

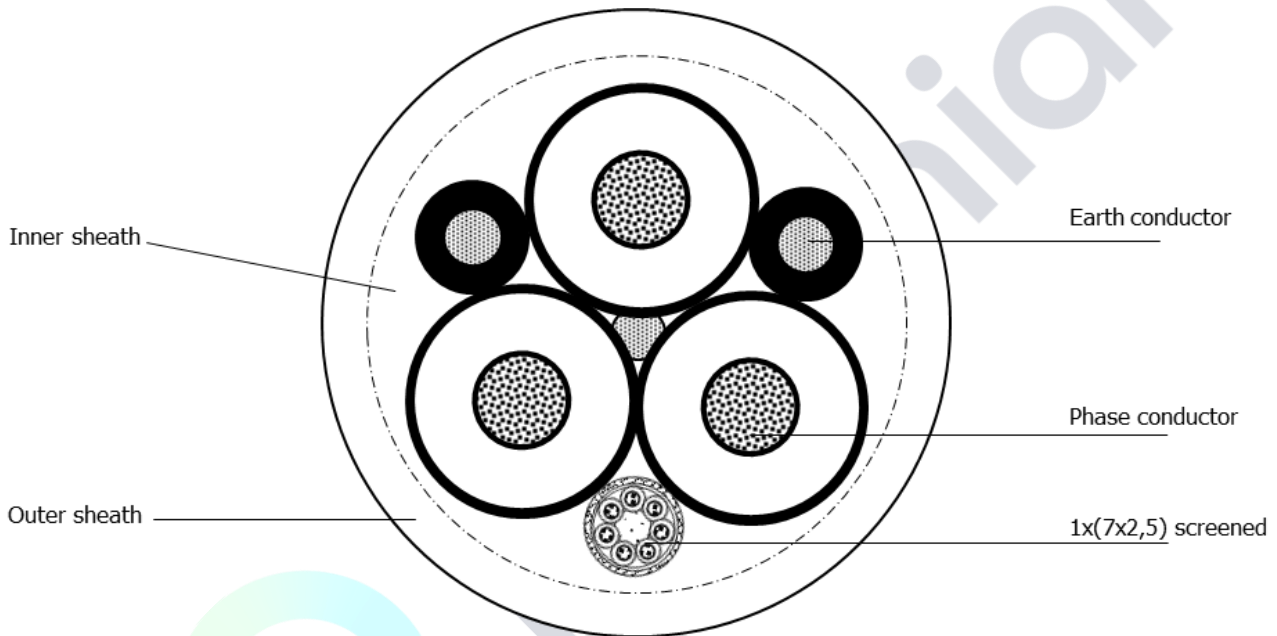
Rev. 1 30/09/2024	TECHNICAL DATA TABLE SHIP TO SHORE CONNECTION CABLE (HVSC systems)	STSX – 1 – 3731 Sheet 1 of 2
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CAVO TIPO / CABLE TYPE

PANZERFLEX-PUR 6/10 kV 3x185+2x95/2+1x(7x2,5)St
ref. norme IEC 60092-300 (serie) e / in line with IEC 60092-300 (series) std. and
IEC/IEEE 80005-1 (2019) / in line with IEC/ IEEE 80005-1 (2019) std.
per quanto applicabile / where applicable
per temp. ambiente non inferiore a -30°C / for ambient temp. not below -30°C

Caratteristiche costruttive / Constructional data

non in scala / not to scale



Analysis

52104024

1	30/09/2024	General revision	LK	UY
0	28/10/2021	Issued for offer	VB	AP
Rev.	Date	Issued for	Prepared	Approved

Compiled by: L. Korek

Approved by: U. Yildirim

Rev. 1 30/09/2024	TECHNICAL DATA TABLE SHIP TO SHORE CONNECTION CABLE (HVSC systems)	STSX – 1 – 3731 Sheet 2 of 2
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	(phases) 3x185 mm²	(earth) 2x50 (95/2) mm²	(pilot cores) 1x(7x2,5)St mm²																				
Conductors and Optical fibers	Plain annealed copper flexible cl.5 IEC 60228	Plain annealed copper flexible cl.5 IEC 60228	Tinned annealed copper flexible cl.5 IEC 60228																				
- approx. diameter	17,5 mm	9,2 mm	2 mm																				
Conductor screen	Semi conductive layer	Semi conductive layer	N/A																				
Insulation / covering	EPR 90 °C		EPR 90 °C																				
- nominal thickness	3,4 mm	N.A.	0,7 mm																				
- approx. diameter	26 mm	12,5 mm	3,5 mm																				
Insulation screen	Semi conductive layer	N/A	N/A																				
- approx. diameter	27 mm																						
Identification	Printed numbers 1-2-3 on semi conductive layer	N/A	Black cores (*), printed numbers from 1 to 7																				
Electrostatic screen	N/A	N/A	Aluminium/PET tape + Tinned copper open braid as drain wire 12 mm																				
- approx. diameter																							
Cable	See drawing																						
Inner + Outer sheath	Polyurethane (PUR) halogen free according to EN 50363-10-2, in two layers – BLACK colored the outer one.																						
- nominal thickness	7 mm (6 mm min. at any point)																						
Overall Diameter / Weight (approx.)	Nominal 75 mm / 9,8 kg/m																						
Marking (Ink Jet, every meter)	PALAZZO – PANZERFLEX-PUR <i>week/year</i> –3x185+2x95/2+(7x2,5)St 6/10 kV – ISO/IEC/IEEE 80005-1 – SHORE CONNECTION CABLE. DANGER! HIGH VOLTAGE – <i>meter</i>																						
Electrical characteristics	Rated Voltage U ₀ /U(U _m) as per IEC/IEEE 80005-1 - phase 185 mm ² 6/10(12) kV (ref. IEC 60092-354) - pilot 2,5 mm ² 150/250(300) V (ref. IEC 60092-376) Test voltage A.C. (according to IEC 60092-350 Tab. 2) - phase 185 mm ² 21 kV x 5 minutes - pilot 2,5 mm ² 1,5 kV x 5 minutes Maximum D.C. resistance at 20 °C (according to IEC 60228) - phase 185 mm ² 0,106 Ohm/km - earth 95 mm ² 0,206 Ohm/km (parallel connected) - pilot 2,5 mm ² 8,21 Ohm/km Short circuit current (1 sec., starting temp. 80 °C, final temp. 200 °C., ref. VDE 0250) - phase 185 mm ² 23,7 kA (26,5 kA considering starting/final temp. 90/250 °C) - earth 50 mm ² 6,4 kA (7,2 kA considering starting/final temp. 90/250 °C) Current carrying capacity at 30 °C (conductor temp. 80 °C., ref. VDE 0298) - phase conductors 185 mm ² stretched laying 461 A mono spiral or 1 layer 369 A 2 layers 281 A Current carrying capacity at 45 °C (conductor temp. 90 °C) Mono spiral or 1 layer 350 A																						
De-rating factors for varying ambient temperatures	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">°C</th> <th style="text-align: center;">15</th> <th style="text-align: center;">20</th> <th style="text-align: center;">25</th> <th style="text-align: center;">30</th> <th style="text-align: center;">35</th> <th style="text-align: center;">40</th> <th style="text-align: center;">45</th> <th style="text-align: center;">50</th> <th style="text-align: center;">60</th> </tr> </thead> <tbody> <tr> <th style="text-align: center;">k</th> <td style="text-align: center;">1,12</td> <td style="text-align: center;">1,08</td> <td style="text-align: center;">1,04</td> <td style="text-align: center;">1,00</td> <td style="text-align: center;">0,96</td> <td style="text-align: center;">0,91</td> <td style="text-align: center;">0,87</td> <td style="text-align: center;">0,82</td> <td style="text-align: center;">0,71</td> </tr> </tbody> </table>			°C	15	20	25	30	35	40	45	50	60	k	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,71
°C	15	20	25	30	35	40	45	50	60														
k	1,12	1,08	1,04	1,00	0,96	0,91	0,87	0,82	0,71														
Mechanical characteristics	Minimum bending radius Static 6 x OD Dynamic 8,5 x OD (ISO/IEC 80005-1 bending test 10±5% x OD) Max permissible tensile load 11100 N (permanent, up to 20N/mm ² on phase conductors only) 16650 N (in shore power application: low speed, tide compensation)																						
Thermal	Minimum operating temperature Fully flexible - 30 °C Fixed installation - 40 °C																						
Fire Performance	Flame retardant IEC 60332-1-2																						

Note: cable is Halogen free (HCl <= 0,5 %) but it is not to be considered as not toxic

(*) Alternative suggested instead off-White/Natural uncolored compound