

# Type T/N Drilmar® 90 Signal & Instrumentation

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

A Viakable Company

## 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.

Cables meet applicable requirements of IEC 92-350.

## 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 1580-2001

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

IEEE 45-2002

Recommended Practice for Electrical Installations on Shipboard Cable.

UL 1309-1995

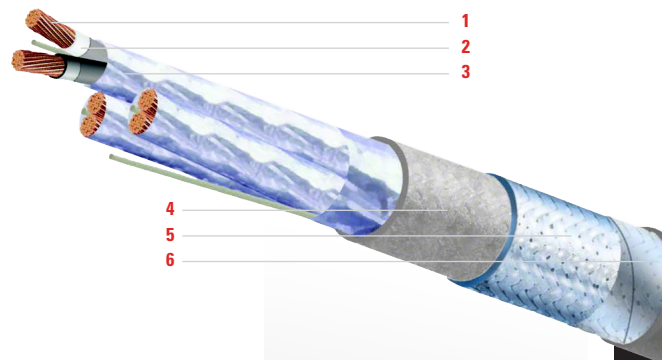
Marine Shipboard Cable.

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.
- DNV, Det Norske Veritas
- 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.

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		Aluminum			Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km	Part Number	lb/kft	kg/km
2	0.42	10.7	DTPI20TNT-2	64	95	0.47	12.0	DTPI20NTA-2	86	128	DTPI20NTB-2	136	203
3	0.45	11.4	DTPI20TNT-3	81	120	0.50	12.6	DTPI20NTA-3	104	155	DTPI20NTB-3	157	234
4	0.49	12.5	DTPI20TNT-4	100	148	0.54	13.7	DTPI20NTA-4	125	186	DTPI20NTB-4	183	273
5	0.57	14.4	DTPI20TNT-5	134	200	0.62	15.7	DTPI20NTA-5	164	244	DTPI20NTB-5	231	343
6	0.62	15.7	DTPI20TNT-6	155	231	0.67	16.9	DTPI20NTA-6	187	278	DTPI20NTB-6	259	386
8	0.67	16.9	DTPI20TNT-8	191	284	0.72	18.2	DTPI20NTA-8	225	335	DTPI20NTB-8	303	451
10	0.78	19.8	DTPI20TNT-10	234	348	0.83	21.1	DTPI20NTA-10	274	408	DTPI20NTB-10	365	543
15	0.94	23.8	DTPI20TNT-15	357	531	0.99	25.0	DTPI20NTA-15	405	602	DTPI20NTB-15	513	763
20	1.03	26.3	DTPI20TNT-20	447	665	1.08	27.5	DTPI20NTA-20	500	743	DTPI20NTB-20	619	921
25	1.17	29.8	DTPI20TNT-25	543	809	1.22	31.1	DTPI20NTA-25	603	897	DTPI20NTB-25	738	1098
30	1.22	30.9	DTPI20TNT-30	625	930	1.27	32.2	DTPI20NTA-30	687	1022	DTPI20NTB-30	826	1230
40	1.36	34.6	DTPI20TNT-40	797	1186	1.41	35.9	DTPI20NTA-40	866	1289	DTPI20NTB-40	1022	1521
50	1.55	39.2	DTPI20TNT-50	975	1451	1.60	40.5	DTPI20NTA-50	1053	1567	DTPI20NTB-50	1230	1830

Conductor	Armored and Sheathed							
	Nominal OD		Part Number	Net Weight		Part Number	Net Weight	
	in	mm		lb/kft	kg/km		lb/kft	kg/km
2	0.59	15.1	DTPI20NTAS-2	146	217	DTPI20NTBS-2	196	292
3	0.62	15.7	DTPI20NTAS-3	167	249	DTPI20NTBS-3	220	328
4	0.66	16.8	DTPI20NTAS-4	193	287	DTPI20NTBS-4	251	374
5	0.74	18.7	DTPI20NTAS-5	240	358	DTPI20NTBS-5	307	457
6	0.79	20.0	DTPI20NTAS-6	269	400	DTPI20NTBS-6	341	508
8	0.88	22.3	DTPI20NTAS-8	345	513	DTPI20NTBS-8	423	629
10	0.99	25.2	DTPI20NTAS-10	411	612	DTPI20NTBS-10	502	747
15	1.15	29.1	DTPI20NTAS-15	565	841	DTPI20NTBS-15	673	1002
20	1.24	31.6	DTPI20NTAS-20	675	1004	DTPI20NTBS-20	794	1181
25	1.38	35.2	DTPI20NTAS-25	799	1189	DTPI20NTBS-25	934	1390
30	1.43	36.2	DTPI20NTAS-30	889	1323	DTPI20NTBS-30	1029	1531
40	1.57	39.9	DTPI20NTAS-40	1090	1622	DTPI20NTBS-40	1246	1855
50	1.82	46.1	DTPI20NTAS-50	1405	2092	DTPI20NTBS-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		Aluminum			Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km	Part Number	lb/kft	kg/km
2	0.46	11.7	DTPI18TNT-2	79	117	0.51	12.9	DTPI18TNTA-2	103	153	DTPI18TNTB-2	157	234
3	0.49	12.4	DTPI18TNT-3	102	152	0.54	13.6	DTPI18TNTA-3	127	190	DTPI18TNTB-3	185	275
4	0.56	14.3	DTPI18TNT-4	143	212	0.61	15.6	DTPI18TNTA-4	172	256	DTPI18TNTB-4	238	354
5	0.62	15.6	DTPI18TNT-5	169	252	0.67	16.9	DTPI18TNTA-5	201	300	DTPI18TNTB-5	273	407
6	0.67	17.0	DTPI18TNT-6	197	293	0.72	18.3	DTPI18TNTA-6	231	344	DTPI18TNTB-6	310	461
8	0.73	18.4	DTPI18TNT-8	245	365	0.78	19.7	DTPI18TNTA-8	282	420	DTPI18TNTB-8	367	546
10	0.89	22.7	DTPI18TNT-10	335	498	0.94	24.0	DTPI18TNTA-10	380	566	DTPI18TNTB-10	483	719
15	1.02	25.9	DTPI18TNT-15	459	682	1.07	27.2	DTPI18TNTA-15	511	760	DTPI18TNTB-15	628	935
20	1.13	28.7	DTPI18TNT-20	580	863	1.18	30.0	DTPI18TNTA-20	637	949	DTPI18TNTB-20	767	1142
25	1.29	32.6	DTPI18TNT-25	708	1054	1.34	33.9	DTPI18TNTA-25	774	1151	DTPI18TNTB-25	921	1370
30	1.33	33.8	DTPI18TNT-30	820	1220	1.38	35.1	DTPI18TNTA-30	887	1321	DTPI18TNTB-30	1040	1548
40	1.49	37.9	DTPI18TNT-40	1054	1568	1.54	39.2	DTPI18TNTA-40	1129	1681	DTPI18TNTB-40	1300	1935
50	1.76	44.6	DTPI18TNT-50	1391	2070	1.81	45.9	DTPI18TNTA-50	1480	2202	DTPI18TNTB-50	1680	2500

Conductor	Armored and Sheathed							
	Nominal OD		Part Number	Net Weight		Part Number	Net Weight	
	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		Aluminum			Bronze		
	in	mm		lb/kft	kg/km	in	mm	Part Number	lb/kft	kg/km	Part Number	lb/kft	kg/km
2	0.51	12.9	DTPI16TNT-2	98	146	0.56	14.1	DTPI16TNTA-2	124	185	DTPI16TNTB-2	184	274
3	0.57	14.5	DTPI16TNT-3	145	216	0.62	15.7	DTPI16TNTA-3	174	260	DTPI16TNTB-3	241	359
4	0.62	15.8	DTPI16TNT-4	179	267	0.67	17.1	DTPI16TNTA-4	212	315	DTPI16TNTB-4	284	423
5	0.68	17.3	DTPI16TNT-5	215	320	0.73	18.6	DTPI16TNTA-5	250	372	DTPI16TNTB-5	329	490
6	0.74	18.9	DTPI16TNT-6	251	373	0.79	20.1	DTPI16TNTA-6	289	430	DTPI16TNTB-6	375	558
8	0.81	20.4	DTPI16TNT-8	315	468	0.86	21.7	DTPI16TNTA-8	356	530	DTPI16TNTB-8	449	669
10	0.99	25.1	DTPI16TNT-10	425	632	1.04	26.4	DTPI16TNTA-10	475	707	DTPI16TNTB-10	589	877
15	1.13	28.8	DTPI16TNT-15	589	877	1.18	30.0	DTPI16TNTA-15	647	963	DTPI16TNTB-15	777	1156
20	1.26	31.9	DTPI16TNT-20	750	1117	1.31	33.2	DTPI16TNTA-20	814	1212	DTPI16TNTB-20	958	1426
25	1.43	36.4	DTPI16TNT-25	920	1369	1.48	37.7	DTPI16TNTA-25	992	1477	DTPI16TNTB-25	1156	1721
30	1.49	37.7	DTPI16TNT-30	1070	1592	1.54	39.0	DTPI16TNTA-30	1145	1704	DTPI16TNTB-30	1315	1957
40	1.73	43.9	DTPI16TNT-40	1478	2200	1.78	45.2	DTPI16TNTA-40	1565	2330	DTPI16TNTB-40	1763	2623
50	1.96	49.7	DTPI16TNT-50	1811	2695	2.01	51.0	DTPI16TNTA-50	1909	2841	DTPI16TNTB-50	2132	3173

Conductor	Armored and Sheathed							
	Nominal OD		Part Number	Net Weight		Part Number	Net Weight	
	in	mm		lb/kft	kg/km		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.