TIOI Power cable 0,6/1 kV (HUSO)

Braided halogen free ship cable

Application:

· Halogen free power, control and lighting cable for ships and offshore-platforms
· Due to its flexibility also suitable when the installation space is limited and/or for places which are difficult to access
· Suitable for areas where protection against electromagnetic interference (EMI) signals is important

Properties regarding fire performance:

· Flame retardant, in accordance with IEC 60332-3-22 (cat. A)
· Halogen free, in accordance with IEC 60754
· Low smoke, in accordance with IEC 61034

General properties:

· Can withstand vibrations very well
· The braiding offers good protection against electromagnetic interference (EMI)
· Resistant against many oils and greases

Remarks:

· Because of their construction, cables from the ShipLine Plus range are more robust and easier to install than cables from the ShipLine range

Construction:

Conductor: stranded annealed copper, round
Insulation: cross-linked polyethylene (XLPE)
Cores: cabled together
Filler: halogen free material
Inner sheath: halogen free flame retardant thermoplastic (LSOH)
Braiding: tinned copper wires
Outer sheath: halogen free flame retardant thermoplastic (LSOH)

Electrical data:

Voltage rating: 0,6/1 kV
Test voltage: 3,5 kV

Core colours:

2 cores: brown, blue
3 cores: brown, black, grey
4 cores: brown, black, grey, blue
5 cores: brown, black, grey, black,blue
Multi core: white, numbered

Standards/References:

IEC 60092-353
IEC 60332-1
IEC 60332-3
IEC 61034
IEC 60754

Additional information:

Minimum installation temperature: -20 °C
Maximum conductor temperature: +90 °C
Operating temperature: min. -40 °C, max. +80 °C
Outer sheath colour: black
Standard: IEC 60092-353
Approval: Approval by most important classification societies: American Bureau of Shipping, Bureau Veritas, Det Norske Veritas, Lloyds Register and Germanischer Lloyd
Packaging: drums

Construction data

Conductor category	Class 2 = stranded
Shape of conductor	Round
Core insulation	XLPE
Yellow/green conductor	No
Concentric conductor	None
Screen	No
Drain wire	No
Material outer sheath	Copolymer, thermoplastic
Colour outer sheath	Black
Halogen free (acc. IEC 60754-2)	Yes
Flame retardant	In accordance with IEC 60332-3-22
Low smoke (acc. IEC 61034-2)	Yes
Circuit integrity in accordance with IEC 60331	No
Oil resistant (acc. IEC 60811-2-1)	Yes
Operating temperature, flexible	-20/80 °C
Operating temperature, fix	-40/80 °C
Nominal voltage U0	0.6 kV
Nominal voltage U	1 kV
Conductor material	Cu, bare
Fire-resistant layer (core)	No
Armouring/reinforcement	Braiding
Material armouring	Cu, tinned

Properties

Mud resistant	No

Electrical

standards

Standard	IEC 60092-353

TIOI Power cable 0,6/1 kV (HUSO) - Continuation

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Product Range

Product nr.	No. of cores and conductor cross-section[1] (n x mm²)	Earth screen [2] (mm²)	Nominal diameter over insulation (mm)	Nominal overall diameter (mm)	Minimum bending radius (mm)	Maximum tensile strength (N)	Approx. weight (kg/km)
125043	1x10	2,5	5,4	9,7	80	500	205
125044	1x16	2,5	6,4	10,8	90	800	275
125047	1x25	4	8,1	12,9	105	1250	405
125048	1x35	6	9,4	14,5	120	1750	535
125050	1x50	6	10,8	16,1	130	2500	680
125058	1x70	6	12,8	18,5	150	3500	920
125059	1x95	10	14,7	20,6	165	4750	1195
125051	1x120	10	16,5	22,6	185	6000	1480
125053	1x150	16	18,4	24,7	200	7500	1790
125055	1x185	16	20,7	27,2	220	9250	2200
125056	1x240	16	23,4	30,1	245	10000	2795
125061	2x1,5	4	3,0	11,3	95	150	205
125078	2x2,5	4	3,5	12,4	100	250	255
125080	2x4	6	4,0	13,9	115	400	345
125081	2x6	6	4,5	15,2	125	600	425
125034	2x10	10	5,4	16,7	135	1000	555
125035	2x16	16	6,4	19,5	160	1600	800
125020	3x1,5	4	3,0	12,0	100	225	235
125016	3x2,5	4	3,5	13,0	105	375	290
125021	3x4	6	4,0	14,5	120	600	390
125022	3x6	6	4,5	15,9	130	900	485
125019	3x10	10	5,4	17,7	145	1500	655
125024	3x16	16	6,4	20,5	165	2400	945
125023	3x25	16	8,1	24,3	195	3750	1345
125069	3x35	16	9,4	27,3	220	5250	1725
125067	3x50	25	10,8	32,3	260	7500	2405
124995	3x70	35	12,8	37,1	300	10000	3305
125032	3x95	50	14,7	42,6	345	10000	4495
125026	3x120	60	16,5	47,1	380	10000	5635
125030	3x150	70	18,4	51,7	415	10000	6735
125082	4x1,5	4	3,0	12,8	105	300	265
125092	4x2,5	6	3,5	14,3	115	500	360
125094	4x4	6	4,0	15,8	130	800	465
125095	4x6	6	4,5	17,2	140	1200	585
125036	4x10	10	5,4	19,1	155	2000	785
125040	4x16	16	6,4	22,6	185	3200	1150
125041	4x25	16	8,1	26,5	215	5000	1665
128022	4x35	16	9,4	29,7	240	7000	2095
128024	4x50	25	10,8	35,5	285	10000	2975
128023	4x70	35	12,8	40,8	330	10000	4055
128025	4x95	50	14,7	47,0	380	10000	5540
125407	5x1,5	4	3,0	13,8	115	375	305
125408	5x2,5	6	3,5	15,5	125	625	420
125096	6x1,5	6	3,0	14,6	120	450	335
125099	7x1,5	6	3,0	14,7	120	525	350
125118	8x1,5	6	3,0	15,9	130	600	400
125122	10x1,5	10	3,0	17,9	145	750	470
125123	12x1,5	10	3,0	18,6	150	900	530
125126	16x1,5	10	3,0	20,3	165	1200	645
125127	19x1,5	10	3,0	21,6	175	1425	730
125128	24x1,5	16	3,0	24,7	200	1800	920

1) The letter G in this column indicates presence of a green-and-yellow core.The letter x indicates absence of a green-and-yellow core.

2) Nominal equivalent copper cross-section of the armour.

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Electrical features

Product nr.	No. of cores and conductor cross-section[1] (n x mm²)	Earth screen [2] (mm²)	Conductor resistance at 20 °C, DC (ohm/km)	Conductor resistance at 90 °C, 50 Hz (ohm/km)	Maximum current rating[3] (A)	Workingself-inductance [4] (mH/km)
125043	1x10	2,5	1,83	2,3333	72	0,391
125044	1x16	2,5	1,15	1,4663	96	0,363
125047	1x25	4	0,727	0,9269	127	0,351
125048	1x35	6	0,524	0,6681	157	0,339
125050	1x50	6	0,387	0,4934	196	0,320
125058	1x70	6	0,268	0,3417	242	0,268
125059	1x95	10	0,193	0,2461	293	0,296
125051	1x120	10	0,153	0,1951	339	0,290
125053	1x150	16	0,124	0,1581	389	0,288
125055	1x185	16	0,0991	0,1264	444	0,285
125056	1x240	16	0,0754	0,0961	522	0,276
125061	2x1,5	4	12,1	15,4275	20	0,332
125078	2x2,5	4	7,41	9,4478	26	0,312
125080	2x4	6	4,61	5,8778	34	0,293
125081	2x6	6	3,08	3,9270	44	0,280
125034	2x10	10	1,83	2,3333	61	0,266
125035	2x16	16	1,15	1,4663	82	0,255
125020	3x1,5	4	12,1	15,4275	16	0,332
125016	3x2,5	4	7,41	9,4478	21	0,312
125021	3x4	6	4,61	5,8778	28	0,293
125022	3x6	6	3,08	3,9270	36	0,280
125019	3x10	10	1,83	2,3333	50	0,266
125024	3x16	16	1,15	1,4663	67	0,255
125023	3x25	16	0,727	0,9269	89	0,256
125069	3x35	16	0,524	0,6681	110	0,247
125067	3x50	25	0,387	0,4934	137	0,237
124995	3x70	35	0,268	0,3417	169	0,233
125032	3x95	50	0,193	0,2461	205	0,228
125026	3x120	60	0,153	0,1951	237	0,224
125030	3x150	70	0,124	0,1581	272	0,226
125082	4x1,5	4	12,1	15,4275	14	0,355
125092	4x2,5	6	7,41	9,4478	18	0,335
125094	4x4	6	4,61	5,8778	25	0,316
125095	4x6	6	3,08	3,9270	32,5	0,303
125036	4x10	10	1,83	2,3333	45	0,289
125040	4x16	16	1,15	1,4663	60	0,278
125041	4x25	16	0,727	0,9269	80	0,279
128022	4x35	16	0,524	0,6681	98,5	0,270
128024	4x50	25	0,387	0,4934	123	0,260
128023	4x70	35	0,268	0,3417	152	0,256
128025	4x95	50	0,193	0,2461	184,5	0,251
125407	5x1,5	4	12,1	15,4275	13	0,364
125408	5x2,5	6	7,41	9,4478	16,5	0,344
125096	6x1,5	6	12,1	15,4275	12,5	0,332
125099	7x1,5	6	12,1	15,4275	12	0,332
125118	8x1,5	6	12,1	15,4275	11,5	0,332
125122	10x1,5	10	12,1	15,4275	10,5	0,332
125123	12x1,5	10	12,1	15,4275	10	0,332

1) The letter G in this column indicates presence of a green-and-yellow core.The letter x indicates absence of a green-and-yellow core.

2) Nominal equivalent copper cross-section of the armour.

3) The maximum current rating applies to one cable loaded in free air in accordance with IEC 60092-352 table A.4, method E, 2- and 3-cores loaded, at an ambient temperature of 45 °C and a maximum conductor temperature of 90 °C. Correction factors for other circumstances are given in table 3 and A.6. The maximum current for a single core cable is given in table A.4, method G (three single core cables loaded in horizontal formation, spacing 1x cable diameter). For 4- and 5-cores the maximum current is given for 3 cores loaded. For multicore cables the maximum current rating is based on IEC 60364.

4) For 4-cores cables the working self-inductance for 2 not adjacent cores is given. For multicore cables the values are available on request.

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Product nr.	No. of cores and conductor cross-section[1] (n x mm²)	Earth screen [2] (mm²)	Conductor resistance at 20 °C, DC (ohm/km)	Conductor resistance at 90 °C, 50 Hz (ohm/km)	Maximum current rating[3] (A)	Workingself-inductance [4] (mH/km)
125126	16x1,5	10	12,1	15,4275	9	0,332
125127	19x1,5	10	12,1	15,4275	8,5	0,332
125128	24x1,5	16	12,1	15,4275	7,5	0,332

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