

# Type T/N Drilmar® 90 Signal & Instrumentation

Polyvinyl Chloride/Nylon Insulated, Drilling Rig and Marine Cable, 600/1000 V

## Features

Maximum conductor operating temperature: 90 °C per IEEE, UL and CSA.

DRILMAR® T/N Insulation:

- Rated at 105 °C.
- UL dual listed as TFFN, 18 AWG and 16 AWG.

DRILMAR® PVC Jacket:

- Rated at 90 °C.
- Abrasion resistant.
- Chemical resistant.
- Sunlight resistant.

Completed cable offers superior flame resistance meeting:

- VW-1 rated singles, 18 AWG and 16 AWG.
- 70,000 Btu Flame Tests IEEE 1202/FT4, IEEE 383, UL 1685, ICEA T-30-520.

## Application

DRILMAR® 90 cables are specifically designed for the installation and use in marine environments, for use on offshore drilling rigs, aboard marine vessels and on fixed and floating offshore facilities. These cables are used for signal transmission where twisted groups of conductors are desired. Individual or overall group shielding is provided to prevent electrostatic and/or electromagnetic interference, in circuits rated for 300 volts.

## Standards

IEEE 1580

Recommended Practice for Marine Cable for Use on Shipboard and Fixed and Floating Platforms.

IEEE 45

Recommended Practice for Electrical Installations on Shipboard Cable.

UL 1309

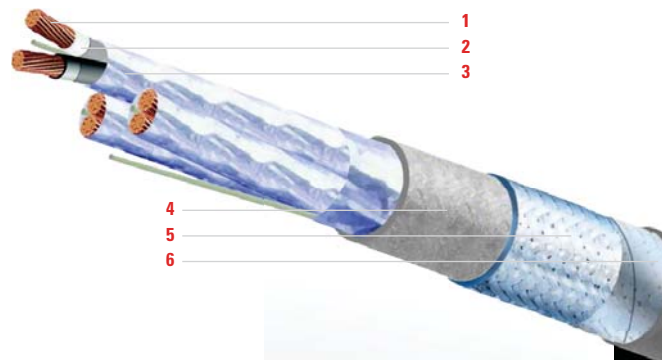
Marine Shipboard Cable.

CSA C22.2 No. 245

Marine Shipboard Cable.

## Approvals

- UL and CSA, as Type T/N (IEEE).
- UL and CSA, as Type T/N 90.
- ABS, American Bureau of Shipping.
- LRS, Lloyd's Register of Shipping.
- United States Coast Guard.



## Engineering Information

**1. Conductor:** Uncoated soft annealed stranded copper per IEEE, UL and CSA.

**Sizes:** 20 AWG up to 16 AWG.

**2. Insulation:** Flame retardant and sunlight resistant Polyvinyl Chloride and Polyamide (Nylon) covering per IEEE, UL and CSA.

**Identification:** Color-coded with sequential printed numbers.

**Pairs:** Black and White.

**Assembly:** Insulated conductors twisted in pairs.

**Cabling:** Twisted pairs cabled round with moisture and flame retardant fillers, as required and binder tape.

**3. Shielding (optional):** Individual and/or Overall Aluminum/Polyester tape, with drain wire, 100% coverage.

**4. Jacket:** Flame retardant and sunlight resistant Polyvinyl Chloride (PVC), per IEEE, UL and CSA.

**5. Armor (optional):** Standard - Aluminum.

*Optional - Bronze or Tinned Copper Braid per IEEE, UL and CSA.*

**6. Jacket (overall):** Flame retardant and sunlight resistant Polyvinyl Chloride (PVC), per IEEE, UL and CSA.

**Note:** Overall Jacket is optional for Bronze armor only, Tinned Copper armor and Aluminum armor require the use of outer jacket.

Technical Data

## Type T/N-Pairs Signal & Instrumentation, 20 AWG-10 Strands, Individual Shield

Conductor	Unarmored					Armored				
	Nominal OD		Part Number	Net Weight		Nominal OD		Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km
2	0.42	10.7	DTPI20TNT-2	64	95	0.47	12.0	DTPI20TNTB-2	136	203
3	0.45	11.4	DTPI20TNT-3	81	120	0.50	12.6	DTPI20TNTB-3	157	234
4	0.49	12.5	DTPI20TNT-4	100	148	0.54	13.7	DTPI20TNTB-4	183	273
5	0.57	14.4	DTPI20TNT-5	134	200	0.62	15.7	DTPI20TNTB-5	231	343
6	0.62	15.7	DTPI20TNT-6	155	231	0.67	16.9	DTPI20TNTB-6	259	386
8	0.67	16.9	DTPI20TNT-8	191	284	0.72	18.2	DTPI20TNTB-8	303	451
10	0.78	19.8	DTPI20TNT-10	234	348	0.83	21.1	DTPI20TNTB-10	365	543
15	0.94	23.8	DTPI20TNT-15	357	531	0.99	25.0	DTPI20TNTB-15	513	763
20	1.03	26.3	DTPI20TNT-20	447	665	1.08	27.5	DTPI20TNTB-20	619	921
25	1.17	29.8	DTPI20TNT-25	543	809	1.22	31.1	DTPI20TNTB-25	738	1098
30	1.22	30.9	DTPI20TNT-30	625	930	1.27	32.2	DTPI20TNTB-30	826	1230
40	1.36	34.6	DTPI20TNT-40	797	1186	1.41	35.9	DTPI20TNTB-40	1022	1521
50	1.55	39.2	DTPI20TNT-50	975	1451	1.60	40.5	DTPI20TNTB-50	1230	1830

Conductor	Armored and Sheathed								
	Size AWG / kcmil	Nominal OD		Part Number	Aluminum		Part Number	Bronze	
		in	mm		lb/kft	kg/km		lb/kft	kg/km
2	0.59	15.1	DTPI20TNTAS-2	146	217	DTPI20TNTBS-2	196	292	
3	0.62	15.7	DTPI20TNTAS-3	167	249	DTPI20TNTBS-3	220	328	
4	0.66	16.8	DTPI20TNTAS-4	193	287	DTPI20TNTBS-4	251	374	
5	0.74	18.7	DTPI20TNTAS-5	240	358	DTPI20TNTBS-5	307	457	
6	0.79	20.0	DTPI20TNTAS-6	269	400	DTPI20TNTBS-6	341	508	
8	0.88	22.3	DTPI20TNTAS-8	345	513	DTPI20TNTBS-8	423	629	
10	0.99	25.2	DTPI20TNTAS-10	411	612	DTPI20TNTBS-10	502	747	
15	1.15	29.1	DTPI20TNTAS-15	565	841	DTPI20TNTBS-15	673	1002	
20	1.24	31.6	DTPI20TNTAS-20	675	1004	DTPI20TNTBS-20	794	1181	
25	1.38	35.2	DTPI20TNTAS-25	799	1189	DTPI20TNTBS-25	934	1390	
30	1.43	36.2	DTPI20TNTAS-30	889	1323	DTPI20TNTBS-30	1029	1531	
40	1.57	39.9	DTPI20TNTAS-40	1090	1622	DTPI20TNTBS-40	1246	1855	
50	1.82	46.1	DTPI20TNTAS-50	1405	2092	DTPI20TNTBS-50	1582	2354	

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 T/N-Pairs Signal & Instrumentation, 18 AWG-16 Strands, Individual Shield

Conductor	Unarmored					Armored				
	Nominal OD		Part Number	Net Weight		Nominal OD		Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km
2	0.46	11.7	DTPI18TNT-2	79	117	0.51	12.9	DTPI18TNTB-2	157	234
3	0.49	12.4	DTPI18TNT-3	102	152	0.54	13.6	DTPI18TNTB-3	185	275
4	0.56	14.3	DTPI18TNT-4	143	212	0.61	15.6	DTPI18TNTB-4	238	354
5	0.62	15.6	DTPI18TNT-5	169	252	0.67	16.9	DTPI18TNTB-5	273	407
6	0.67	17.0	DTPI18TNT-6	197	293	0.72	18.3	DTPI18TNTB-6	310	461
8	0.73	18.4	DTPI18TNT-8	245	365	0.78	19.7	DTPI18TNTB-8	367	546
10	0.89	22.7	DTPI18TNT-10	335	498	0.94	24.0	DTPI18TNTB-10	483	719
15	1.02	25.9	DTPI18TNT-15	459	682	1.07	27.2	DTPI18TNTB-15	628	935
20	1.13	28.7	DTPI18TNT-20	580	863	1.18	30.0	DTPI18TNTB-20	767	1142
25	1.29	32.6	DTPI18TNT-25	708	1054	1.34	33.9	DTPI18TNTB-25	921	1370
30	1.33	33.8	DTPI18TNT-30	820	1220	1.38	35.1	DTPI18TNTB-30	1040	1548
40	1.49	37.9	DTPI18TNT-40	1054	1568	1.54	39.2	DTPI18TNTB-40	1300	1935
50	1.76	44.6	DTPI18TNT-50	1391	2070	1.81	45.9	DTPI18TNTB-50	1680	2500

Conductor	Armored and Sheathed								
	Size AWG / kcmil	Nominal OD		Part Number	Aluminum		Part Number	Bronze	
		in	mm		lb/kft	kg/km		lb/kft	kg/km
2	0.63	16.0	DTPI18TNTAS-2	167	248	DTPI18TNTBS-2	221	329	
3	0.66	16.7	DTPI18TNTAS-3	195	290	DTPI18TNTBS-3	252	376	
4	0.73	18.6	DTPI18TNTAS-4	248	369	DTPI18TNTBS-4	314	467	
5	0.79	20.0	DTPI18TNTAS-5	283	422	DTPI18TNTBS-5	355	529	
6	0.88	22.4	DTPI18TNTAS-6	352	524	DTPI18TNTBS-6	430	640	
8	0.94	23.8	DTPI18TNTAS-8	411	612	DTPI18TNTBS-8	496	738	
10	1.10	28.0	DTPI18TNTAS-10	534	795	DTPI18TNTBS-10	637	948	
15	1.23	31.2	DTPI18TNTAS-15	683	1017	DTPI18TNTBS-15	801	1192	
20	1.34	34.0	DTPI18TNTAS-20	827	1231	DTPI18TNTBS-20	957	1424	
25	1.50	38.0	DTPI18TNTAS-25	986	1468	DTPI18TNTBS-25	1134	1687	
30	1.54	39.2	DTPI18TNTAS-30	1107	1648	DTPI18TNTBS-30	1260	1875	
40	1.76	44.8	DTPI18TNTAS-40	1471	2189	DTPI18TNTBS-40	1642	2444	
50	2.03	51.5	DTPI18TNTAS-50	1876	2791	DTPI18TNTBS-50	2076	3090	

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

## Type T/N-Pairs Signal & Instrumentation, 16 AWG-26 Strands, Individual Shield

Conductor	Unarmored					Armored				
	Nominal OD		Part Number	Net Weight		Nominal OD		Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km
2	0.51	12.9	DTPI16TNT-2	98	146	0.56	14.1	DTPI16TNTB-2	184	274
3	0.57	14.5	DTPI16TNT-3	145	216	0.62	15.7	DTPI16TNTB-3	241	359
4	0.62	15.8	DTPI16TNT-4	179	267	0.67	17.1	DTPI16TNTB-4	284	423
5	0.68	17.3	DTPI16TNT-5	215	320	0.73	18.6	DTPI16TNTB-5	329	490
6	0.74	18.9	DTPI16TNT-6	251	373	0.79	20.1	DTPI16TNTB-6	375	558
8	0.81	20.4	DTPI16TNT-8	315	468	0.86	21.7	DTPI16TNTB-8	449	669
10	0.99	25.1	DTPI16TNT-10	425	632	1.04	26.4	DTPI16TNTB-10	589	877
15	1.13	28.8	DTPI16TNT-15	589	877	1.18	30.0	DTPI16TNTB-15	777	1156
20	1.26	31.9	DTPI16TNT-20	750	1117	1.31	33.2	DTPI16TNTB-20	958	1426
25	1.43	36.4	DTPI16TNT-25	920	1369	1.48	37.7	DTPI16TNTB-25	1156	1721
30	1.49	37.7	DTPI16TNT-30	1070	1592	1.54	39.0	DTPI16TNTB-30	1315	1957
40	1.73	43.9	DTPI16TNT-40	1478	2200	1.78	45.2	DTPI16TNTB-40	1763	2623
50	1.96	49.7	DTPI16TNT-50	1811	2695	2.01	51.0	DTPI16TNTB-50	2132	3173

Conductor	Armored and Sheathed								
	Size AWG / kcmil	Nominal OD		Part Number	Aluminum		Part Number	Bronze	
		in	mm		Net Weight	Net Weight		lb/kft	kg/km
2	0.68	17.2	DTPI16TNTAS-2	194	289	DTPI16TNTBS-2	254	378	
3	0.74	18.8	DTPI16TNTAS-3	251	374	DTPI16TNTBS-3	318	473	
4	0.79	20.1	DTPI16TNTAS-4	294	438	DTPI16TNTBS-4	367	546	
5	0.89	22.6	DTPI16TNTAS-5	372	553	DTPI16TNTBS-5	451	672	
6	0.95	24.2	DTPI16TNTAS-6	420	625	DTPI16TNTBS-6	506	754	
8	1.02	25.8	DTPI16TNTAS-8	497	739	DTPI16TNTBS-8	590	878	
10	1.20	30.5	DTPI16TNTAS-10	644	958	DTPI16TNTBS-10	758	1127	
15	1.34	34.1	DTPI16TNTAS-15	837	1245	DTPI16TNTBS-15	967	1439	
20	1.47	37.3	DTPI16TNTAS-20	1023	1522	DTPI16TNTBS-20	1167	1737	
25	1.64	41.7	DTPI16TNTAS-25	1227	1826	DTPI16TNTBS-25	1391	2070	
30	1.76	44.6	DTPI16TNTAS-30	1485	2211	DTPI16TNTBS-30	1655	2464	
40	2.00	50.8	DTPI16TNTAS-40	1956	2911	DTPI16TNTBS-40	2153	3204	
50	2.23	56.6	DTPI16TNTAS-50	2347	3493	DTPI16TNTBS-50	2570	3825	

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.