 20°C max. Ω/km	Current carrying capacity (1) A	Short Circuit Current (conductor) kA
3x25+3x25/3	20004456	5DK2101	7.1	4.2	34.3	37.3	373	2110	1500	2250	0.8	131	3.58
3x35+3x25/3		5DK2102	8.3	4.2	43	46	460	3150	2100	3150	0.57	162	5.01
3x50+3x25/3	20143217	5DK2103	9.9	4.2	46.4	49.4	494	3840	3000	4500	0.39	202	7.15
3x70+3x35/3	20004457	5DK2104	11.8	5	45.9	48.9	489	4230	4200	6300	0.28	250	10.01
3x95+3x50/3	20004458	5DK2105	13.8	5.9	50.3	54.3	543	5440	5700	8550	0.21	301	13.59
3x120+3x70/3		5DK2106	15.4	7	63.8	67.8	678	8010	7200	10800	0.16	352	17.16
3x150+3x70/3		5DK2107	17.2	7	67.7	71.7	717	9240	9000	13500	0.13	404	21.45
3x185+3x95/3		5DK2108	19	8	71.6	75.6	756	10750	11100	16650	0.11	461	26.46
3x240+3x120/3		5DK2110	21.8	9	79.4	83.4	834	13640	14400	21600	0.08	540	34.32
3x300+3x150/3		5DK2111	24.4	10	84.7	89.7	897	16230	18000	27000	0.07	620	42.9

(1) Nominal current carrying capacity for rubber cables laid on a surface, at 30°C ambient temperature (see also VDE 0298-4, Table 15).
Special designs upon request!

PROTOLON (SMK) (N)TSCGEWOU 3,6/6KV

Medium voltage reeling cable



Flexible medium voltage reeling cable for application under high to extreme mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes, churning on running over rollers and torsional stresses. Mainly for mobile equipment, e.g. fast-moving container cranes and large moving equipment.

STANDARDS / APPROVALS

Based on DIN VDE 0250-813

DIN VDE 0298-4

DIN EN 60228/ IEC 60228 / VDE 0295

DIN EN 60811-404 / IEC 60811-404

Reversed bending; roller bending; torsional stress

GOST -R/-K/-B Fire Certificate of Russian Federation

General

Electrical parameters

Conductor

Chemical behaviour

Mechanical parameters

Certifications / Approvals

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 HS
-	Special compound > 3GI3
Outer semi-conducting layer	Yes
-	Semi-conductive NBR easy-strip
Core arrangement	Three core design, with split earth conductor in three interstices
Material inner sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special sandwich EPR/CR
Armouring/reinforcement	Braiding
Armouring/reinforcement material	Polyester
Material outer sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special compound > 5GM5

ELECTRICAL PARAMETERS

Rated voltage U ₀ /U (Um)	3.6/6 (7.2) kV
Test voltage [kV]	11
Nominal voltage U [V]	6,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-35
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes
Sea water resistance	Yes

MECHANICAL PARAMETERS

Torsional stress +/- [°/m]	25
Permanent tensile strength (rule)	20 N/mm ² static 30 N/mm ² 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

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
3x25+3x25/3	20004476	5DK3101	7.1	35.5	38.5	2,300
3x35+3x25/3	20004477	5DK3102	8.3	39	42	2,810
3x50+3x25/3	20004478	5DK3103	9.9	42.4	45.4	3,490
3x70+3x35/3	20004479	5DK3104	11.8	46.4	49.4	4,450
3x95+3x50/3	20004480	5DK3105	13.8	51.4	55.5	5,700
3x120+3x70/3	20024335	5DK3106	15.4	55	59	6,860
3x150+3x70/3	20004481	5DK3107	17.2	58.8	62.8	8,100
3x185+3x95/3	20006940	5DK3108	19	64	68	9,840
3x240+3x120/3	20139312	5DK3110	21.8	72.5	76.5	12,120
3x300+3x150/3	20181041	5DK3111	24.4	78.2	82.2	14,580
3x400+3x240/3	20170687	5DK3112	28.2	89	94	19,600

CABLE PROPERTIES ELECTRICAL / MECHANICAL

Basic construction	SAP code	External code	Max. tensile strength [N]	Max. tensile strength during acceleration [N]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
3x25+3x25/3	20004476	5DK3101	1,500	2,250	385	0.795	131
3x35+3x25/3	20004477	5DK3102	2,100	3,150	420	0.565	162
3x50+3x25/3	20004478	5DK3103	3,000	4,500	454	0.393	202
3x70+3x35/3	20004479	5DK3104	4,200	6,300	494	0.277	250
3x95+3x50/3	20004480	5DK3105	5,700	8,550	555	0.21	301
3x120+3x70/3	20024335	5DK3106	7,200	10,800	590	0.164	352
3x150+3x70/3	20004481	5DK3107	9,000	13,500	628	0.132	404
3x185+3x95/3	20006940	5DK3108	11,100	16,650	680	0.108	461
3x240+3x120/3	20139312	5DK3110	14,400	21,600	765	0.0817	540
3x300+3x150/3	20181041	5DK3111	18,000	27,000	822	0.0654	620
3x400+3x240/3	20170687	5DK3112	24,000	36,000	940	0.0495	800

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.

PROTOLON (SMK) (N)TSCGEWOU 6/10KV

Medium voltage reeling cable



Flexible medium voltage reeling cable for application under high to extreme mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes, churning on running over rollers and torsional stresses. Mainly for mobile equipment, e.g. fast-moving container cranes and large moving equipment.

STANDARDS / APPROVALS

Based on DIN VDE 0250-813	General
GOST -R/-K/-B Fire Certificate of Russian Federation	Certifications / Approvals
DIN EN 60228/ IEC 60228 / VDE 0295	Conductor
DIN VDE 0298-4	Electrical parameters
Reversed bending; roller bending; torsional stress	Mechanical parameters
DIN EN 60811-404 / IEC 60811-404	Chemical behaviour

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 HS
-	Special compound > 3GI3
Outer semi-conducting layer	Yes
-	Semi-conductive NBR easy-strip
Core arrangement	Three core design, with split earth conductor in three interstices
Material inner sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special sandwich EPR/CR
Armouring/reinforcement	Braiding
Armouring/reinforcement material	Polyester
Material outer sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special compound > 5GM5

ELECTRICAL PARAMETERS

Rated voltage U ₀ /U (Um)	6/10 (12) kV
Test voltage [kV]	17
Nominal voltage U [V]	10,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-35
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes
Sea water resistance	Yes

MECHANICAL PARAMETERS

Torsional stress +/- [°/m]	25
Permanent tensile strength (rule)	20 N/mm ² static 30 N/mm ² 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

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
3x25+3x25/3	20004539	5DK4061	7.1	37.8	40.8	2,500
3x35+3x25/3	20001443	5DK4062	8.3	40.2	43.2	2,930
3x35+3x35/3	20004545	5DK4072	8.3	40.2	43.2	3,030
3x35+3x50/3	20008105	5DK4802	8.3	42.7	45.7	3,450
3x50+3x25/3	20004540	5DK4063	9.9	43.7	46.7	3,630
3x70+3x50/3	20004546	5DK4074	11.8	47.7	50.7	4,710
3x70+3x35/3	20257658	5DK4064	11.8	47.7	50.7	4,600
3x95+3x50/3	20004541	5DK4065	13.8	52.8	56.8	5,860
3x120+3x70/3	20004542	5DK4066	15.4	56.2	60.2	7,110
3x150+3x70/3	20004543	5DK4067	17.2	61.5	65.5	8,390
3x185+3x95/3	20004544	5DK4068	19	65.3	69.3	9,890
3x240+3x120/3	20113369	5DK4070	21.8	73.8	77.8	12,310
3x300+3x150/3	20154762	5DK4071	24.4	79.5	83.5	14,780

CABLE PROPERTIES ELECTRICAL / MECHANICAL

Basic construction	SAP code	External code	Max. tensile strength [N]	Max. tensile strength during acceleration [N]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
3x25+3x25/3	20004539	5DK4061	1,500	2,250	408	0.795	131
3x35+3x25/3	20001443	5DK4062	2,100	3,150	432	0.565	162
3x35+3x35/3	20004545	5DK4072	2,100	3,150	432	0.565	162
3x35+3x50/3	20008105	5DK4802	2,100	3,150	457	0.565	162
3x50+3x25/3	20004540	5DK4063	3,000	4,500	467	0.393	202
3x70+3x50/3	20004546	5DK4074	4,200	6,300	507	0.277	250
3x70+3x35/3	20257658	5DK4064	4,200	6,300	507	0.277	250
3x95+3x50/3	20004541	5DK4065	5,700	8,550	568	0.21	301
3x120+3x70/3	20004542	5DK4066	7,200	10,800	602	0.164	352
3x150+3x70/3	20004543	5DK4067	9,000	13,500	655	0.132	404
3x185+3x95/3	20004544	5DK4068	11,100	16,650	693	0.108	461
3x240+3x120/3	20113369	5DK4070	15,000	21,600	778	0.0817	540
3x300+3x150/3	20154762	5DK4071	18,000	27,000	835	0.0654	620

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.

PROTOLON (SMK) (N)TSCGEWOU 8,7/15KV

Medium voltage reeling cable



Flexible medium voltage reeling cable for application under high to extreme mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes, churning on running over rollers and torsional stresses. Mainly for mobile equipment, e.g. fast-moving container cranes and large moving equipment.

STANDARDS / APPROVALS

Based on DIN VDE 0250-813

DIN VDE 0298-4

DIN EN 60228/ IEC 60228 / VDE 0295

DIN EN 60811-404 / IEC 60811-404

Reversed bending; roller bending; torsional stress

GOST -R/-K/-B Fire Certificate of Russian Federation

General

Electrical parameters

Conductor

Chemical behaviour

Mechanical parameters

Certifications / Approvals

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 HS
-	Special compound > 3GI3
Outer semi-conducting layer	Yes
-	Semi-conductive NBR easy-strip
Core arrangement	Three core design, with split earth conductor in three interstices
Material inner sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special sandwich EPR/CR
Armouring/reinforcement	Braiding
Armouring/reinforcement material	Polyester
Material outer sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special compound > 5GM5

ELECTRICAL PARAMETERS

Rated voltage U ₀ /U (U _m)	8.7/15 (17.5) kV
Test voltage [kV]	24
Nominal voltage U [V]	15,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-35
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes
Sea water resistance	Yes

MECHANICAL PARAMETERS

Torsional stress +/- [°/m]	25
Permanent tensile strength (rule)	20 N/mm ² static 30 N/mm ² 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

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
3x25+3x25/3	20004658	5DK5061	7.1	41.1	44.1	2,790
3x35+3x25/3	20004659	5DK5062	8.3	43.7	46.7	3,270
3x50+3x25/3	20004660	5DK5063	9.9	47.1	50.1	3,980
3x70+3x35/3	20004661	5DK5064	11.8	52	56	5,160
3x95+3x50/3	20148256	5DK5065	13.8	57.2	61.2	6,330
3x120+3x70/3	20321231	5DK5066	15.4	62.1	66.1	7,770
3x150+3x70/3	20196988	5DK5067	17.2	65.9	69.9	8,630
3x185+3x95/3	SMK_15KV_002	5DK5068	19	69.8	73.8	10,500
3x240+3x120/3	SMK_15KV_003	5DK5070	21.8	77.3	81.3	13,300
3x300+3x150/3	SMK_15KV_004	5DK5071	24.4	84.2	89.2	16,350

CABLE PROPERTIES ELECTRICAL / MECHANICAL

Basic construction	SAP code	External code	Max. tensile strength [N]	Max. tensile strength during acceleration [N]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
3x25+3x25/3	20004658	5DK5061	1,500	2,250	441	0.795	139
3x35+3x25/3	20004659	5DK5062	2,100	3,150	467	0.565	172
3x50+3x25/3	20004660	5DK5063	3,000	4,500	501	0.393	215
3x70+3x35/3	20004661	5DK5064	4,200	6,300	560	0.277	265
3x95+3x50/3	20148256	5DK5065	5,700	8,550	612	0.21	319
3x120+3x70/3	20321231	5DK5066	7,200	10,800	661	0.164	371
3x150+3x70/3	20196988	5DK5067	9,000	13,500	699	0.132	428
3x185+3x95/3	SMK_15KV_002	5DK5068	11,100	16,650	738	0.108	488
3x240+3x120/3	SMK_15KV_003	5DK5070	14,400	21,600	813	0.0817	574
3x300+3x150/3	SMK_15KV_004	5DK5071	18,000	27,000	892	0.0654	660

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.

PROTOLON (SMK) (N)TSCGEWOU 12/20KV

Medium voltage reeling cable



Flexible medium voltage reeling cable for application under high to extreme mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes, churning on running over rollers and torsional stresses. Mainly for mobile equipment, e.g. fast-moving container cranes and large moving equipment.

STANDARDS / APPROVALS

Based on DIN VDE 0250-813	General
DIN VDE 0298-4	Electrical parameters
DIN EN 60228/ IEC 60228 / VDE 0295	Conductor
DIN EN 60811-404 / IEC 60811-404	Chemical behaviour
GOST -R/-K/-B Fire Certificate of Russian Federation	Certifications / Approvals
Reversed bending; roller bending; torsional stress	Mechanical parameters

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 HS
-	Special compound > 3GI3
Outer semi-conducting layer	Yes
-	Semi-conductive NBR easy-strip
Core arrangement	Three core design, with split earth conductor in three interstices
Material inner sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special sandwich EPR/CR
Armouring/reinforcement	Braiding
Armouring/reinforcement material	Polyester
Material outer sheath	Rubber - polychloroprene (PCP)
-	PROTOFIRM
-	Special compound > 5GM5

ELECTRICAL PARAMETERS

Rated voltage U ₀ /U (U _m)	12/20 (24) kV
Test voltage [kV]	29
Nominal voltage U [V]	20,000

THERMAL PARAMETERS

Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Ambient temperature fix installation (min) [°C]	-50
Ambient temperature fix installation (max) [°C]	80
Ambient temperature flexible installation (min) [°C]	-35
Ambient temperature flexible installation (max) [°C]	80

CHEMICAL PARAMETERS

Oil resistant	Yes
Ozone resistance	Yes
Resistant to UV	Yes
Sea water resistance	Yes

MECHANICAL PARAMETERS

Torsional stress +/- [°/m]	25
Permanent tensile strength (rule)	20 N/mm ² static 30 N/mm ² 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

CABLE PROPERTIES

Basic construction	SAP code	External code	Diameter conductor [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]
3x25+3x25/3	20004698	5DK5521	7.1	44.1	47.1	3,090
3x35+3x25/3	20004699	5DK5522	8.3	46.6	49.6	3,570
3x35+3x35/3	20172299	5DK5***	8.3	46.6	49.6	3,620
3x50+3x25/3	20119477	5DK5523	9.9	51.8	55.8	4,300
3x70+3x35/3	20025103	5DK5524	11.8	55	59	5,640
3x95+3x50/3	20004700	5DK5525	13.8	61.6	65.6	6,740
3x120+3x70/3	20168895	5DK5526	15.4	65.1	69.1	8,370
3x150+3x70/3	20278571	5DK5527	17.2	69	73	9,400
3x185+3x95/3	SMK_20KV_002	5DK5528	19	74.3	78.3	11,200
3x240+3x120/3	SMK_20KV_003	5DK5530	21.8	80.3	84.3	13,850
3x300+3x150/3	SMK_20KV_004	5DK5532	24.4	87.2	92.2	16,900

CABLE PROPERTIES ELECTRICAL / MECHANICAL

Basic construction	SAP code	External code	Max. tensile strength [N]	Max. tensile strength during acceleration [N]	Bending radius moving (min) [mm]	Conductor resistance at 20° C [Ohm/km]	Current carrying capacity [A]
3x25+3x25/3	20004698	5DK5521	1,500	2,250	471	0.795	139
3x35+3x25/3	20004699	5DK5522	2,100	3,150	496	0.565	172
3x35+3x35/3	20172299	5DK5***	2,100	3,150	496	0.565	172
3x50+3x25/3	20119477	5DK5523	3,000	4,500	558	0.393	215
3x70+3x35/3	20025103	5DK5524	4,200	6,300	590	0.277	265
3x95+3x50/3	20004700	5DK5525	5,700	8,550	656	0.21	319
3x120+3x70/3	20168895	5DK5526	7,200	10,800	691	0.164	371
3x150+3x70/3	20278571	5DK5527	9,000	13,500	730	0.132	428
3x185+3x95/3	SMK_20KV_002	5DK5528	11,100	16,650	783	0.108	488
3x240+3x120/3	SMK_20KV_003	5DK5530	14,400	21,600	843	0.0817	574
3x300+3x150/3	SMK_20KV_004	5DK5532	18,000	27,000	922	0.0654	660

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.