

Type LS Drilmar® Signal & Instrumentation

HF XLPE Insulated, SHF1 Jacketed, Drilling Rig and Marine Cable, 150/250 V

CME[®]
wire and cable

A Viakable Company

Features

Engineered for easiest installation.

Maximum conductor operating temperature: 90 °C as per IEC.

DRILMAR® HF XLPE Insulation:

- Low Smoke and Halogen Free XLPE meeting IEC 60092-360

- Rated at 90 °C.

SHF1 Jacket:

- Low Smoke and Halogen Free Polyolefin meeting IEC 60092-360

Completed cable offers superior flame resistance meeting:

- 7IEC 60332-1 and IEC 60332-3-22 Category A.
- Low smoke as per IEC 61034-2
- Halogen free as per IEC 60754-1.

Application

DRILMAR® Type LS cables are for use in signal transmission application where twisted groups of conductors are desired, also with overall or individual shielding to prevent electrostatic and/or electromagnetic interference.

Typical applications include: tank level indicators, fire and gas protection systems, communication systems, CO₂ systems, and smoke detectors.

Standards

IEC 60092-350

General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications.

IEC 60092-351

Insulating materials for shipboard and offshore units, power, control, instrumentation, telecommunication and data cables.

IEC 60092-376

Cables for control and instrumentation circuits 150/250 V (300 V).

IEC 60092-359

Sheathing materials for shipboard power and telecommunication cables.

IEC 60092-352

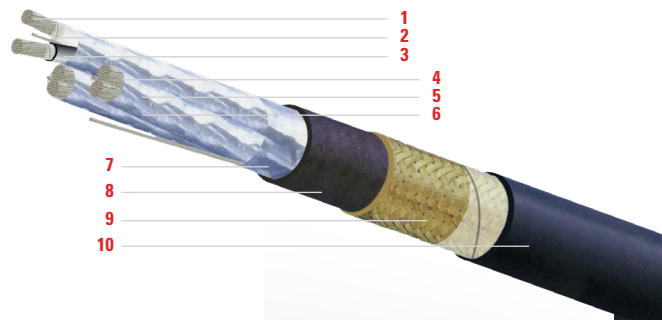
Electrical installations in ships - Part 352: Choice and installation of electrical cables.

IEEE 45 - 2002

Recommended Practice for Electrical Installations on Shipboard Cable, as noted in Clause 23.3 for products manufactured per IEC 60092-350 series.

Approvals

- Intertek, as Type HF XLPE/SHF1
- ABS, American Bureau of Shipping.
- DNV, Det Norske Veritas
- LRS, Lloyd's Register of Shipping.



Engineering Information

1. Conductor: Annealed flexible Tin Coated Copper, Class 5 as per IEC 60228.

Sizes: 0.5 mm² up to 2.5 mm².

2. Separator Tape: Suitable tape as required.

3. Insulation: Low Smoke Halogen Free flame retardant crosslinked polyethylene (HF XLPE).

4. Assembly: Insulated conductors twisted in pairs or triads.

5. Identification: Color coded with sequential printed numbers.

Pairs: Black and White.

Triads: Black, White and Red.

6. Cabling: Pairs/Triads cabled round with moisture and flame resistant fillers as required, and binder tape.

7. Optional Shielding: Individual and/or Overall Aluminum/Polyester tape, with drain wire, 100% coverage.

8. Jacket: Black Low Smoke Halogen Free flame retardant thermoplastic Polyolefin (SHF1).

9. Armor (optional): Standard - Tinned Copper Braid.

10. Jacket (overall): Black Low Smoke Halogen Free flame retardant thermoplastic Polyolefin (SHF1).

On request: Grey Jacket is available.

Technical Data

Type LS-Triads Signal & Instrumentation, 0.5 mm², Individual Shield

Conductor	Unarmored					Armored					Armored and Sheathed				
	Number of Triads	Part Number	Nominal OD		Net Weight		Tinned Copper				Tinned Copper				
			in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft
2	DTTI0.5LSSH-F-2	0.43	11.0	94	140	DTTI0.5LSSH-F-T2	0.48	12.2	172	256	DTTI0.5LSSH-F-TS2	0.57	14.4	217	324
3	DTTI0.5LSSH-F-3	0.47	11.8	119	177	DTTI0.5LSSH-F-T3	0.52	13.1	203	302	DTTI0.5LSSH-F-TS3	0.60	15.2	251	374
4	DTTI0.5LSSH-F-4	0.51	12.9	135	201	DTTI0.5LSSH-F-T4	0.56	14.2	227	337	DTTI0.5LSSH-F-TS4	0.65	16.5	284	423
5	DTTI0.5LSSH-F-5	0.57	14.4	174	259	DTTI0.5LSSH-F-T5	0.62	15.6	275	410	DTTI0.5LSSH-F-TS5	0.71	18.0	338	503
6	DTTI0.5LSSH-F-6	0.62	15.6	208	309	DTTI0.5LSSH-F-T6	0.67	16.9	317	472	DTTI0.5LSSH-F-TS6	0.76	19.3	385	573
7	DTTI0.5LSSH-F-7	0.62	15.6	216	321	DTTI0.5LSSH-F-T7	0.67	16.9	326	484	DTTI0.5LSSH-F-TS7	0.76	19.3	393	585
8	DTTI0.5LSSH-F-8	0.73	18.5	289	430	DTTI0.5LSSH-F-T8	0.78	19.7	418	622	DTTI0.5LSSH-F-TS8	0.88	22.3	503	749
10	DTTI0.5LSSH-F-10	0.80	20.3	313	466	DTTI0.5LSSH-F-T10	0.85	21.5	454	675	DTTI0.5LSSH-F-TS10	0.95	24.1	547	814
12	DTTI0.5LSSH-F-12	0.82	20.9	359	534	DTTI0.5LSSH-F-T12	0.87	22.2	504	750	DTTI0.5LSSH-F-TS12	0.98	24.9	608	905
14	DTTI0.5LSSH-F-14	0.87	22.2	413	614	DTTI0.5LSSH-F-T14	0.92	23.4	566	842	DTTI0.5LSSH-F-TS14	1.03	26.2	676	1005
16	DTTI0.5LSSH-F-16	0.92	23.4	468	696	DTTI0.5LSSH-F-T16	0.97	24.6	629	937	DTTI0.5LSSH-F-TS16	1.08	27.4	744	1108
17	DTTI0.5LSSH-F-17	0.98	24.8	511	761	DTTI0.5LSSH-F-T17	1.03	26.1	682	1016	DTTI0.5LSSH-F-TS17	1.15	29.1	816	1214
19	DTTI0.5LSSH-F-19	0.98	24.8	540	804	DTTI0.5LSSH-F-T19	1.03	26.1	712	1059	DTTI0.5LSSH-F-TS19	1.15	29.1	845	1258
20	DTTI0.5LSSH-F-20	1.03	26.1	591	879	DTTI0.5LSSH-F-T20	1.08	27.4	770	1147	DTTI0.5LSSH-F-TS20	1.20	30.4	910	1354
24	DTTI0.5LSSH-F-24	1.14	29.1	730	1087	DTTI0.5LSSH-F-T24	1.19	30.3	930	1384	DTTI0.5LSSH-F-TS24	1.32	33.5	1095	1630

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

Ampacities: Refer to beginning of section.

Type LS-Triads Signal & Instrumentation, 0.75 mm², Individual Shield

Conductor	Unarmored					Armored					Armored and Sheathed				
	Number of Triads	Part Number	Nominal OD		Net Weight		Tinned Copper				Tinned Copper				
			in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft
2	DTTI0.75LSSH-F-2	0.51	12.9	127	189	DTTI0.75LSSH-F-T2	0.56	14.2	218	325	DTTI0.75LSSH-F-TS2	0.65	16.5	276	410
3	DTTI0.75LSSH-F-3	0.54	13.7	158	235	DTTI0.75LSSH-F-T3	0.59	15.0	254	378	DTTI0.75LSSH-F-TS3	0.68	17.3	315	468
4	DTTI0.75LSSH-F-4	0.60	15.3	202	301	DTTI0.75LSSH-F-T4	0.65	16.5	309	460	DTTI0.75LSSH-F-TS4	0.74	18.9	375	559
5	DTTI0.75LSSH-F-5	0.67	16.9	236	352	DTTI0.75LSSH-F-T5	0.72	18.2	354	528	DTTI0.75LSSH-F-TS5	0.82	20.7	434	646
6	DTTI0.75LSSH-F-6	0.73	18.4	283	422	DTTI0.75LSSH-F-T6	0.78	19.7	412	613	DTTI0.75LSSH-F-TS6	0.88	22.3	497	740
7	DTTI0.75LSSH-F-7	0.73	18.4	293	437	DTTI0.75LSSH-F-T7	0.78	19.7	422	628	DTTI0.75LSSH-F-TS7	0.88	22.3	507	755
8	DTTI0.75LSSH-F-8	0.86	21.8	396	590	DTTI0.75LSSH-F-T8	0.91	23.1	547	814	DTTI0.75LSSH-F-TS8	1.02	25.8	655	975
10	DTTI0.75LSSH-F-10	0.94	23.9	422	628	DTTI0.75LSSH-F-T10	0.99	25.1	587	873	DTTI0.75LSSH-F-TS10	1.10	27.9	704	1048
12	DTTI0.75LSSH-F-12	0.98	24.9	494	735	DTTI0.75LSSH-F-T12	1.03	26.1	665	990	DTTI0.75LSSH-F-TS12	1.15	29.1	799	1189
14	DTTI0.75LSSH-F-14	1.03	26.2	561	835	DTTI0.75LSSH-F-T14	1.08	27.5	741	1103	DTTI0.75LSSH-F-TS14	1.20	30.5	881	1312
16	DTTI0.75LSSH-F-16	1.10	27.9	650	967	DTTI0.75LSSH-F-T16	1.15	29.2	842	1253	DTTI0.75LSSH-F-TS16	1.27	32.2	990	1474
17	DTTI0.75LSSH-F-17	1.16	29.4	699	1040	DTTI0.75LSSH-F-T17	1.21	30.7	901	1341	DTTI0.75LSSH-F-TS17	1.33	33.9	1068	1589
19	DTTI0.75LSSH-F-19	1.16	29.4	739	1099	DTTI0.75LSSH-F-T19	1.21	30.7	941	1400	DTTI0.75LSSH-F-TS19	1.33	33.9	1108	1648
20	DTTI0.75LSSH-F-20	1.23	31.1	820	1221	DTTI0.75LSSH-F-T20	1.29	32.8	1089	1621	DTTI0.75LSSH-F-TS20	1.42	36.0	1267	1886
24	DTTI0.75LSSH-F-24	1.36	34.6	1011	1505	DTTI0.75LSSH-F-T24	1.43	36.2	1309	1948	DTTI0.75LSSH-F-TS24	1.56	39.6	1518	2259

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

Ampacities: Refer to beginning of section.

Technical Data *continued*

Type LS-Triads Signal & Instrumentation, 1.0 mm², Individual Shield

Conductor	Unarmored					Armored					Armored and Sheathed					
	Number of Triads	Part Number	Nominal OD		Net Weight		Tinned Copper					Tinned Copper				
			in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km
2	DTT11.0LSSH-F-2	0.54	13.7	151	225	DTT11.0LSSH-F-T2	0.59	15.0	248	369	DTT11.0LSSH-F-TS2	0.68	17.3	308	459	
3	DTT11.0LSSH-F-3	0.58	14.8	194	289	DTT11.0LSSH-F-T3	0.63	16.1	298	443	DTT11.0LSSH-F-TS3	0.73	18.4	362	539	
4	DTT11.0LSSH-F-4	0.64	16.2	242	360	DTT11.0LSSH-F-T4	0.69	17.5	355	528	DTT11.0LSSH-F-TS4	0.78	19.8	425	632	
5	DTT11.0LSSH-F-5	0.71	18.0	284	423	DTT11.0LSSH-F-T5	0.76	19.3	410	610	DTT11.0LSSH-F-TS5	0.86	21.8	494	735	
6	DTT11.0LSSH-F-6	0.78	19.9	348	518	DTT11.0LSSH-F-T6	0.83	21.1	486	724	DTT11.0LSSH-F-TS6	0.93	23.7	578	860	
7	DTT11.0LSSH-F-7	0.78	19.9	364	541	DTT11.0LSSH-F-T7	0.83	21.1	501	746	DTT11.0LSSH-F-TS7	0.93	23.7	593	882	
8	DTT11.0LSSH-F-8	0.92	23.4	484	720	DTT11.0LSSH-F-T8	0.97	24.7	646	961	DTT11.0LSSH-F-TS8	1.08	27.4	761	1132	
10	DTT11.0LSSH-F-10	1.01	25.7	522	776	DTT11.0LSSH-F-T10	1.06	27.0	699	1040	DTT11.0LSSH-F-TS10	1.18	30.0	837	1245	
12	DTT11.0LSSH-F-12	1.05	26.5	602	896	DTT11.0LSSH-F-T12	1.10	27.8	785	1168	DTT11.0LSSH-F-TS12	1.21	30.8	927	1379	
14	DTT11.0LSSH-F-14	1.11	28.2	698	1038	DTT11.0LSSH-F-T14	1.16	29.5	892	1327	DTT11.0LSSH-F-TS14	1.28	32.5	1042	1550	
16	DTT11.0LSSH-F-16	1.17	29.8	794	1182	DTT11.0LSSH-F-T16	1.22	31.1	999	1487	DTT11.0LSSH-F-TS16	1.35	34.3	1168	1738	
17	DTT11.0LSSH-F-17	1.25	31.6	865	1287	DTT11.0LSSH-F-T17	1.31	33.3	1138	1693	DTT11.0LSSH-F-TS17	1.44	36.5	1318	1962	
19	DTT11.0LSSH-F-19	1.25	31.6	918	1365	DTT11.0LSSH-F-T19	1.31	33.3	1191	1772	DTT11.0LSSH-F-TS19	1.44	36.5	1371	2040	
20	DTT11.0LSSH-F-20	1.32	33.5	1015	1511	DTT11.0LSSH-F-T20	1.38	35.1	1304	1941	DTT11.0LSSH-F-TS20	1.52	38.5	1507	2242	
24	DTT11.0LSSH-F-24	1.47	37.2	1249	1859	DTT11.0LSSH-F-T24	1.53	38.8	1569	2335	DTT11.0LSSH-F-TS24	1.67	42.4	1803	2683	

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

Ampacities: Refer to beginning of section.

Type LS-Triads Signal & Instrumentation, 1.5 mm², Individual Shield

Conductor	Unarmored					Armored					Armored and Sheathed					
	Number of Triads	Part Number	Nominal OD		Net Weight		Tinned Copper					Tinned Copper				
			in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km
2	DTT11.5LSSH-F-2	0.63	16.0	207	308	DTT11.5LSSH-F-T2	0.68	17.3	319	474	DTT11.5LSSH-F-TS2	0.77	19.6	388	577	
3	DTT11.5LSSH-F-3	0.68	17.2	264	393	DTT11.5LSSH-F-T3	0.73	18.5	385	572	DTT11.5LSSH-F-TS3	0.83	21.0	465	692	
4	DTT11.5LSSH-F-4	0.74	18.9	333	495	DTT11.5LSSH-F-T4	0.79	20.2	464	691	DTT11.5LSSH-F-TS4	0.89	22.7	552	821	
5	DTT11.5LSSH-F-5	0.83	21.0	389	578	DTT11.5LSSH-F-T5	0.88	22.2	534	795	DTT11.5LSSH-F-TS5	0.98	25.0	638	950	
6	DTT11.5LSSH-F-6	0.91	23.1	474	706	DTT11.5LSSH-F-T6	0.96	24.3	634	943	DTT11.5LSSH-F-TS6	1.07	27.1	747	1112	
7	DTT11.5LSSH-F-7	0.91	23.1	495	737	DTT11.5LSSH-F-T7	0.96	24.3	655	974	DTT11.5LSSH-F-TS7	1.07	27.1	768	1143	
8	DTT11.5LSSH-F-8	1.08	27.3	664	989	DTT11.5LSSH-F-T8	1.13	28.6	852	1268	DTT11.5LSSH-F-TS8	1.24	31.6	998	1485	
10	DTT11.5LSSH-F-10	1.18	30.0	715	1064	DTT11.5LSSH-F-T10	1.25	31.6	974	1450	DTT11.5LSSH-F-TS10	1.37	34.8	1146	1706	
12	DTT11.5LSSH-F-12	1.23	31.2	838	1248	DTT11.5LSSH-F-T12	1.29	32.9	1108	1649	DTT11.5LSSH-F-TS12	1.42	36.1	1286	1914	
14	DTT11.5LSSH-F-14	1.30	33.1	968	1440	DTT11.5LSSH-F-T14	1.37	34.7	1253	1864	DTT11.5LSSH-F-TS14	1.50	38.2	1454	2164	
16	DTT11.5LSSH-F-16	1.38	35.0	1104	1642	DTT11.5LSSH-F-T16	1.44	36.6	1405	2091	DTT11.5LSSH-F-TS16	1.58	40.0	1616	2405	
17	DTT11.5LSSH-F-17	1.46	37.1	1199	1784	DTT11.5LSSH-F-T17	1.53	38.8	1518	2260	DTT11.5LSSH-F-TS17	1.67	42.3	1752	2607	
19	DTT11.5LSSH-F-19	1.46	37.1	1273	1895	DTT11.5LSSH-F-T19	1.53	38.8	1593	2370	DTT11.5LSSH-F-TS19	1.67	42.3	1826	2718	
20	DTT11.5LSSH-F-20	1.55	39.3	1409	2097	DTT11.5LSSH-F-T20	1.61	40.9	1747	2600	DTT11.5LSSH-F-TS20	1.75	44.5	1993	2966	
24	DTT11.5LSSH-F-24	1.73	43.9	1754	2610	DTT11.5LSSH-F-T24	1.79	45.5	2130	3170	DTT11.5LSSH-F-TS24	1.94	49.3	2419	3601	

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

Ampacities: Refer to beginning of section.

Technical Data *continued*

Type LS-Triads Signal & Instrumentation, 2.5 mm², Individual Shield

Conductor	Unarmored					Armored					Armored and Sheathed					
	Number of Triads	Part Number	Nominal OD		Net Weight		Tinned Copper					Tinned Copper				
			in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km	Part Number	in	mm	lb/kft	kg/km
2	DTTI2.5LSSH-F-2	0.72	18.2	286	426	DTTI2.5LSSH-F-T2	0.77	19.5	413	614	DTTI2.5LSSH-F-TS2	0.87	22.0	497	740	
3	DTTI2.5LSSH-F-3	0.77	19.6	371	553	DTTI2.5LSSH-F-T3	0.82	20.8	507	755	DTTI2.5LSSH-F-TS3	0.92	23.4	598	889	
4	DTTI2.5LSSH-F-4	0.85	21.5	469	698	DTTI2.5LSSH-F-T4	0.90	22.8	618	920	DTTI2.5LSSH-F-TS4	1.00	25.5	725	1079	
5	DTTI2.5LSSH-F-5	0.94	23.8	549	818	DTTI2.5LSSH-F-T5	0.99	25.1	714	1062	DTTI2.5LSSH-F-TS5	1.10	27.8	831	1236	
6	DTTI2.5LSSH-F-6	1.03	26.2	673	1002	DTTI2.5LSSH-F-T6	1.08	27.5	854	1271	DTTI2.5LSSH-F-TS6	1.20	30.5	994	1480	
7	DTTI2.5LSSH-F-7	1.03	26.2	710	1057	DTTI2.5LSSH-F-T7	1.08	27.5	891	1326	DTTI2.5LSSH-F-TS7	1.20	30.5	1031	1535	
8	DTTI2.5LSSH-F-8	1.23	31.3	955	1422	DTTI2.5LSSH-F-T8	1.30	33.0	1226	1824	DTTI2.5LSSH-F-TS8	1.42	36.2	1405	2090	
10	DTTI2.5LSSH-F-10	1.35	34.4	1034	1538	DTTI2.5LSSH-F-T10	1.42	36.0	1330	1979	DTTI2.5LSSH-F-TS10	1.55	39.4	1538	2288	
12	DTTI2.5LSSH-F-12	1.41	35.8	1215	1807	DTTI2.5LSSH-F-T12	1.47	37.4	1522	2265	DTTI2.5LSSH-F-TS12	1.61	40.8	1738	2586	
14	DTTI2.5LSSH-F-14	1.48	37.7	1389	2068	DTTI2.5LSSH-F-T14	1.55	39.3	1713	2550	DTTI2.5LSSH-F-TS14	1.69	42.9	1950	2902	
16	DTTI2.5LSSH-F-16	1.58	40.1	1601	2383	DTTI2.5LSSH-F-T16	1.64	41.7	1945	2894	DTTI2.5LSSH-F-TS16	1.78	45.2	2195	3267	
17	DTTI2.5LSSH-F-17	1.68	42.5	1739	2587	DTTI2.5LSSH-F-T17	1.74	44.2	2103	3130	DTTI2.5LSSH-F-TS17	1.89	47.9	2384	3548	
19	DTTI2.5LSSH-F-19	1.68	42.5	1856	2762	DTTI2.5LSSH-F-T19	1.74	44.2	2220	3304	DTTI2.5LSSH-F-TS19	1.89	47.9	2501	3722	
20	DTTI2.5LSSH-F-20	1.77	45.0	2043	3040	DTTI2.5LSSH-F-T20	1.84	46.6	2428	3614	DTTI2.5LSSH-F-TS20	1.99	50.6	2746	4086	
24	DTTI2.5LSSH-F-24	1.98	50.2	2527	3761	DTTI2.5LSSH-F-T24	2.04	51.8	2956	4399	DTTI2.5LSSH-F-TS24	2.21	56.0	3326	4950	

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product.

Ampacities: Refer to beginning of section.