

Type LS Drilmar® Signal & Instrumentation

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

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

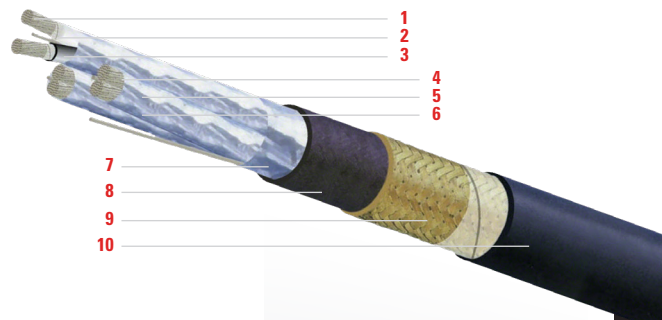
Electrical installations in ships - Part 352: Choice and installation of electrical cables.

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-Pairs Signal & Instrumentation, 0.5 mm², Overall Shield

Conductor	Unarmored					Armored					Armored and Sheathed					
	Number of Pairs	Part Number	Nominal OD		Net Weight		Part Number	Nominal OD		Net Weight		Part Number	Nominal OD		Net Weight	
			in	mm	lb/kft	kg/km		in	mm	lb/kft	kg/km		in	mm	lb/kft	kg/km
1	DTP00.5LSSH-F-1	0.24	6.1	33	49	DTP00.5LSSH-F-T1	0.27	6.9	61	91	DTP00.5LSSH-F-TS1	0.35	8.8	85	127	
2	DTP00.5LSSH-F-2	0.31	7.9	51	76	DTP00.5LSSH-F-T2	0.34	8.7	87	130	DTP00.5LSSH-F-TS2	0.42	10.6	117	174	
3	DTP00.5LSSH-F-3	0.36	9.2	69	103	DTP00.5LSSH-F-T3	0.39	10.0	111	165	DTP00.5LSSH-F-TS3	0.48	12.1	148	221	
4	DTP00.5LSSH-F-4	0.39	9.8	82	122	DTP00.5LSSH-F-T4	0.42	10.6	127	189	DTP00.5LSSH-F-TS4	0.50	12.7	166	248	
5	DTP00.5LSSH-F-5	0.42	10.6	97	144	DTP00.5LSSH-F-T5	0.47	11.9	172	257	DTP00.5LSSH-F-TS5	0.55	14.0	217	322	
6	DTP00.5LSSH-F-6	0.46	11.7	115	171	DTP00.5LSSH-F-T6	0.51	13.0	198	295	DTP00.5LSSH-F-TS6	0.60	15.1	246	366	
7	DTP00.5LSSH-F-7	0.46	11.7	126	187	DTP00.5LSSH-F-T7	0.51	13.0	209	311	DTP00.5LSSH-F-TS7	0.60	15.1	257	382	
8	DTP00.5LSSH-F-8	0.50	12.6	140	209	DTP00.5LSSH-F-T8	0.55	13.9	230	342	DTP00.5LSSH-F-TS8	0.64	16.2	286	426	
10	DTP00.5LSSH-F-10	0.58	14.7	176	262	DTP00.5LSSH-F-T10	0.63	16.0	280	416	DTP00.5LSSH-F-TS10	0.72	18.3	344	512	
12	DTP00.5LSSH-F-12	0.61	15.4	201	299	DTP00.5LSSH-F-T12	0.66	16.7	309	460	DTP00.5LSSH-F-TS12	0.75	19.0	376	559	
14	DTP00.5LSSH-F-14	0.64	16.2	226	337	DTP00.5LSSH-F-T14	0.69	17.4	339	505	DTP00.5LSSH-F-TS14	0.78	19.8	409	609	
16	DTP00.5LSSH-F-16	0.68	17.2	258	384	DTP00.5LSSH-F-T16	0.73	18.5	378	562	DTP00.5LSSH-F-TS16	0.83	21.0	458	682	
17	DTP00.5LSSH-F-17	0.70	17.7	271	403	DTP00.5LSSH-F-T17	0.75	18.9	394	587	DTP00.5LSSH-F-TS17	0.85	21.5	477	709	
19	DTP00.5LSSH-F-19	0.71	18.1	295	438	DTP00.5LSSH-F-T19	0.76	19.4	421	626	DTP00.5LSSH-F-TS19	0.86	21.9	505	751	
20	DTP00.5LSSH-F-20	0.73	18.6	308	459	DTP00.5LSSH-F-T20	0.78	19.9	438	651	DTP00.5LSSH-F-TS20	0.88	22.4	524	780	
24	DTP00.5LSSH-F-24	0.81	20.7	368	547	DTP00.5LSSH-F-T24	0.86	21.9	511	761	DTP00.5LSSH-F-TS24	0.97	24.7	614	914	

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-Pairs Signal & Instrumentation, 0.75 mm², Overall Shield

Conductor	Unarmored					Armored					Armored and Sheathed					
	Number of Pairs	Part Number	Nominal OD		Net Weight		Part Number	Nominal OD		Net Weight		Part Number	Nominal OD		Net Weight	
			in	mm	lb/kft	kg/km		in	mm	lb/kft	kg/km		in	mm	lb/kft	kg/km
1	DTP00.75LSSH-F-1	0.27	6.9	41	62	DTP00.75LSSH-F-T1	0.30	7.7	73	109	DTP00.75LSSH-F-TS1	0.38	9.6	100	149	
2	DTP00.75LSSH-F-2	0.37	9.3	70	103	DTP00.75LSSH-F-T2	0.40	10.1	112	167	DTP00.75LSSH-F-TS2	0.48	12.2	150	223	
3	DTP00.75LSSH-F-3	0.42	10.6	91	136	DTP00.75LSSH-F-T3	0.47	11.9	167	248	DTP00.75LSSH-F-TS3	0.55	14.0	211	314	
4	DTP00.75LSSH-F-4	0.46	11.6	114	170	DTP00.75LSSH-F-T4	0.51	12.9	197	293	DTP00.75LSSH-F-TS4	0.59	15.0	244	364	
5	DTP00.75LSSH-F-5	0.50	12.6	135	201	DTP00.75LSSH-F-T5	0.55	13.9	225	334	DTP00.75LSSH-F-TS5	0.64	16.3	281	419	
6	DTP00.75LSSH-F-6	0.54	13.7	156	233	DTP00.75LSSH-F-T6	0.59	15.0	253	376	DTP00.75LSSH-F-TS6	0.68	17.3	313	466	
7	DTP00.75LSSH-F-7	0.54	13.7	172	257	DTP00.75LSSH-F-T7	0.59	15.0	269	400	DTP00.75LSSH-F-TS7	0.68	17.3	329	490	
8	DTP00.75LSSH-F-8	0.59	15.1	200	297	DTP00.75LSSH-F-T8	0.64	16.4	306	455	DTP00.75LSSH-F-TS8	0.74	18.7	371	553	
10	DTP00.75LSSH-F-10	0.69	17.5	249	371	DTP00.75LSSH-F-T10	0.74	18.8	371	553	DTP00.75LSSH-F-TS10	0.84	21.3	453	674	
12	DTP00.75LSSH-F-12	0.72	18.4	286	425	DTP00.75LSSH-F-T12	0.77	19.6	414	615	DTP00.75LSSH-F-TS12	0.87	22.2	499	742	
14	DTP00.75LSSH-F-14	0.77	19.5	329	490	DTP00.75LSSH-F-T14	0.82	20.8	465	692	DTP00.75LSSH-F-TS14	0.92	23.3	555	826	
16	DTP00.75LSSH-F-16	0.81	20.5	367	547	DTP00.75LSSH-F-T16	0.86	21.8	510	759	DTP00.75LSSH-F-TS16	0.97	24.5	612	911	
17	DTP00.75LSSH-F-17	0.83	21.1	387	576	DTP00.75LSSH-F-T17	0.88	22.4	533	794	DTP00.75LSSH-F-TS17	0.99	25.1	638	950	
19	DTP00.75LSSH-F-19	0.85	21.6	422	628	DTP00.75LSSH-F-T19	0.90	22.9	572	851	DTP00.75LSSH-F-TS19	1.01	25.7	679	1011	
20	DTP00.75LSSH-F-20	0.88	22.4	447	666	DTP00.75LSSH-F-T20	0.93	23.7	602	897	DTP00.75LSSH-F-TS20	1.04	26.4	713	1061	
24	DTP00.75LSSH-F-24	0.98	24.9	533	794	DTP00.75LSSH-F-T24	1.03	26.2	705	1049	DTP00.75LSSH-F-TS24	1.15	29.2	839	1248	

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-Pairs Signal & Instrumentation, 1.0 mm², Overall Shield

Conductor	Unarmored						Armored				Armored and Sheathed				
	Number of Pairs	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
1	DTPO1.0LSSH-F-1	0.29	7.2	49	72	DTPO1.0LSSH-F-T1	0.32	8.1	82	122	DTPO1.0LSSH-F-TS1	0.39	10.0	110	163
2	DTPO1.0LSSH-F-2	0.39	9.8	82	122	DTPO1.0LSSH-F-T2	0.42	10.6	127	188	DTPO1.0LSSH-F-TS2	0.50	12.8	167	248
3	DTPO1.0LSSH-F-3	0.45	11.5	112	167	DTPO1.0LSSH-F-T3	0.50	12.7	193	288	DTPO1.0LSSH-F-TS3	0.59	14.9	240	358
4	DTPO1.0LSSH-F-4	0.48	12.3	136	202	DTPO1.0LSSH-F-T4	0.53	13.6	223	332	DTPO1.0LSSH-F-TS4	0.62	15.7	273	406
5	DTPO1.0LSSH-F-5	0.53	13.4	161	240	DTPO1.0LSSH-F-T5	0.58	14.7	256	381	DTPO1.0LSSH-F-TS5	0.67	17.0	315	469
6	DTPO1.0LSSH-F-6	0.59	14.9	193	288	DTPO1.0LSSH-F-T6	0.64	16.1	298	443	DTPO1.0LSSH-F-TS6	0.73	18.5	362	539
7	DTPO1.0LSSH-F-7	0.59	14.9	214	318	DTPO1.0LSSH-F-T7	0.64	16.1	318	473	DTPO1.0LSSH-F-TS7	0.73	18.5	383	569
8	DTPO1.0LSSH-F-8	0.63	16.1	240	357	DTPO1.0LSSH-F-T8	0.68	17.3	352	524	DTPO1.0LSSH-F-TS8	0.77	19.7	421	627
10	DTPO1.0LSSH-F-10	0.73	18.6	299	444	DTPO1.0LSSH-F-T10	0.78	19.9	428	637	DTPO1.0LSSH-F-TS10	0.88	22.5	515	766
12	DTPO1.0LSSH-F-12	0.78	19.8	351	522	DTPO1.0LSSH-F-T12	0.83	21.0	488	726	DTPO1.0LSSH-F-TS12	0.93	23.6	579	861
14	DTPO1.0LSSH-F-14	0.82	20.8	397	591	DTPO1.0LSSH-F-T14	0.87	22.1	541	805	DTPO1.0LSSH-F-TS14	0.98	24.8	645	960
16	DTPO1.0LSSH-F-16	0.86	21.9	444	660	DTPO1.0LSSH-F-T16	0.91	23.2	595	886	DTPO1.0LSSH-F-TS16	1.02	25.9	704	1047
17	DTPO1.0LSSH-F-17	0.89	22.8	473	704	DTPO1.0LSSH-F-T17	0.94	24.0	630	938	DTPO1.0LSSH-F-TS17	1.05	26.7	742	1104
19	DTPO1.0LSSH-F-19	0.92	23.2	517	770	DTPO1.0LSSH-F-T19	0.97	24.5	678	1009	DTPO1.0LSSH-F-TS19	1.07	27.3	792	1179
20	DTPO1.0LSSH-F-20	0.94	23.9	541	806	DTPO1.0LSSH-F-T20	0.99	25.2	707	1052	DTPO1.0LSSH-F-TS20	1.10	27.9	824	1226
24	DTPO1.0LSSH-F-24	1.05	26.6	646	961	DTPO1.0LSSH-F-T24	1.10	27.9	829	1234	DTPO1.0LSSH-F-TS24	1.22	30.9	971	1445

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-Pairs Signal & Instrumentation, 1.5 mm², Overall Shield

Conductor	Unarmored						Armored				Armored and Sheathed				
	Number of Pairs	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
1	DTPO1.5LSSH-F-2	0.32	8.2	77	114	DTPO1.5LSSH-F-T2	0.36	9.0	122	181	DTPO1.5LSSH-F-TS2	0.43	10.9	152	227
2	DTPO1.5LSSH-F-2	0.45	11.5	111	166	DTPO1.5LSSH-F-T2	0.50	12.8	193	287	DTPO1.5LSSH-F-TS2	0.59	14.9	240	357
3	DTPO1.5LSSH-F-3	0.52	13.2	149	221	DTPO1.5LSSH-F-T3	0.57	14.5	242	360	DTPO1.5LSSH-F-TS3	0.66	16.8	300	447
4	DTPO1.5LSSH-F-4	0.57	14.5	188	280	DTPO1.5LSSH-F-T4	0.62	15.7	290	431	DTPO1.5LSSH-F-TS4	0.71	18.1	353	526
5	DTPO1.5LSSH-F-5	0.62	15.8	224	334	DTPO1.5LSSH-F-T5	0.67	17.1	335	498	DTPO1.5LSSH-F-TS5	0.76	19.4	403	600
6	DTPO1.5LSSH-F-6	0.69	17.4	267	397	DTPO1.5LSSH-F-T6	0.74	18.7	388	578	DTPO1.5LSSH-F-TS6	0.84	21.2	470	699
7	DTPO1.5LSSH-F-7	0.69	17.4	296	440	DTPO1.5LSSH-F-T7	0.74	18.7	417	621	DTPO1.5LSSH-F-TS7	0.84	21.2	499	742
8	DTPO1.5LSSH-F-8	0.74	18.8	333	495	DTPO1.5LSSH-F-T8	0.79	20.1	464	690	DTPO1.5LSSH-F-TS8	0.89	22.7	551	820
10	DTPO1.5LSSH-F-10	0.86	21.9	414	616	DTPO1.5LSSH-F-T10	0.91	23.2	566	842	DTPO1.5LSSH-F-TS10	1.02	26.0	674	1004
12	DTPO1.5LSSH-F-12	0.91	23.2	484	721	DTPO1.5LSSH-F-T12	0.96	24.5	645	959	DTPO1.5LSSH-F-TS12	1.07	27.2	759	1129
14	DTPO1.5LSSH-F-14	0.96	24.4	550	819	DTPO1.5LSSH-F-T14	1.01	25.7	719	1070	DTPO1.5LSSH-F-TS14	1.12	28.4	839	1248
16	DTPO1.5LSSH-F-16	1.02	26.0	625	931	DTPO1.5LSSH-F-T16	1.07	27.2	804	1197	DTPO1.5LSSH-F-TS16	1.19	30.2	943	1404
17	DTPO1.5LSSH-F-17	1.05	26.7	659	981	DTPO1.5LSSH-F-T17	1.10	28.0	843	1255	DTPO1.5LSSH-F-TS17	1.22	31.0	986	1467
19	DTPO1.5LSSH-F-19	1.09	27.6	734	1092	DTPO1.5LSSH-F-T19	1.14	28.9	924	1375	DTPO1.5LSSH-F-TS19	1.26	31.9	1071	1593
20	DTPO1.5LSSH-F-20	1.12	28.5	768	1143	DTPO1.5LSSH-F-T20	1.17	29.7	964	1435	DTPO1.5LSSH-F-TS20	1.29	32.7	1115	1660
24	DTPO1.5LSSH-F-24	1.25	31.6	916	1363	DTPO1.5LSSH-F-T24	1.31	33.3	1189	1769	DTPO1.5LSSH-F-TS24	1.44	36.5	1369	2038

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-Pairs Signal & Instrumentation, 2.5 mm², Overall Shield

Conductor	Unarmored					Armored					Armored and Sheathed				
	Number of Pairs	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
1	DTPO2.5LSSH-F-1	0.37	9.3	106	157	DTPO2.5LSSH-F-T1	0.40	10.	157	234	DTPO2.5LSSH-F-TS1	0.48	12.3	195	291
2	DTPO2.5LSSH-F-2	0.51	12.9	152	226	DTPO2.5LSSH-F-T2	0.56	14.1	243	361	DTPO2.5LSSH-F-TS2	0.65	16.5	300	447
3	DTPO2.5LSSH-F-3	0.60	15.1	213	316	DTPO2.5LSSH-F-T3	0.65	16.4	318	474	DTPO2.5LSSH-F-TS3	0.74	18.7	384	572
4	DTPO2.5LSSH-F-4	0.64	16.3	263	392	DTPO2.5LSSH-F-T4	0.69	17.5	377	561	DTPO2.5LSSH-F-TS4	0.78	19.9	447	665
5	DTPO2.5LSSH-F-5	0.71	18.0	322	479	DTPO2.5LSSH-F-T5	0.76	19.3	448	666	DTPO2.5LSSH-F-TS5	0.86	21.8	532	791
6	DTPO2.5LSSH-F-6	0.78	19.9	382	569	DTPO2.5LSSH-F-T6	0.83	21.1	520	774	DTPO2.5LSSH-F-TS6	0.93	23.7	612	910
7	DTPO2.5LSSH-F-7	0.78	19.9	427	636	DTPO2.5LSSH-F-T7	0.83	21.1	565	841	DTPO2.5LSSH-F-TS7	0.93	23.7	656	977
8	DTPO2.5LSSH-F-8	0.85	21.5	482	717	DTPO2.5LSSH-F-T8	0.90	22.8	631	939	DTPO2.5LSSH-F-TS8	1.01	25.6	738	1098
10	DTPO2.5LSSH-F-10	0.99	25.2	605	901	DTPO2.5LSSH-F-T10	1.04	26.5	779	1160	DTPO2.5LSSH-F-TS10	1.16	29.5	915	1361
12	DTPO2.5LSSH-F-12	1.04	26.5	703	1046	DTPO2.5LSSH-F-T12	1.09	27.8	886	1318	DTPO2.5LSSH-F-TS12	1.21	30.8	1027	1529
14	DTPO2.5LSSH-F-14	1.11	28.2	814	1211	DTPO2.5LSSH-F-T14	1.16	29.5	1008	1499	DTPO2.5LSSH-F-TS14	1.28	32.5	1157	1722
16	DTPO2.5LSSH-F-16	1.17	29.7	914	1360	DTPO2.5LSSH-F-T16	1.22	31.0	1118	1663	DTPO2.5LSSH-F-TS16	1.35	34.2	1286	1914
17	DTPO2.5LSSH-F-17	1.21	30.8	975	1451	DTPO2.5LSSH-F-T17	1.28	32.5	1241	1847	DTPO2.5LSSH-F-TS17	1.40	35.7	1417	2109
19	DTPO2.5LSSH-F-19	1.24	31.6	1070	1593	DTPO2.5LSSH-F-T19	1.31	33.2	1343	1998	DTPO2.5LSSH-F-TS19	1.43	36.4	1523	2266
20	DTPO2.5LSSH-F-20	1.28	32.6	1122	1669	DTPO2.5LSSH-F-T20	1.35	34.2	1403	2087	DTPO2.5LSSH-F-TS20	1.48	37.6	1600	2382
24	DTPO2.5LSSH-F-24	1.43	36.4	1350	2009	DTPO2.5LSSH-F-T24	1.50	38.0	1663	2475	DTPO2.5LSSH-F-TS24	1.64	41.6	1892	2816

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.