



Shipline TFOI 6/10(12)kV MV Power cable

Flame retardant halogen-free medium voltage (MV) power cable. Braided

TFOI 6/10(12) kV

XLPE/EPR/TCWB/PO



Operating temperature : 90°C
Operating Voltage : 6/10(12) kV

Standards applied

Application

Armoured cable for fixed installation in ships where cable protection is required. Medium Voltage power distribution. Can be installed and operated both indoors and outdoors.

- IEC 60092-354 - Design
- IEC 60228 class 2 - Conductor
- IEC 60092-351 - Insulation
- IEC 60092-359 - Sheath
- IEC 60332-1 - Flame Retardant
- IEC 60332-3-22 - Flame Retardant
- IEC 600754-1,2 - Halogen Free
- IEC 61034-1,2 - Low Smoke

Construction

	Code Letter	
Conductor		Annealed stranded circular copper(SCC), IEC 60228 class 2
Conductor screen semiconductive		Extruded semiconductive layer
Insulation	T	Crosslinked Polyethylene, IEC 60092-351 (HFXLPE)
Insulation screen semiconductive		Extruded semiconductive layer. A copper tape is applied as a metallic screen above the insulation screen. The thickness of the copper tape is 0,1 mm.
Lay up / Shielding		Cores are laid up together. Cores are identified by Brown, Black or Grey threads under and over the metallic screen on each conductor.
Inner covering	F	Flame retardant and halogen-free thermoplastic compound
Tape over inner covering		Additional tape may be applied
Armour/screen	O	Tinned annealed copper wire braid
Tape over armour/screen		Additional tape may be applied
Outer sheath	I	Flame retardant halogen-free thermoplastic compound, SHF1
Marking text		E.g. "meter" "year" DRAKA NORSK KABEL TFOI 6/10(12)KV 3 x 95/50 mm2 IEC 60332-3-22 ShipLine
Outer sheath colour		Red



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Range and dimensions

Number of elements	Cross section core, mm ²	Cross section screen, mm ²	Conductor Diameter, mm	Insulation Thickness, mm	Thickness Inner covering, mm	Diameter inner covering, mm	Diameter Braid Wire, mm	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
1	35	10	6.8	3.4	1	19 ± 0.8	0.3	1.5	23 ± 1	930	489
1	50	10	8.0	3.4	1	20 ± 1	0.3	1.5	24 ± 1	1080	627
1	70	10	9.6	3.4	1	21 ± 1	0.3	1.6	25.5 ± 1	1320	823
1	95	10	11.2	3.4	1	22.5 ± 1	0.3	1.7	27 ± 1	1650	1094
1	120	10	12.6	3.4	1	24.5 ± 1	0.3	1.7	29 ± 1	1930	1327
1	150	10	14.2	3.4	1	26 ± 1	0.3	1.8	31 ± 1.5	2240	1572
1	185	16	15.9	3.4	1	28 ± 1	0.3	1.8	32.5 ± 1.5	2630	1819
1	240	16	18.1	3.4	1.2	30.5 ± 1.5	0.3	2	35.5 ± 1.5	3290	2444
3	25	16	5.9	3.4	1.5	37 ± 1.5	0.3	2.1	42 ± 2	2740	1067
3	35	16	6.8	3.4	1.2	38 ± 1.5	0.4	2.1	43.5 ± 2	2750	1500
3	50	25	8.0	3.4	1.6	41.5 ± 2	0.4	2.3	47.5 ± 2	3860	1786
3	70	35	9.6	3.4	1.7	45.5 ± 2	0.4	2.4	51.5 ± 2.5	4840	2468
3	95	50	11.2	3.4	1.8	49 ± 2	0.6	2.6	56.5 ± 2.5	6100	3331
3	120	60	12.6	3.4	1.8	52 ± 2.5	0.6	2.7	59.5 ± 2.5	7230	4194
3	150	70	14.2	3.4	1.8	55.5 ± 2.5	0.5	2.9	64.5 ± 3	8650	5266
3	185	95	15.9	3.4	1.9	59.5 ± 2.5	0.5	3	69 ± 3	10170	6037
3	240	120	18.1	3.4	2	64.5 ± 3	0.6	3.2	75 ± 3.5	12650	8229

Ordering information

Part number	Description	EAN No. DNK	EL No.
838501	TFOI 6/10(12)KV 1X 35/10mm ²	7021528385014	-
838502	TFOI 6/10(12)KV 1X 50/10mm ²	7021528385021	-
838503	TFOI 6/10(12)KV 1X 70/10mm ²	7021528385038	-
838504	TFOI 6/10(12)KV 1X 95/10mm ²	7021528385045	-
838505	TFOI 6/10(12)KV 1X 120/10mm ²	7021528385052	-
838506	TFOI 6/10(12)KV 1X 150/10mm ²	7021528385069	-
838507	TFOI 6/10(12)KV 1X 185/16mm ²	7021528385076	-
838508	TFOI 6/10(12)KV 1X 240/16mm ²	7021528385083	-
838521	TFOI 6/10(12)kV 3X 25/16mm ²	7021528385212	-
838522	TFOI 6/10(12)KV 3X 35/16mm ²	7021528385229	-
838523	TFOI 6/10(12)kV 3X 50/25mm ²	7021528385236	-
838524	TFOI 6/10(12)kV 3X 70/35mm ²	7021528385243	-
838525	TFOI 6/10(12)kV 3X 95/50mm ²	7021528385250	-
838526	TFOI 6/10(12)kV 3X 120/60mm ²	7021528385267	-
838527	TFOI 6/10(12)kV 3X 150/70mm ²	7021528385274	-
838528	TFOI 6/10(12)kV 3X 185/95mm ²	7021528385281	-
838529	TFOI 6/10(12)kV 3X 240/120mm ²	7021528385298	-



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Electrical values power cables

Number of elements	Cross section core, mm ²	Cross section screen, mm ²	Conductor type 2	Max. conductor resistance at 20°C, Ohm/km	Max. conductor resistance at 90°C, Ohm/km	Reactance at 50Hz, Ohm/km	Reactance at 60Hz, Ohm/km	Capacitance per phase, nF/km	Current rating IEC 60092-352 Table B.4, Ampere	Short circuit rating 1 second, Ampere
1	35	10	SCC	0.524	0.668	-	-	215	157	4900
1	50	10	SCC	0.387	0.493	0.143	0.162	231	196	7000
1	70	10	SCC	0.268	0.342	0.126	0.151	260	242	16800
1	95	10	SCC	0.193	0.246	0.119	0.143	300	293	16800
1	120	10	SCC	0.153	0.195	0.116	0.139	330	339	16800
1	150	10	SCC	0.124	0.1581	0.113	0.136	360	389	21000
1	185	16	SCC	0.0991	0.1264	0.110	0.132	400	444	25900
1	240	16	SCC	0.0754	0.0961	0.103	0.124	440	522	33600
3	25	16	SCC	0.727	0.927	-	-	-	89	4900
3	35	16	SCC	0.524	0.668	-	-	215	110	4900
3	50	25	SCC	0.387	0.493	0.101	0.121	231	137	4900
3	70	35	SCC	0.268	0.342	0.094	0.113	260	169	9800
3	95	50	SCC	0.193	0.246	0.091	0.109	300	205	4900
3	120	60	SCC	0.153	0.195	0.088	0.106	330	237	9800
3	150	70	SCC	0.124	0.1581	0.088	0.106	360	272	21000
3	185	95	SCC	0.0991	0.1264	0.085	0.102	400	311	25900
3	240	120	SCC	0.0754	0.0961	0.082	0.098	440	365	33600

Ambient temperature correction factors

Ambient Temp °C	35	40	45	50	55	60	65	70	75	80
Rating factor	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

Installation recommendations

Minimum Bending Radius during Installation	Minimum Bending Radius Fixed Installed	Maximum Tensile Load During Installation	Minimum Installation Temperature
15 x D	9 x D	50 N /mm ²	-10°C