



TFOI Cable Armoured 600/1000V

Applications:	TFOI armoured power and control marine cable suitable as shipwiring and shipboard cable where armour protection is required
Conductor:	Stranded plain annealed copper wires as per IEC 60228, class 2.
Insulation:	XLPE as per IEC60092-351
Cabling:	Insulated conductors shall be cabled. Flame retardant and non-hygroscopic fillers may be used. Suitable tapes may be applied on the cabled core.
Inner covering:	Non-hygroscopic material
Armour:	Braid of annealed copper wire/ Coverage density min. 90%
Sheath:	SHF1 as per IEC60092-359
Colour:	Black
Core Identification:	1 Core – Black 2 Core – Black and Light Blue 3 Core – Black, Brown and Light Blue 4 Core – Black, Blue, Brown and White 5 Core and Above – White and numbered
Voltage:	0.6 / 1kV
Standards:	Design Guide: IEC 60092-350 and IEC 60092-353 Insulation material: IEC 60092-351, XLPE Sheath material: IEC 60092-359, SHF1 Flame retardant: IEC60332-1 and IEC 60332-3 Category A Halogen content: IEC60754-1, 0.5%↓ Smoke emission: IEC 61034, 60%↑ Cold bend/impact: CSA22.22 Number 0.3 (-40°C / -35°C) Max rated conductor temperature: 90°C UL1581
Approvals:	ABS, Bureau Veritas and Lloyds Register

One Core

Conductor			Thickness of insulation	Thickness of inner covering (lapped)	Nominal dia. of inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor resistance (at 20°C) (min)	Insulation resistance (at 20°C) (min)	Test voltage	Cable weight	BATT part no
Nominal area	Min. no. of wires	Max. dia.						Nominal	Tolerance					
mm ²	Ea	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5miin	Kg/km		
1.5	7	1.7	0.7	0.4	3.4	0.2	1.0	6.5	0.5	12.1	1030	3500	70	-
2.5	7	2.1	0.7	0.4	3.8	0.2	1.0	6.9	0.5	7.41	850	3500	80	-
4	7	2.7	0.7	0.4	4.4	0.2	1.0	7.5	0.5	4.61	700	3500	100	-
6	7	3.3	0.7	0.4	4.9	0.2	1.0	8.0	0.5	3.08	600	3500	130	-
10	7	4.2	0.7	0.4	5.9	0.2	1.1	9.2	0.6	1.83	480	3500	180	-
16	7	5.3	0.7	0.4	6.9	0.2	1.1	10.2	0.6	1.15	390	3500	250	-
25	7	6.6	0.9	0.4	8.6	0.2	1.2	12.1	0.7	0.727	400	3500	370	-
35	7	7.9	0.9	0.4	9.8	0.2	1.2	13.3	0.7	0.524	350	3500	480	-
50	19	9.1	1.0	0.4	11.3	0.3	1.3	15.3	0.8	0.387	330	3500	650	-
70	19	11.0	1.1	0.4	13.3	0.3	1.4	17.5	0.8	0.268	300	3500	890	14260
95	19	12.9	1.1	0.4	15.2	0.3	1.5	19.6	0.9	0.193	260	3500	1170	-
120	37	14.5	1.2	0.4	17.0	0.3	1.5	21.4	0.9	0.153	250	3500	1440	14433
150	37	16.2	1.4	0.4	19.0	0.3	1.6	23.6	1.0	0.124	270	3500	1750	-
185	37	18.0	1.6	0.4	21.2	0.3	1.7	26.0	1.1	0.0991	270	3500	2160	-
240	61	20.6	1.7	0.4	24.1	0.3	1.8	29.1	1.2	0.0754	250	3500	2780	-
300	61	23.1	1.8	0.4	26.7	0.3	1.9	31.9	1.3	0.0601	240	3500	3420	-

Two Core

Conductor			Thickness of insulation	Thickness of inner covering (lapped)	Nominal dia. of inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor resistance (at 20°C) (min)	Insulation resistance (at 20°C) (min)	Test voltage	Cable weight	BATT part no	BATT part no Red and black cores
Nominal area	Min. no. of wires	Max. dia.						Nominal	Tolerance						
mm ²	Ea	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5miin	Kg/km			
1.00	7	1.4	0.7	0.4	5.8	0.2	1.1	9.1	0.6	18.1	1180	3500	110	-	-
1.5	7	1.7	0.7	0.4	6.4	0.2	1.1	9.7	0.6	12.1	1030	3500	130	-	14205
2.5	7	2.1	0.7	0.4	7.2	0.2	1.1	10.5	0.6	7.41	850	3500	160	-	14206
4	7	2.7	0.7	0.4	8.4	0.2	1.2	11.9	0.7	4.61	700	3500	210	-	-
6	7	3.3	0.7	0.4	9.4	0.2	1.2	12.9	0.7	3.08	600	3500	270	14278	-
10	7	4.2	0.7	0.4	11.4	0.3	1.3	15.4	0.8	1.83	480	3500	400	14434	-
16	7	5.3	0.7	0.4	13.4	0.3	1.4	17.6	0.8	1.15	390	3500	560	-	-
25	7	6.6	0.9	0.4	16.8	0.3	1.5	21.2	0.9	0.727	400	3500	830	-	-
35	7	7.9	0.9	0.4	19.2	0.3	1.6	23.8	1.0	0.524	350	3500	1090	-	-
50	19	9.1	1.0	0.4	22.2	0.3	1.7	27.0	1.1	0.387	330	3500	1410	-	-
70	19	11.0	1.1	0.4	26.2	0.3	1.9	31.4	1.2	0.268	300	3500	1940	-	-
95	19	12.9	1.1	0.4	30.0	0.3	2.1	36.1	1.4	0.193	260	3500	2670	-	-
120	37	14.5	1.2	0.4	33.6	0.4	2.2	39.9	1.5	0.153	250	3500	3280	-	-
150	37	16.2	1.4	0.4	37.6	0.4	2.4	44.3	1.6	0.124	270	3500	4010	-	-
185	37	18.0	1.6	0.4	42.4	0.4	2.6	49.5	1.8	0.0991	270	3500	4960	-	-

Three Core

Conductor			Thickness of insulation	Thickness of inner covering (lapped)	Nominal dia. of inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor resistance (at 20°C) (min)	Insulation resistance (at 20°C) (min)	Test voltage	Cable weight	BATT part no	BATT part no Red, yellow and blue cores
Nominal area	Min. no. of wires	Max. dia.						Nominal	Tolerance						
mm ²	Ea	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5miin	Kg/km			
1	7	1.4	0.7	0.4	6.2	0.2	1.1	9.5	0.6	18.1	1180	3500	130	-	-
1.5	7	1.7	0.7	0.4	6.9	0.2	1.1	10.2	0.6	12.1	1030	3500	150	-	14207
2.5	7	2.1	0.7	0.4	7.7	0.2	1.1	11.0	0.6	7.41	850	3500	190	14238	14171
4	7	2.7	0.7	0.4	9.0	0.2	1.2	12.5	0.7	4.61	700	3500	260	14239	14172
6	7	3.3	0.7	0.4	10.0	0.2	1.2	13.5	0.7	3.08	600	3500	330	-	14208
10	7	4.2	0.7	0.4	12.3	0.3	1.3	16.3	0.8	1.83	480	3500	520	14449	14209
16	7	5.3	0.7	0.4	14.4	0.3	1.4	18.6	0.9	1.15	390	3500	730	-14450	14210
25	7	6.6	0.9	0.4	18.1	0.3	1.6	22.7	1.0	0.727	400	3500	1110	-	14211
35	7	7.9	0.9	0.4	20.7	0.3	1.7	25.5	1.1	0.524	350	3500	1460	14253	-
50	19	9.1	1.0	0.4	23.9	0.3	1.8	28.9	1.2	0.387	330	3500	1900	-	14230
70	19	11.0	1.1	0.4	28.2	0.3	2.0	33.6	1.3	0.268	300	3500	2650	-	-
95	19	12.9	1.1	0.4	32.3	0.4	2.2	38.6	1.5	0.193	260	3500	3640	-	-
120	37	14.5	1.2	0.4	36.2	0.4	2.3	42.7	1.6	0.153	250	3500	4490	-	-
150	37	16.2	1.4	0.6	40.9	0.4	2.5	47.8	1.7	0.124	270	3500	5510	-	-
185	37	18.0	1.6	0.6	45.6	0.4	2.7	52.9	1.9	0.0991	270	3500	6820	-	-
240	61	20.6	1.7	0.6	51.9	0.4	2.9	59.6	2.1	0.0754	250	3500	8770	-	-



Four Core

Conductor			Thickness of insulation	Thickness of inner covering (lapped)	Nominal dia. of inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor resistance (at 20°C)	Insulation resistance (at 20°C)	Test voltage	Cable weight	BATT part no	BATT part no Red, yellow, blue and black cores
Nominal area	Min. no. of wires	Max. dia.						Nominal	Tolerance						
mm ²	Ea	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5miin	Kg/km			
1	7	1.4	0.7	0.4	6.9	0.2	1.1	10.2	0.6	18.1	1180	3500	150	-	-
1.5	7	1.7	0.7	0.4	7.6	0.2	1.1	10.9	0.6	12.1	1030	3500	180	-	14212
2.5	7	2.1	0.7	0.4	8.6	0.2	1.2	12.1	0.7	7.41	850	3500	240	-	14213
4	7	2.7	0.7	0.4	10.1	0.3	1.3	13.9	0.7	4.61	700	3500	340	14214	-
6	7	3.3	0.7	0.4	11.3	0.3	1.3	15.3	0.8	3.08	600	3500	440	14415	14215
10	7	4.2	0.7	0.4	13.7	0.3	1.4	17.9	0.8	1.83	480	3500	650	14457	14216
16	7	5.3	0.7	0.4	16.1	0.3	1.5	20.5	0.9	1.15	390	3500	920	-	14217
25	7	6.6	0.9	0.4	20.2	0.3	1.7	25.0	1.1	0.727	400	3500	1420	-	14218
35	7	7.9	0.9	0.4	23.1	0.3	1.8	28.1	1.1	0.524	350	3500	1870	-	-
50	19	9.1	1.0	0.4	26.7	0.3	1.9	31.9	1.3	0.387	330	3500	2440	-	-
70	19	11.0	1.1	0.4	31.5	0.4	2.1	37.6	1.4	0.268	300	3500	3510	-	-
95	19	12.9	1.1	0.4	36.1	0.4	2.3	42.6	1.6	0.193	260	3500	4680	-	-
120	37	14.5	1.2	0.6	40.9	0.4	2.5	47.8	1.7	0.153	250	3500	5840	-	-
150	37	16.2	1.4	0.6	45.7	0.4	2.7	53.0	1.9	0.124	270	3500	7140	-	-
185	37	18.0	1.6	0.6	51.0	0.4	2.9	58.7	2.1	0.0991	270	3500	8840	-	-

Five Core and above

No of cores	Conductor			Thickness of insulation	Thickness of inner covering (lapped)	Nominal dia. of inner covering	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor resistance (at 20°C)	Insulation resistance (at 20°C)	Test voltage	Cable weight	BATT part no
	Nominal area	Min. no. of wires	Max. dia.						Nominal	Tolerance					
	mm ²	Ea	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5miin	Kg/km	
5	1	7	1.4	0.7	0.4	7.7	0.2	1.1	11.0	0.6	18.1	1180	3500	170	-
7	1	7	1.4	0.7	0.4	8.5	0.2	1.2	12.	0.7	18.1	1180	3500	210	-
9	1	7	1.4	0.7	0.4	10.2	0.3	1.3	14.2	0.7	18.1	1180	3500	290	-
12	1	7	1.4	0.7	0.4	11.6	0.3	1.3	15.6	0.8	18.1	1180	3500	350	-
16	1	7	1.4	0.7	0.4	13.1	0.3	1.4	17.3	0.8	18.1	1180	3500	440	-
19	1	7	1.4	0.7	0.4	13.9	0.3	1.4	18.1	0.8	18.1	1180	3500	490	-
24	1	7	1.4	0.7	0.4	16.6	0.3	1.5	21.0	0.9	18.1	1180	3500	620	-
27	1	7	1.4	0.7	0.4	17.0	0.3	1.5	21.4	0.9	18.1	1180	3500	660	-
33	1	7	1.4	0.7	0.4	18.5	0.3	1.6	23.1	1.0	18.1	1180	3500	780	-
37	1	7	1.4	0.7	0.4	19.3	0.3	1.6	23.9	1.0	18.1	1180	3500	840	-
44	1	7	1.4	0.7	0.4	22.0	0.3	1.7	26.8	1.1	18.1	1180	3501	1010	-
5	1.5	7	1.7	0.7	0.4	8.5	0.2	1.2	12.0	0.7	12.1	1030	3500	220	14244
7	1.5	7	1.7	0.7	0.4	9.4	0.2	1.2	12.9	0.7	12.1	1030	3500	260	14219
9	1.5	7	1.7	0.7	0.4	11.2	0.3	1.3	15.2	0.8	12.1	1030	3500	350	-
12	1.5	7	1.7	0.7	0.4	12.9	0.3	1.4	17.1	0.8	12.1	1030	3500	440	14220
16	1.5	7	1.7	0.7	0.4	14.5	0.3	1.4	18.7	0.9	12.1	1030	3500	540	-
19	1.5	7	1.7	0.7	0.4	15.4	0.3	1.5	19.8	0.9	12.1	1030	3500	620	14235
24	1.5	7	1.7	0.7	0.4	18.4	0.3	1.6	23.0	1.0	12.1	1030	3500	790	-
27	1.5	7	1.7	0.7	0.4	18.9	0.3	1.6	23.5	1.0	12.1	1030	3500	840	-
33	1.5	7	1.7	0.7	0.4	20.5	0.3	1.7	25.3	1.1	12.1	1030	3500	990	-
37	1.5	7	1.7	0.7	0.4	21.4	0.3	1.7	26.2	1.1	12.1	1030	3500	1080	-
44	1.5	7	1.7	0.7	0.4	24.4	0.3	1.8	29.4	1.2	12.1	1030	3501	1300	-
5	2.5	7	2.1	0.7	0.4	9.6	0.2	1.2	13.1	0.7	7.41	850	3500	280	-
7	2.5	7	2.1	0.7	0.4	10.6	0.3	1.3	14.6	0.7	7.41	850	3500	370	14452
9	2.5	7	2.1	0.7	0.4	12.7	0.3	1.4	16.9	0.8	7.41	850	3500	470	-
12	2.5	7	2.1	0.7	0.4	14.5	0.3	1.4	18.7	0.9	7.41	850	3500	590	-
16	2.5	7	2.1	0.7	0.4	16.4	0.3	1.5	20.8	0.9	7.41	850	3500	740	-
19	2.5	7	2.1	0.7	0.4	17.4	0.3	1.5	21.8	1.0	7.41	850	3500	840	-
24	2.5	7	2.1	0.7	0.4	20.8	0.3	1.7	25.6	1.1	7.41	850	3500	1080	-
27	2.5	7	2.1	0.7	0.4	21.3	0.3	1.7	26.1	1.1	7.41	850	3500	1170	-
33	2.5	7	2.1	0.7	0.4	23.2	0.3	1.8	28.2	1.1	7.41	850	3500	1380	-
37	2.5	7	2.1	0.7	0.4	24.2	0.3	1.8	29.2	1.2	7.41	850	3500	1510	-
44	2.5	7	2.1	0.7	0.4	27.6	0.3	2.0	33.0	1.3	7.41	850	3501	1830	-