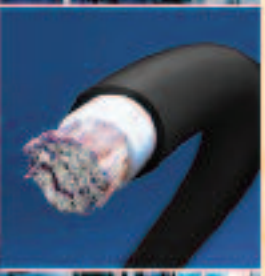
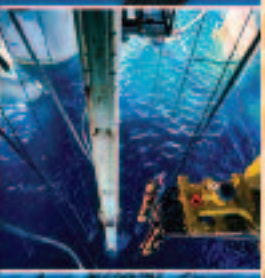
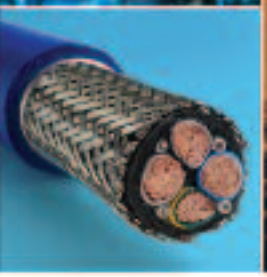
Tricab Flexible 125°C type P Offshore Cables

Issue 1.0

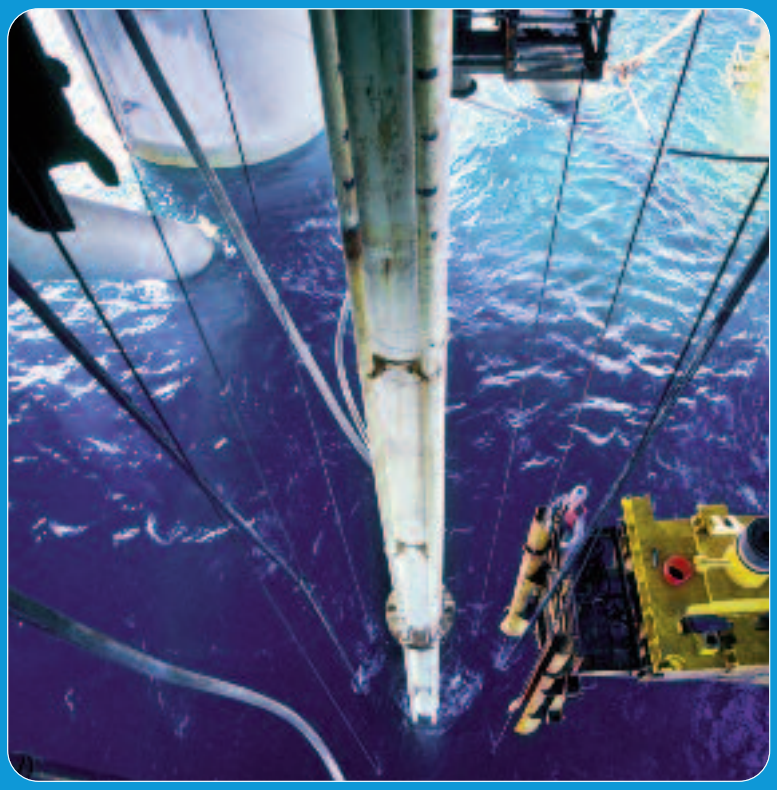


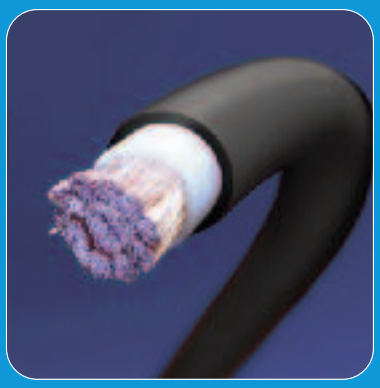




tricab

Welcome to our inaugural type P catalogue, presenting Tricab's innovative approach to the oil and gas industry.





Drawing upon our decades of experience within the Marine sector, we have incorporated into this range, all of the User features that we know make good, practical sense.

These include flexible conductor, flexible proprietary insulation and jacket compounds, lightweight construction, low smoke propagation, significantly reduced halogens and a unique ripcord system for simple, safe jacket removal.

Of-course, our standard service features of length marking, personalized print text and cut length packaging are also included.

We have invested heavily in our new, state-of-the-art manufacturing facility in Massachusetts, and look forward to providing you with the highest possible quality product and service.

Approvals and Certifications

Table of Contents

Features and Benefits

FEATURES	BENEFITS
• **Ripcord** - Tricab includes a high strength ripcord under all bedding and overall jackets, and under the insulation on 10mm^2 and larger conductors.	Provides quick and efficient removal of any length of jacket or insulation without the risk of damage to underlying components. Eliminates the risk of injury from using razor knives or blades.
• **Fine Copper Stranding** - Tricab uses very fine copper wire for all conductors, in accordance with ASTM B3-01, ASTM B33-00 and IEC 60228.	Significantly increased flexibility has numerous practical benefits, including reduced installation time and easier cable handing. These benefits translate directly into reduced installation time and cost. Fine stranded conductors also offer improved performance and reliability when subjected to vibration.
• **Round Concentric Cores** - Tricab exclusively manufactures round cores throughout its entire size range, and does not use sectorial conductors.	Standard lugs, terminals and connectors can be used, saving installation time, inventory and cost - also providing better electrical contact with standard round lugs.
• **Lightweight** - Tricab has developed specific product ranges that have reduced weight.	Especially relevant to high speed craft, where weight saving translates into improved performance and overall cost benefits.
• **Small OD** - Tricab has developed specific product ranges that have reduced OD's.	Additional cables can be installed within a specified cable tray, ladder or conduit. A smaller bending radius benefits tight configurations, and smaller glands reduce cost.
• **Flexible Construction** - Tricab uses a combination of fine conductors, special compounds and manufacturing processes to produce a very flexible cable.	Reduced installation time and cost, improved bending radius and safer cable handling (especially larger sizes).
• **Foot marking** - All Tricab cables are foot-marked as standard, with a descending number (metre marking also available).	Assists the installation process and enables accurate stock management.
• **Product marking** - Tricab offers personalized text messages printed onto the cable at regular intervals, even for short lengths.	Project Reference Codes, Company Name, Part Numbers, Quality Data, Marketing Information etc. can all be clearly marked.

FEATURES	BENEFITS
• **Make to order facility** - Tricab can manufacture cables exactly to customer specifications.	No need for the user to compromise or accept an alternative cable. Customers receive exactly what they need.
• **Global distribution** - Tricab operates its own network of company offices and warehouses worldwide. We currently have operations in the Pacific, Asia, the Middle East, Europe and North America.	We support customer projects wherever they may be, streamlining logistics, increasing supply reliability and saving time and money.
• **Research & development** - Tricab maintains a very active R&D programme, working very closely with our sales team and customers. In conjunction with our in-house laboratory, we are continually improving cable performance.	New cable technologies are introduced to our customers on an ongoing basis.
• **Quick response** - Tricab has invested in manpower, machinery and materials to provide a short leadtime manufacturing capability.	When cable is needed urgently, either due to an emergency or unexpected contingency, Tricab has the systems in place to fast-track the manufacturing process, reducing downtime and saving time and money.
• **Reliable long-term partner** - Tricab has been supplying innovative cable solutions since 1978. We believe in long term partnerships and have a solid track record of successfully completed projects worldwide.	We believe that satisfied customers are our strength and we do everything in our power to ensure that we both grow and prosper over the long term.
• **Approvals** - Tricab maintains approvals from numerous certification bodies, including LR, DNV, ABS, BV, GL, UL, CSA. If required, we also obtain specific case approval.	Reliable certification simplifies the task for procurement and engineering, saving time and money. It also allows cables left over from one project to be used for future projects.
• **Quality accreditation** - Tricab operates an accredited Quality system in accordance with ISO 9001:2000, both within our manufacturing plant and our global offices and warehouses.	We continually improve our quality performance, which in turn provides improved products and services to our customers.

PA series

Flexible type P Single Conductor
0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

APPLICATION
Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION
Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

OPERATING TEMPERATURE
-40ºc to +125ºc

VOLTAGE RATING
.6/1kV

INSULATION COLOR
Black

STANDARDS
ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS
ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	INSULATION THICKNESS (inches)	INSULATION THICKNESS (mm)	DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PA-XXXD/1A18BK	1c 18	0.030	0.76	0.110	2.79	0.4	10 - 15	16
PA-XXXD/1A16BK	1c 16	0.030	0.76	0.122	3.1	0.5	14 - 21	23
PA-XXXD/1A14BK	1c 14	0.030	0.76	0.138	3.51	0.6	20 - 30	37
PA-XXXD/1A12BK	1c 12	0.030	0.76	0.156	3.96	0.6	28 - 42	45
PA-XXXD/1A10BK	1c 10	0.030	0.76	0.181	4.6	0.7	42 - 62	58
PA-XXXD/1A8BK	1c 8	0.045	1.14	0.244	6.2	1.0	69 - 103	72
PA-XXXD/1A6BK	1c 6	0.045	1.14	0.284	7.21	1.1	104 - 155	96
PA-XXXD/1A4BK	1c 4	0.045	1.14	0.334	8.48	1.3	155 - 231	128
PA-XXXD/1A2BK	1c 2	0.045	1.14	0.394	10.01	1.6	236 - 351	169
PA-XXXD/1A1BK	1c 1	0.055	1.4	0.446	11.33	1.8	299 - 445	194
PA-XXXD/1A1/0BK	1c 1/0	0.055	1.4	0.491	12.47	2.0	372 - 554	227
PA-XXXD/1A2/0BK	1c 2/0	0.055	1.4	0.541	13.74	2.2	462 - 687	262
PA-XXXD/1A3/0BK	1c 3/0	0.055	1.4	0.591	15.01	2.4	574 - 854	300
PA-XXXD/1A4/0BK	1c 4/0	0.055	1.4	0.666	16.92	2.7	724 - 1077	351
PA-XXXD/1A262BK	1c 262	0.065	1.65	0.756	19.2	3.0	895 - 1332	407
PA-XXXD/1A313BK	1c 313	0.065	1.65	0.791	20.09	3.2	1067 - 1588	455
PA-XXXD/1A373BK	1c 373	0.065	1.65	0.846	21.49	3.4	1256 - 1869	516
PA-XXXD/1A444BK	1c 444	0.065	1.65	0.924	23.47	3.7	1453 - 2162	588
PA-XXXD/1A535BK	1c 535	0.080	2.03	1.003	25.48	4.0	1739 - 2588	630
PA-XXXD/1A646BK	1c 646	0.080	2.03	1.098	27.89	4.4	2150 - 3199	731
PA-XXXD/1A777BK	1c 777	0.080	2.03	1.198	30.43	4.8	2572 - 3827	822
PA-XXXD/1A1111BK	1c 1111	0.110	2.79	1.481	37.62	5.9	3704 - 5512	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Single Conductor Armored

0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

PZ
series

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

.6/1kV

CORE COLOR

White

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	DIAMETER OVER INSULATION (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PZA-PFBD/1A8BK	1c 8	0.244	0.294	0.400	2.4	137 - 204	72
PZA-PFBD/1A6BK	1c 6	0.284	0.334	0.440	2.6	182 - 271	96
PZA-PFBD/1A4BK	1c 4	0.334	0.384	0.490	2.9	245 - 365	128
PZA-PFBD/1A2BK	1c 2	0.394	0.444	0.580	3.5	352 - 524	169
PZA-PFBD/1A1BK	1c 1	0.446	0.496	0.635	3.8	428 - 637	194
PZA-PFBD/1A1/0BK	1c 1/0	0.491	0.541	0.680	4.1	512 - 762	227
PZA-PFBD/1A2/0BK	1c 2/0	0.541	0.591	0.730	4.4	615 - 915	262
PZA-PFBD/1A3/0BK	1c 3/0	0.591	0.641	0.780	4.7	740 - 1101	300
PZA-PFBD/1A4/0BK	1c 4/0	0.666	0.716	0.900	5.4	934 - 1390	351
PZA-PFBD/1A262BK	1c 262	0.756	0.806	0.990	5.9	1130 - 1681	407
PZA-PFBD/1A313BK	1c 313	0.791	0.841	1.025	6.2	1312 - 1952	455
PZA-PFBD/1A373BK	1c 373	0.846	0.896	1.080	6.5	1517 - 2257	516
PZA-PFBD/1A444BK	1c 444	0.924	0.974	1.155	6.9	1735 - 2582	588
PZA-PFBD/1A535BK	1c 535	1.003	1.053	1.235	7.4	2043 - 3040	630
PZA-PFBD/1A646BK	1c 646	1.098	1.148	1.330	8.0	2481 - 3692	731
PZA-PFBD/1A777BK	1c 777	1.198	1.248	1.430	8.6	2932 - 4363	822
PZA-PFBD/1A1111BK	1c 1111	1.481	1.531	1.780	10.7	4216 - 6273	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PB series

Flexible type P Multi Conductor Power

0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

APPLICATION
Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION
Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Assembly: Conductors cabled with optional fillers and binder tape.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE
-40ºc to +125ºc

VOLTAGE RATING
.6/1kV

CORE COLOR
To customer specification.

JACKET COLOR
Black

STANDARDS
ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202
IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS
ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	OVERALL DIAMETER Nom. (inches)	OVERALL DIAMETER Nom. (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PBA-PFXD/2A8BK	2c	8	0.244	6.2	0.625	15.88	2.5	228 - 339	64
PBA-PFXD/2A6BK	2c	6	0.284	7.21	0.705	17.91	2.8	319 - 475	85
PBA-PFXD/2A4BK	2c	4	0.334	8.48	0.805	20.45	3.2	451 - 671	110
PBA-PFXD/2A2BK	2c	2	0.394	10.01	0.970	24.64	3.9	680 - 1012	149
PBA-PFXD/2A1BK	2c	1	0.446	11.33	1.075	27.31	4.3	846 - 1259	174
PBA-PFXD/2A1/0BK	2c	1/0	0.491	12.47	1.165	29.59	4.7	1029 - 1531	199
PBA-PFXD/2A2/0BK	2c	2/0	0.541	13.74	1.265	32.13	5.1	1255 - 1867	242
PBA-PFXD/2A3/0BK	2c	3/0	0.591	15.01	1.365	34.67	5.5	1530 - 2277	265
PBA-PFXD/2A4/0BK	2c	4/0	0.666	16.92	1.515	38.48	6.1	1908 - 2839	307
PBA-PFXD/2A262BK	2c	262	0.756	19.2	1.765	44.83	7.1	2426 - 3610	358
PBA-PFXD/2A313BK	2c	313	0.791	20.09	1.835	46.61	7.3	2818 - 4193	391
PBA-PFXD/2A373BK	2c	373	0.846	21.49	1.945	49.4	7.8	3274 - 4872	442
PBA-PFXD/2A444BK	2c	444	0.924	23.47	2.100	53.34	8.4	3780 - 5625	504
PBA-PFXD/2A535BK	2c	535	1.003	25.48	2.255	57.28	9.0	4477 - 6662	538

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Multi Conductor Power

0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

PB series

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	OVERALL DIAMETER Nom. (inches)	OVERALL DIAMETER Nom. (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PBA-PFXD/3A8BK	3c 8	0.244	6.2	0.665	16.89	2.7	293 - 436	52
PBA-PFXD/3A6BK	3c 6	0.284	7.21	0.750	19.05	3.0	418 - 622	70
PBA-PFXD/3A4BK	3c 4	0.334	8.48	0.900	22.86	3.6	623 - 927	92
PBA-PFXD/3A2BK	3c 2	0.394	10.01	1.030	26.16	4.1	907 - 1350	122
PBA-PFXD/3A1BK	3c 1	0.446	11.33	1.140	28.96	4.6	1131 - 1683	143
PBA-PFXD/3A1/0BK	3c 1/0	0.491	12.47	1.240	31.5	5.0	1383 - 2058	164
PBA-PFXD/3A2/0BK	3c 2/0	0.541	13.74	1.345	34.16	5.4	1695 - 2522	188
PBA-PFXD/3A3/0BK	3c 3/0	0.591	15.01	1.455	36.96	5.8	2077 - 3091	218
PBA-PFXD/3A4/0BK	3c 4/0	0.666	16.92	1.615	41.02	6.5	2596 - 3863	252
PBA-PFXD/3A262BK	3c 262	0.756	19.2	1.875	47.63	7.5	3277 - 4876	294
PBA-PFXD/3A313BK	3c 313	0.791	20.09	1.950	49.53	7.8	3836 - 5708	321
PBA-PFXD/3A373BK	3c 373	0.846	21.49	2.070	52.58	8.3	4474 - 6657	361
PBA-PFXD/3A444BK	3c 444	0.924	23.47	2.240	56.9	9.0	5163 - 7683	411
PBA-PFXD/4A8BK	4c 8	0.244	6.2	0.725	18.42	2.9	370 - 551	42
PBA-PFXD/4A6BK	4c 6	0.284	7.21	0.820	20.83	3.3	531 - 790	56
PBA-PFXD/4A4BK	4c 4	0.334	8.48	0.985	25.02	3.9	792 - 1178	74
PBA-PFXD/4A2BK	4c 2	0.394	10.01	1.130	28.7	4.5	1163 - 1731	98
PBA-PFXD/4A1BK	4c 1	0.446	11.33	1.255	31.88	5.0	1453 - 2162	114
PBA-PFXD/4A1/0BK	4c 1/0	0.491	12.47	1.360	34.54	5.4	1781 - 2650	131
PBA-PFXD/4A2/0BK	4c 2/0	0.541	13.74	1.480	37.59	5.9	2186 - 3253	150
PBA-PFXD/4A3/0BK	4c 3/0	0.591	15.01	1.600	40.64	6.4	2686 - 3997	174
PBA-PFXD/4A4/0BK	4c 4/0	0.666	16.92	1.850	46.99	7.4	3437 - 5114	202
PBA-PFXD/4A262BK	4c 262	0.756	19.2	2.065	52.45	8.3	4229 - 6293	235
PBA-PFXD/4A313BK	4c 313	0.791	20.09	2.150	54.61	8.6	4966 - 7389	257
PBA-PFXD/4A373BK	4c 373	0.846	21.49	2.280	57.91	9.1	5799 - 8629	289
PBA-PFXD/5A8BK	5c 8	0.244	6.2	0.795	20.19	3.2	451 - 671	42
PBA-PFXD/5A6BK	5c 6	0.284	7.21	0.950	24.13	3.8	676 - 1006	56
PBA-PFXD/5A4BK	5c 4	0.334	8.48	1.085	27.56	4.3	970 - 1443	74
PBA-PFXD/5A2BK	5c 2	0.394	10.01	1.245	31.62	5.0	1428 - 2125	98
PBA-PFXD/5A1BK	5c 1	0.446	11.33	1.385	35.18	5.5	1787 - 2659	114
PBA-PFXD/5A1/0BK	5c 1/0	0.491	12.47	1.510	38.35	6.0	2194 - 3265	131
PBA-PFXD/5A2/0BK	5c 2/0	0.541	13.74	1.645	41.78	6.6	2696 - 4012	150
PBA-PFXD/5A3/0BK	5c 3/0	0.591	15.01	1.845	46.86	7.4	3392 - 5047	174
PBA-PFXD/5A4/0BK	5c 4/0	0.666	16.92	2.050	52.07	8.2	4237 - 6305	202
PBA-PFXD/5A262BK	5c 262	0.756	19.2	2.295	58.29	9.2	5216 - 7761	235
PBA-PFXD/5A313BK	5c 313	0.791	20.09	2.385	60.58	9.5	6132 - 9124	257

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PB series

Flexible type P Multi Conductor Control

0.6/1kV 125°C

LOW SMOKE LOW HALOGEN FLAME RETARDANT

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	(mm)	OVERALL DIAMETER Nom. (inches)	(mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PBA-CBXD/2A18BK	2c	18	0.110	2.79	0.325	8.26	1.3	49 - 73	14
PBA-CBXD/3A18BK	3c	18	0.110	2.79	0.340	8.64	1.4	59 - 88	12
PBA-CBXD/4A18BK	4c	18	0.110	2.79	0.370	9.4	1.5	72 - 107	10
PBA-CBXD/5A18BK	5c	18	0.110	2.79	0.400	10.16	1.6	86 - 128	10
PBA-CBXD/7A18BK	7c	18	0.110	2.79	0.435	11.05	1.7	102 - 152	8
PBA-CBXD/12A18BK	12c	18	0.110	2.79	0.595	15.11	2.4	181 - 269	6
PBA-CBXD/16A18BK	16c	18	0.110	2.79	0.655	16.64	2.6	228 - 339	6
PBA-CBXD/24A18BK	24c	18	0.110	2.79	0.795	20.19	3.2	344 - 512	5
PBA-CBXD/30A18BK	30c	18	0.110	2.79	0.885	22.48	3.5	418 - 622	5
PBA-CBXD/37A18BK	37c	18	0.110	2.79	0.950	24.13	3.8	494 - 735	5
PBA-CBXD/2A16BK	2c	16	0.122	3.1	0.350	8.89	1.4	59 - 88	19
PBA-CBXD/3A16BK	3c	16	0.122	3.1	0.365	9.27	1.5	73 - 109	16
PBA-CBXD/4A16BK	4c	16	0.122	3.1	0.395	10.03	1.6	90 - 134	13
PBA-CBXD/5A16BK	5c	16	0.122	3.1	0.435	11.05	1.7	108 - 161	13
PBA-CBXD/7A16BK	7c	16	0.122	3.1	0.470	11.94	1.9	130 - 193	11
PBA-CBXD/12A16BK	12c	16	0.122	3.1	0.645	16.38	2.6	230 - 342	8
PBA-CBXD/16A16BK	16c	16	0.122	3.1	0.710	18.03	2.8	292 - 434	8
PBA-CBXD/24A16BK	24c	16	0.122	3.1	0.915	23.24	3.7	468 - 696	7
PBA-CBXD/30A16BK	30c	16	0.122	3.1	0.965	24.51	3.9	537 - 799	7
PBA-CBXD/37A16BK	37c	16	0.122	3.1	1.035	26.29	4.1	638 - 949	6
PBA-CBXD/2A14BK	2c	14	0.138	3.51	0.380	9.65	1.5	76 - 113	31
PBA-CBXD/3A14BK	3c	14	0.138	3.51	0.400	10.16	1.6	95 - 141	25
PBA-CBXD/4A14BK	4c	14	0.138	3.51	0.435	11.05	1.7	118 - 176	20
PBA-CBXD/5A14BK	5c	14	0.138	3.51	0.475	12.07	1.9	143 - 213	20
PBA-CBXD/7A14BK	7c	14	0.138	3.51	0.520	13.21	2.1	175 - 260	18
PBA-CBXD/12A14BK	12c	14	0.138	3.51	0.710	18.03	2.8	309 - 460	13
PBA-CBXD/16A14BK	16c	14	0.138	3.51	0.785	19.94	3.1	396 - 589	13
PBA-CBXD/24A14BK	24c	14	0.138	3.51	1.010	25.65	4.0	630 - 937	11
PBA-CBXD/30A14BK	30c	14	0.138	3.51	1.065	27.05	4.3	729 - 1085	11
PBA-CBXD/37A14BK	37c	14	0.138	3.51	1.150	29.21	4.6	871 - 1296	10
PBA-CBXD/2A12BK	2c	12	0.156	3.96	0.415	10.54	1.7	99 - 147	40
PBA-CBXD/3A12BK	3c	12	0.156	3.96	0.440	11.18	1.8	126 - 187	31
PBA-CBXD/4A12BK	4c	12	0.156	3.96	0.480	12.19	1.9	158 - 235	25
PBA-CBXD/5A12BK	5c	12	0.156	3.96	0.525	13.34	2.1	192 - 286	25
PBA-CBXD/7A12BK	7c	12	0.156	3.96	0.605	15.37	2.4	251 - 373	22
PBA-CBXD/12A12BK	12c	12	0.156	3.96	0.785	19.94	3.1	421 - 626	16
PBA-CBXD/16A12BK	16c	12	0.156	3.96	0.915	23.24	3.7	567 - 844	16
PBA-CBXD/24A12BK	24c	12	0.156	3.96	1.120	28.45	4.5	857 - 1275	14
PBA-CBXD/30A12BK	30c	12	0.156	3.96	1.180	29.97	4.7	1001 - 1489	14
PBA-CBXD/37A12BK	37c	12	0.156	3.96	1.275	32.39	5.1	1201 - 1787	12
PBA-CBXD/2A10BK	2c	10	0.181	4.6	0.465	11.81	1.9	135 - 201	49
PBA-CBXD/3A10BK	3c	10	0.181	4.6	0.495	12.57	2.0	176 - 262	41
PBA-CBXD/4A10BK	4c	10	0.181	4.6	0.570	14.48	2.3	234 - 348	33
PBA-CBXD/5A10BK	5c	10	0.181	4.6	0.625	15.88	2.5	285 - 424	33
PBA-CBXD/7A10BK	7c	10	0.181	4.6	0.680	17.27	2.7	355 - 528	29
PBA-CBXD/12A10BK	12c	10	0.181	4.6	0.935	23.75	3.7	626 - 931	21

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Multi Conductor Power Armored

0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

PG series

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Assembly: Conductors cabled with optional fillers and binder tape.

Ripcord: High strength ripcord under bedding.

Bedding: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

.6/1kV

CORE COLOR

To customer specification.

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	DIAMETER OVER INSULATION (inches)	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PGA-PFBD/2A8BK	2c 8	0.244	0.627	0.677	0.815	4.9	403 - 600	64
PGA-PFBD/2A6BK	2c 6	0.284	0.707	0.757	0.940	5.6	540 - 804	85
PGA-PFBD/2A4BK	2c 4	0.334	0.807	0.857	1.040	6.2	700 - 1042	110
PGA-PFBD/2A2BK	2c 2	0.394	0.972	1.022	1.205	7.2	976 - 1452	149
PGA-PFBD/2A1BK	2c 1	0.446	1.074	1.124	1.305	7.8	1171 - 1742	174
PGA-PFBD/2A1/0BK	2c 1/0	0.491	1.164	1.214	1.395	8.4	1380 - 2053	199
PGA-PFBD/2A2/0BK	2c 2/0	0.541	1.264	1.314	1.495	9.0	1634 - 2431	242
PGA-PFBD/2A3/0BK	2c 3/0	0.591	1.364	1.414	1.595	9.6	1936 - 2881	265
PGA-PFBD/2A4/0BK	2c 4/0	0.666	1.514	1.564	1.815	10.9	2432 - 3619	307
PGA-PFBD/2A262BK	2c 262	0.756	1.763	1.813	2.065	12.4	3030 - 4509	358
PGA-PFBD/2A313BK	2c 313	0.791	1.833	1.883	2.135	12.8	3444 - 5125	391
PGA-PFBD/2A373BK	2c 373	0.846	1.943	1.993	2.245	13.5	3936 - 5857	442
PGA-PFBD/2A444BK	2c 444	0.924	2.099	2.149	2.400	14.4	4493 - 6686	504
PGA-PFBD/2A535BK	2c 535	1.003	2.256	2.306	2.555	15.3	5240 - 7797	538

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PG series

Flexible type P Multi Conductor Power Armored

0.6/1kV 125°C

LOW SMOKE LOW HALOGEN FLAME RETARDANT

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PGA-PFBD/3A8BK	3c	8	0.244	0.663	0.713	0.895	5.4	502 - 747	52
PGA-PFBD/3A6BK	3c	6	0.284	0.749	0.799	0.980	5.9	651 - 969	70
PGA-PFBD/3A4BK	3c	4	0.334	0.902	0.952	1.135	6.8	899 - 1338	92
PGA-PFBD/3A2BK	3c	2	0.394	1.031	1.081	1.265	7.6	1219 - 1814	122
PGA-PFBD/3A1BK	3c	1	0.446	1.141	1.191	1.375	8.3	1475 - 2195	143
PGA-PFBD/3A1/0BK	3c	1/0	0.491	1.238	1.288	1.470	8.8	1754 - 2610	164
PGA-PFBD/3A2/0BK	3c	2/0	0.541	1.346	1.396	1.580	9.5	2096 - 3119	188
PGA-PFBD/3A3/0BK	3c	3/0	0.591	1.453	1.503	1.755	10.5	2580 - 3839	218
PGA-PFBD/3A4/0BK	3c	4/0	0.666	1.614	1.664	1.915	11.5	3152 - 4690	252
PGA-PFBD/3A262BK	3c	262	0.756	1.877	1.927	2.175	13.1	3917 - 5828	294
PGA-PFBD/3A313BK	3c	313	0.791	1.952	2.002	2.255	13.5	4501 - 6697	321
PGA-PFBD/3A373BK	3c	373	0.846	2.070	2.120	2.370	14.2	5177 - 7703	361
PGA-PFBD/3A444BK	3c	444	0.924	2.238	2.288	2.540	15.2	5920 - 8809	411
PGA-PFBD/4A8BK	4c	8	0.244	0.724	0.774	0.955	5.7	596 - 887	42
PGA-PFBD/4A6BK	4c	6	0.284	0.820	0.870	1.055	6.3	784 - 1167	56
PGA-PFBD/4A4BK	4c	4	0.334	0.985	1.035	1.220	7.3	1092 - 1625	74
PGA-PFBD/4A2BK	4c	2	0.394	1.129	1.179	1.360	8.2	1503 - 2236	98
PGA-PFBD/4A1BK	4c	1	0.446	1.253	1.303	1.485	8.9	1828 - 2720	114
PGA-PFBD/4A1/0BK	4c	1/0	0.491	1.361	1.411	1.595	9.6	2186 - 3253	131
PGA-PFBD/4A2/0BK	4c	2/0	0.541	1.481	1.531	1.780	10.7	2699 - 4016	150
PGA-PFBD/4A3/0BK	4c	3/0	0.591	1.601	1.651	1.900	11.4	3237 - 4817	174
PGA-PFBD/4A4/0BK	4c	4/0	0.666	1.848	1.898	2.150	12.9	4068 - 6053	202
PGA-PFBD/4A262BK	4c	262	0.756	2.066	2.116	2.365	14.2	4930 - 7336	235
PGA-PFBD/4A313BK	4c	313	0.791	2.150	2.200	2.450	14.7	5694 - 8473	257
PGA-PFBD/4A373BK	4c	373	0.846	2.282	2.332	2.580	15.5	6570 - 9776	289
PGA-PFBD/5A8BK	5c	8	0.244	0.797	0.847	1.030	6.2	698 - 1039	42
PGA-PFBD/5A6BK	5c	6	0.284	0.950	1.000	1.185	7.1	966 - 1437	56
PGA-PFBD/5A4BK	5c	4	0.334	1.085	1.135	1.320	7.9	1298 - 1931	74
PGA-PFBD/5A2BK	5c	2	0.394	1.247	1.297	1.480	8.9	1802 - 2681	98
PGA-PFBD/5A1BK	5c	1	0.446	1.387	1.437	1.620	9.7	2200 - 3274	114
PGA-PFBD/5A1/0BK	5c	1/0	0.491	1.508	1.558	1.810	10.9	2715 - 4040	131
PGA-PFBD/5A2/0BK	5c	2/0	0.541	1.643	1.693	1.945	11.7	3261 - 4852	150
PGA-PFBD/5A3/0BK	5c	3/0	0.591	1.846	1.896	2.145	12.9	4022 - 5985	174
PGA-PFBD/5A4/0BK	5c	4/0	0.666	2.048	2.098	2.350	14.1	4933 - 7340	202
PGA-PFBD/5A262BK	5c	262	0.756	2.293	2.343	2.595	15.6	5991 - 8915	235
PGA-PFBD/5A313BK	5c	313	0.791	2.387	2.437	2.690	16.1	6938 - 10324	257

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Multi Conductor Control Armored

0.6/1kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

PG
series

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	DIAMETER OVER INSULATION (inches)	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PGA-CBBD/2A18BK	2c 18	0.110	0.324	0.374	0.480	2.9	136 - 202	14
PGA-CBBD/3A18BK	3c 18	0.110	0.340	0.390	0.495	3.0	150 - 223	12
PGA-CBBD/4A18BK	4c 18	0.110	0.368	0.418	0.520	3.1	169 - 251	10
PGA-CBBD/5A18BK	5c 18	0.110	0.401	0.451	0.590	3.5	203 - 302	10
PGA-CBBD/7A18BK	7c 18	0.110	0.434	0.484	0.620	3.7	231 - 344	8
PGA-CBBD/12A18BK	12c 18	0.110	0.594	0.644	0.780	4.7	349 - 519	6
PGA-CBBD/16A18BK	16c 18	0.110	0.654	0.704	0.885	5.3	439 - 653	6
PGA-CBBD/24A18BK	24c 18	0.110	0.797	0.847	1.030	6.2	588 - 875	5
PGA-CBBD/30A18BK	30c 18	0.110	0.887	0.937	1.120	6.7	699 - 1040	5
PGA-CBBD/37A18BK	37c 18	0.110	0.952	1.002	1.185	7.1	801 - 1192	5
PGA-CBBD/2A16BK	2c 16	0.122	0.348	0.398	0.500	3.0	152 - 226	19
PGA-CBBD/3A16BK	3c 16	0.122	0.366	0.416	0.520	3.1	170 - 253	16
PGA-CBBD/4A16BK	4c 16	0.122	0.397	0.447	0.585	3.5	206 - 307	13
PGA-CBBD/5A16BK	5c 16	0.122	0.433	0.483	0.620	3.7	234 - 348	13
PGA-CBBD/7A16BK	7c 16	0.122	0.470	0.520	0.660	4.0	269 - 400	11
PGA-CBBD/12A16BK	12c 16	0.122	0.644	0.694	0.830	5.0	411 - 612	8
PGA-CBBD/16A16BK	16c 16	0.122	0.711	0.761	0.945	5.7	520 - 774	8
PGA-CBBD/24A16BK	24c 16	0.122	0.914	0.964	1.145	6.9	744 - 1107	7
PGA-CBBD/30A16BK	30c 16	0.122	0.964	1.014	1.195	7.2	843 - 1254	7
PGA-CBBD/37A16BK	37c 16	0.122	1.036	1.086	1.270	7.6	973 - 1448	6
PGA-CBBD/2A14BK	2c 14	0.138	0.380	0.430	0.570	3.4	188 - 280	31
PGA-CBBD/3A14BK	3c 14	0.138	0.401	0.451	0.590	3.5	213 - 317	25
PGA-CBBD/4A14BK	4c 14	0.138	0.435	0.485	0.625	3.8	245 - 365	20
PGA-CBBD/5A14BK	5c 14	0.138	0.476	0.526	0.665	4.0	280 - 417	20
PGA-CBBD/7A14BK	7c 14	0.138	0.518	0.568	0.705	4.2	327 - 487	18
PGA-CBBD/12A14BK	12c 14	0.138	0.710	0.760	0.945	5.7	533 - 793	13
PGA-CBBD/16A14BK	16c 14	0.138	0.786	0.836	1.020	6.1	646 - 961	13
PGA-CBBD/24A14BK	24c 14	0.138	1.010	1.060	1.245	7.5	932 - 1387	11
PGA-CBBD/30A14BK	30c 14	0.138	1.067	1.117	1.300	7.8	1067 - 1588	11
PGA-CBBD/37A14BK	37c 14	0.138	1.148	1.198	1.380	8.3	1244 - 1851	10
PGA-CBBD/2A12BK	2c 12	0.156	0.416	0.466	0.605	3.6	220 - 327	40
PGA-CBBD/3A12BK	3c 12	0.156	0.439	0.489	0.625	3.8	254 - 378	31
PGA-CBBD/4A12BK	4c 12	0.156	0.478	0.528	0.665	4.0	296 - 440	25
PGA-CBBD/5A12BK	5c 12	0.156	0.525	0.575	0.715	4.3	341 - 507	25
PGA-CBBD/7A12BK	7c 12	0.156	0.606	0.656	0.795	4.8	427 - 635	22
PGA-CBBD/12A12BK	12c 12	0.156	0.785	0.835	1.020	6.1	666 - 991	16
PGA-CBBD/16A12BK	16c 12	0.156	0.915	0.965	1.150	6.9	856 - 1274	16
PGA-CBBD/24A12BK	24c 12	0.156	1.118	1.168	1.350	8.1	1188 - 1768	14
PGA-CBBD/30A12BK	30c 12	0.156	1.182	1.232	1.415	8.5	1375 - 2046	14
PGA-CBBD/37A12BK	37c 12	0.156	1.274	1.324	1.505	9.0	1617 - 2406	12
PGA-CBBD/2A10BK	2c 10	0.181	0.466	0.516	0.655	3.9	270 - 402	49
PGA-CBBD/3A10BK	3c 10	0.181	0.493	0.543	0.680	4.1	317 - 472	41
PGA-CBBD/4A10BK	4c 10	0.181	0.572	0.622	0.760	4.6	396 - 589	33
PGA-CBBD/5A10BK	5c 10	0.181	0.626	0.676	0.815	4.9	459 - 683	33
PGA-CBBD/7A10BK	7c 10	0.181	0.681	0.731	0.915	5.5	577 - 859	29
PGA-CBBD/12A10BK	12c 10	0.181	0.933	0.983	1.165	7.0	914 - 1360	21

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PS series

Flexible type P Single Conductor

2kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

2kV

INSULATION COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	INSULATION THICKNESS (inches)	INSULATION THICKNESS (mm)	DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PS-XXXD/1A18BK	1c 18	0.045	1.14	0.141	3.58	0.6	14 - 21	16
PS-XXXD/1A16BK	1c 16	0.045	1.14	0.153	3.89	0.6	17 - 25	23
PS-XXXD/1A14BK	1c 14	0.045	1.14	0.169	4.29	0.7	24 - 36	37
PS-XXXD/1A12BK	1c 12	0.045	1.14	0.187	4.75	0.7	32 - 48	45
PS-XXXD/1A10BK	1c 10	0.045	1.14	0.212	5.38	0.8	46 - 68	58
PS-XXXD/1A8BK	1c 8	0.055	1.4	0.266	6.76	1.1	72 - 107	72
PS-XXXD/1A6BK	1c 6	0.055	1.4	0.306	7.77	1.2	108 - 161	96
PS-XXXD/1A4BK	1c 4	0.055	1.4	0.356	9.04	1.4	160 - 238	128
PS-XXXD/1A2BK	1c 2	0.055	1.4	0.416	10.57	1.7	242 - 360	169
PS-XXXD/1A1BK	1c 1	0.065	1.65	0.466	11.84	1.9	305 - 454	194
PS-XXXD/1A1/0BK	1c 1/0	0.065	1.65	0.511	12.98	2.0	378 - 562	227
PS-XXXD/1A2/0BK	1c 2/0	0.065	1.65	0.561	14.25	2.2	469 - 698	262
PS-XXXD/1A3/0BK	1c 3/0	0.065	1.65	0.611	15.52	2.4	583 - 868	300
PS-XXXD/1A4/0BK	1c 4/0	0.065	1.65	0.686	17.42	2.7	733 - 1091	351
PS-XXXD/1A262BK	1c 262	0.075	1.91	0.777	19.74	3.1	905 - 1347	407
PS-XXXD/1A313BK	1c 313	0.075	1.91	0.812	20.62	3.2	1078 - 1604	455
PS-XXXD/1A373BK	1c 373	0.075	1.91	0.867	22.02	3.5	1268 - 1887	516
PS-XXXD/1A444BK	1c 444	0.075	1.91	0.945	24	3.8	1465 - 2180	588
PS-XXXD/1A535BK	1c 535	0.090	2.29	1.024	26.01	4.1	1753 - 2608	630
PS-XXXD/1A646BK	1c 646	0.090	2.29	1.119	28.42	4.5	2165 - 3222	731
PS-XXXD/1A777BK	1c 777	0.090	2.29	1.219	30.96	4.9	2589 - 3852	822
PS-XXXD/1A1111BK	1c 1111	0.110	2.79	1.481	37.62	5.9	3704 - 5512	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Single Conductor Jacketed
2kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

PN series

APPLICATION
Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION
Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE
-40ºc to +125ºc

VOLTAGE RATING
2kV

CORE COLOR
White

JACKET COLOR
Black

STANDARDS
ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS
ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		INSULATION THICKNESS (inches)	INSULATION THICKNESS (mm)	DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PNA-PFXD/1A8BK	1c	8	0.266	6.76	0.365	9.27	1.5	95 - 141	72
PNA-PFXD/1A6BK	1c	6	0.306	7.77	0.405	10.29	1.6	133 - 198	96
PNA-PFXD/1A4BK	1c	4	0.356	9.04	0.455	11.56	1.8	189 - 281	128
PNA-PFXD/1A2BK	1c	2	0.416	10.57	0.515	13.08	2.1	276 - 411	169
PNA-PFXD/1A1BK	1c	1	0.466	11.84	0.600	15.24	2.4	355 - 528	194
PNA-PFXD/1A1/0BK	1c	1/0	0.511	12.98	0.645	16.38	2.6	432 - 643	227
PNA-PFXD/1A2/0BK	1c	2/0	0.561	14.25	0.695	17.65	2.8	527 - 784	262
PNA-PFXD/1A3/0BK	1c	3/0	0.611	15.52	0.745	18.92	3.0	645 - 960	300
PNA-PFXD/1A4/0BK	1c	4/0	0.686	17.42	0.820	20.83	3.3	803 - 1195	351
PNA-PFXD/1A262BK	1c	262	0.777	19.74	0.955	24.26	3.8	1009 - 1501	407
PNA-PFXD/1A313BK	1c	313	0.812	20.62	0.990	25.15	4.0	1186 - 1765	455
PNA-PFXD/1A373BK	1c	373	0.867	22.02	1.045	26.54	4.2	1382 - 2056	516
PNA-PFXD/1A444BK	1c	444	0.945	24	1.125	28.58	4.5	1589 - 2364	588
PNA-PFXD/1A535BK	1c	535	1.024	26.01	1.205	30.61	4.8	1886 - 2806	630
PNA-PFXD/1A646BK	1c	646	1.119	28.42	1.300	33.02	5.2	2309 - 3436	731
PNA-PFXD/1A777BK	1c	777	1.219	30.96	1.400	35.56	5.6	2745 - 4085	822
PNA-PFXD/1A1111BK	1c	1111	1.481	37.62	1.660	42.16	6.6	3891 - 5790	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PX series

Flexible type P Single Conductor Armored

2kV 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40°c to +125°c

VOLTAGE RATING

2kV

CORE COLOR

White

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

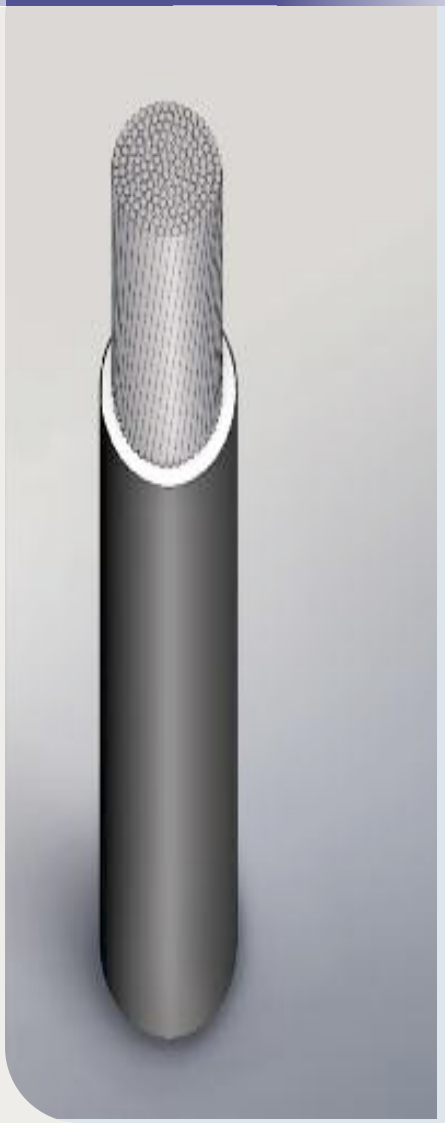
CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PXA-PFBD/1A8BK	1c	8	0.266	0.316	0.420	2.5	146 - 217	72
PXA-PFBD/1A6BK	1c	6	0.306	0.356	0.460	2.8	191 - 284	96
PXA-PFBD/1A4BK	1c	4	0.356	0.406	0.510	3.1	255 - 379	128
PXA-PFBD/1A2BK	1c	2	0.416	0.466	0.605	3.6	364 - 542	169
PXA-PFBD/1A1BK	1c	1	0.466	0.516	0.655	3.9	439 - 653	194
PXA-PFBD/1A1/0BK	1c	1/0	0.511	0.561	0.700	4.2	524 - 780	227
PXA-PFBD/1A2/0BK	1c	2/0	0.561	0.611	0.750	4.5	628 - 934	262
PXA-PFBD/1A3/0BK	1c	3/0	0.611	0.661	0.800	4.8	754 - 1122	300
PXA-PFBD/1A4/0BK	1c	4/0	0.686	0.736	0.920	5.5	949 - 1412	351

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Single Conductor
2kV Heavy Duty 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

PT
series



APPLICATION
Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION
Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

OPERATING TEMPERATURE
-40ºc to +125ºc

VOLTAGE RATING
2kV Heavy Duty

INSULATION COLOR
Black

STANDARDS
ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202
IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS
ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		INSULATION THICKNESS (inches)	INSULATION THICKNESS (mm)	DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PT-XXXD/1A4/0BK	1c	4/0	0.105	2.67	0.771	19.58	3.1	773 - 1150	351
PT-XXXD/1A262BK	1c	262	0.105	2.67	0.841	21.36	3.4	938 - 1396	407
PT-XXXD/1A313BK	1c	313	0.105	2.67	0.876	22.25	3.5	1112 - 1655	455
PT-XXXD/1A373BK	1c	373	0.105	2.67	0.931	23.65	3.7	1304 - 1940	516
PT-XXXD/1A444BK	1c	444	0.105	2.67	1.009	25.63	4.0	1505 - 2239	588
PT-XXXD/1A535BK	1c	535	0.120	3.05	1.087	27.61	4.3	1795 - 2671	630
PT-XXXD/1A646BK	1c	646	0.120	3.05	1.182	30.02	4.7	2210 - 3288	731
PT-XXXD/1A777BK	1c	777	0.120	3.05	1.282	32.56	5.1	2638 - 3925	822
PT-XXXD/1A1111BK	1c	1111	0.120	3.05	1.502	38.15	6.0	3724 - 5541	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PW series

Flexible type P Single Conductor Jacketed

2kV Heavy Duty 125°C

LOW SMOKE LOW HALOGEN FLAME RETARDANT

APPLICATION

Offshore oil and gas drilling platforms, land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

2kV Heavy Duty

CORE COLOR

White

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	OVERALL DIAMETER Nom. (inches)	OVERALL DIAMETER Nom. (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PWA-PFXD/1A4/0BK	1c	4/0	0.771	19.58	0.950	24.13	3.8	876 - 1303	351
PWA-PFXD/1A262BK	1c	262	0.841	21.36	1.020	25.91	4.1	1050 - 1562	407
PWA-PFXD/1A313BK	1c	313	0.876	22.25	1.055	26.8	4.2	1228 - 1827	455
PWA-PFXD/1A373BK	1c	373	0.931	23.65	1.110	28.19	4.4	1426 - 2122	516
PWA-PFXD/1A444BK	1c	444	1.009	25.63	1.190	30.23	4.8	1636 - 2434	588
PWA-PFXD/1A535BK	1c	535	1.087	27.61	1.265	32.13	5.1	1936 - 2881	630
PWA-PFXD/1A646BK	1c	646	1.182	30.02	1.360	34.54	5.4	2363 - 3516	731
PWA-PFXD/1A777BK	1c	777	1.282	32.56	1.460	37.08	5.8	2803 - 4171	822
PWA-PFXD/1A1111BK	1c	1111	1.502	38.15	1.750	44.45	7.0	3986 - 5931	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Single Conductor Armored

2kV Heavy Duty 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

PY series

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

2kV Heavy Duty

CORE COLOR

White

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil		DIAMETER OVER INSULATION (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PYA-PFBD/1A4/0BK	1c	4/0	0.771	0.821	1.005	6.0	1012 - 1506	351
PYA-PFBD/1A262BK	1c	262	0.841	0.891	1.075	6.5	1197 - 1781	407
PYA-PFBD/1A313BK	1c	313	0.876	0.926	1.110	6.7	1381 - 2055	455
PYA-PFBD/1A373BK	1c	373	0.931	0.981	1.165	7.0	1588 - 2363	516
PYA-PFBD/1A444BK	1c	444	1.009	1.059	1.240	7.4	1811 - 2695	588
PYA-PFBD/1A535BK	1c	535	1.087	1.137	1.320	7.9	2123 - 3159	630
PYA-PFBD/1A646BK	1c	646	1.182	1.232	1.415	8.5	2565 - 3817	731
PYA-PFBD/1A777BK	1c	777	1.282	1.332	1.515	9.1	3022 - 4497	822
PYA-PFBD/1A1111BK	1c	1111	1.502	1.552	1.805	10.8	4243 - 6314	1025

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PD series

Flexible type P Multi Pair / Multi Triad Signal

600V 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P.

Pairs/Triads: Individually shielded with Aluminum/Polyester Tape and Tinned Copper Drain Wire.

Assembly: Pairs/Triads cabled with optional fillers.

Overall Shield: Aluminum/Polyester Tape and Tinned Copper Drain Wire.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

.6/1kV

CORE COLORS

To customer specification.

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF PAIRS (p) / TRIADS (t) X AWG		DIAMETER OVER INSULATION (inches)	DIAMETER OVER INSULATION (mm)	OVERALL DIAMETER Nom. (inches)	OVERALL DIAMETER Nom. (mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PDA-DEXD/1P20BK	1p	20	0.101	2.57	0.315	8	1.3	45 - 67	10
PDA-DEXD/2P20BK	2p	20	0.101	2.57	0.475	12.07	1.9	85 - 126	7
PDA-DEXD/4P20BK	4p	20	0.101	2.57	0.580	14.73	2.3	149 - 222	6
PDA-DEXD/5P20BK	5p	20	0.101	2.57	0.635	16.13	2.5	179 - 266	5
PDA-DEXD/6P20BK	6p	20	0.101	2.57	0.690	17.53	2.8	211 - 314	5
PDA-DEXD/8P20BK	8p	20	0.101	2.57	0.745	18.92	3.0	256 - 381	5
PDA-DEXD/10P20BK	10p	20	0.101	2.57	0.915	23.24	3.7	360 - 536	5
PDA-DEXD/12P20BK	12p	20	0.101	2.57	0.940	23.88	3.8	388 - 577	4
PDA-DEXD/16P20BK	16p	20	0.101	2.57	1.040	26.42	4.2	494 - 735	4
PDA-DEXD/20P20BK	20p	20	0.101	2.57	1.150	29.21	4.6	596 - 887	4
PDA-DEXD/24P20BK	24p	20	0.101	2.57	1.275	32.39	5.1	725 - 1079	3

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Multi Pair / Multi Triad Signal

600V 125°C

LOW SMOKE LOW HALOGEN FLAME RETARDANT

PD series

CATALOG CODE	NUMBER OF PAIRS (p) / TRIADS (t) X AWG		DIAMETER OVER INSULATION (inches)	(mm)	OVERALL DIAMETER Nom. (inches)	(mm)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PDA-DEXD/1P18BK	1p	18	0.110	2.79	0.335	8.51	1.3	53 - 79	14
PDA-DEXD/2P18BK	2p	18	0.110	2.79	0.505	12.83	2.0	99 - 147	10
PDA-DEXD/4P18BK	4p	18	0.110	2.79	0.615	15.62	2.5	176 - 262	8
PDA-DEXD/5P18BK	5p	18	0.110	2.79	0.675	17.15	2.7	213 - 317	6
PDA-DEXD/6P18BK	6p	18	0.110	2.79	0.735	18.67	2.9	251 - 373	6
PDA-DEXD/8P18BK	8p	18	0.110	2.79	0.795	20.19	3.2	307 - 457	6
PDA-DEXD/10P18BK	10p	18	0.110	2.79	0.975	24.77	3.9	429 - 638	6
PDA-DEXD/12P18BK	12p	18	0.110	2.79	1.005	25.53	4.0	464 - 690	5
PDA-DEXD/16P18BK	16p	18	0.110	2.79	1.110	28.19	4.4	595 - 885	5
PDA-DEXD/20P18BK	20p	18	0.110	2.79	1.230	31.24	4.9	721 - 1073	5
PDA-DEXD/24P18BK	24p	18	0.110	2.79	1.365	34.67	5.5	878 - 1306	4
PDA-DEXD/1P16BK	1p	16	0.122	3.1	0.355	9.02	1.4	64 - 95	19
PDA-DEXD/2P16BK	2p	16	0.122	3.1	0.580	14.73	2.3	135 - 201	13
PDA-DEXD/4P16BK	4p	16	0.122	3.1	0.665	16.89	2.7	220 - 327	11
PDA-DEXD/5P16BK	5p	16	0.122	3.1	0.730	18.54	2.9	268 - 399	8
PDA-DEXD/6P16BK	6p	16	0.122	3.1	0.795	20.19	3.2	317 - 472	8
PDA-DEXD/8P16BK	8p	16	0.122	3.1	0.905	22.99	3.6	416 - 619	8
PDA-DEXD/10P16BK	10p	16	0.122	3.1	1.055	26.8	4.2	541 - 805	8
PDA-DEXD/12P16BK	12p	16	0.122	3.1	1.090	27.69	4.4	590 - 878	7
PDA-DEXD/16P16BK	16p	16	0.122	3.1	1.210	30.73	4.8	761 - 1132	6
PDA-DEXD/20P16BK	20p	16	0.122	3.1	1.340	34.04	5.4	925 - 1376	6
PDA-DEXD/24P16BK	24p	16	0.122	3.1	1.490	37.85	6.0	1127 - 1677	6
PDA-DEXD/1P14BK	1p	14	0.138	3.51	0.390	9.91	1.6	80 - 119	31
PDA-DEXD/2P14BK	2p	14	0.138	3.51	0.635	16.13	2.5	167 - 248	20
PDA-DEXD/4P14BK	4p	14	0.138	3.51	0.730	18.54	2.9	279 - 415	18
PDA-DEXD/5P14BK	5p	14	0.138	3.51	0.805	20.45	3.2	341 - 507	13
PDA-DEXD/6P14BK	6p	14	0.138	3.51	0.920	23.37	3.7	431 - 641	13
PDA-DEXD/8P14BK	8p	14	0.138	3.51	0.995	25.27	4.0	530 - 789	13
PDA-DEXD/10P14BK	10p	14	0.138	3.51	1.165	29.59	4.7	692 - 1030	13
PDA-DEXD/12P14BK	12p	14	0.138	3.51	1.200	30.48	4.8	758 - 1128	11
PDA-DEXD/16P14BK	16p	14	0.138	3.51	1.335	33.91	5.3	983 - 1463	10
PDA-DEXD/20P14BK	20p	14	0.138	3.51	1.485	37.72	5.9	1199 - 1784	10
PDA-DEXD/24P14BK	24p	14	0.138	3.51	1.650	41.91	6.6	1463 - 2177	9
PDA-DEXD/1T18BK	1t	18	0.110	2.79	0.370	9.4	1.5	68 - 101	12
PDA-DEXD/2T18BK	2t	18	0.110	2.79	0.605	15.37	2.4	141 - 210	10
PDA-DEXD/3T18BK	3t	18	0.110	2.79	0.640	16.26	2.6	183 - 272	8
PDA-DEXD/4T18BK	4t	18	0.110	2.79	0.695	17.65	2.8	231 - 344	6
PDA-DEXD/5T18BK	5t	18	0.110	2.79	0.765	19.43	3.1	281 - 418	6
PDA-DEXD/6T18BK	6t	18	0.110	2.79	0.835	21.21	3.3	334 - 497	6
PDA-DEXD/8T18BK	8t	18	0.110	2.79	0.950	24.13	3.8	437 - 650	5
PDA-DEXD/12T18BK	12t	18	0.110	2.79	1.140	28.96	4.6	621 - 924	5
PDA-DEXD/16T18BK	16t	18	0.110	2.79	1.265	32.13	5.1	801 - 1192	4
PDA-DEXD/1T16BK	1t	16	0.122	3.1	0.400	10.16	1.6	84 - 125	16
PDA-DEXD/2T16BK	2t	16	0.122	3.1	0.650	16.51	2.6	174 - 259	13
PDA-DEXD/3T16BK	3t	16	0.122	3.1	0.690	17.53	2.8	230 - 342	11
PDA-DEXD/4T16BK	4t	16	0.122	3.1	0.755	19.18	3.0	292 - 434	8
PDA-DEXD/5T16BK	5t	16	0.122	3.1	0.830	21.08	3.3	357 - 531	8
PDA-DEXD/6T16BK	6t	16	0.122	3.1	0.950	24.13	3.8	451 - 671	8
PDA-DEXD/8T16BK	8t	16	0.122	3.1	1.030	26.16	4.1	555 - 826	7
PDA-DEXD/12T16BK	12t	16	0.122	3.1	1.240	31.5	5.0	795 - 1183	6
PDA-DEXD/16T16BK	16t	16	0.122	3.1	1.380	35.05	5.5	1031 - 1534	6

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PH series

Flexible type P Multi Pair / Multi Triad Signal Armored

600V 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P.

Pairs/Triads: Individually shielded with Aluminum/Polyester Tape and Tinned Copper Drain Wire.

Assembly: Pairs/Triads cabled with optional fillers.

Overall Shield: Aluminum/Polyester Tape and Tinned Copper Drain Wire.

Ripcord: High strength ripcord under bedding.

Bedding: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

600V

CORE COLORS

To customer specification.

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF PAIRS (p) / TRIADS (t) X AWG		DIAMETER OVER INSULATION (inches)	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PHA-DEBD/1P20BK	1p	20	0.101	0.315	0.365	0.470	2.8	126 - 187	10
PHA-DEBD/2P20BK	2p	20	0.101	0.474	0.524	0.660	4.0	217 - 323	7
PHA-DEBD/4P20BK	4p	20	0.101	0.580	0.630	0.770	4.6	306 - 455	6
PHA-DEBD/5P20BK	5p	20	0.101	0.634	0.684	0.820	4.9	349 - 519	5
PHA-DEBD/6P20BK	6p	20	0.101	0.688	0.738	0.920	5.5	418 - 622	5
PHA-DEBD/8P20BK	8p	20	0.101	0.744	0.794	0.975	5.9	476 - 708	5
PHA-DEBD/10P20BK	10p	20	0.101	0.914	0.964	1.145	6.9	623 - 927	5
PHA-DEBD/12P20BK	12p	20	0.101	0.941	0.991	1.175	7.1	657 - 978	4
PHA-DEBD/16P20BK	16p	20	0.101	1.040	1.090	1.275	7.7	787 - 1171	4
PHA-DEBD/20P20BK	20p	20	0.101	1.150	1.200	1.385	8.3	914 - 1360	4
PHA-DEBD/24P20BK	24p	20	0.101	1.275	1.325	1.510	9.1	1070 - 1592	3

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Multi Pair / Multi Triad Signal Armored

600V 125°C

LOW SMOKE LOW HALOGEN FLAME RETARDANT

PH series

CATALOG CODE	NUMBER OF PAIRS (p) / TRIADS (t) X AWG		DIAMETER OVER INSULATION (inches)	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PHA-DEBD/1P18BK	1p	18	0.110	0.333	0.383	0.485	2.9	137 - 204	14
PHA-DEBD/2P18BK	2p	18	0.110	0.505	0.555	0.695	4.2	238 - 354	10
PHA-DEBD/4P18BK	4p	18	0.110	0.617	0.667	0.805	4.8	341 - 507	8
PHA-DEBD/5P18BK	5p	18	0.110	0.675	0.725	0.910	5.5	416 - 619	6
PHA-DEBD/6P18BK	6p	18	0.110	0.734	0.784	0.965	5.8	469 - 698	6
PHA-DEBD/8P18BK	8p	18	0.110	0.795	0.845	1.030	6.2	539 - 802	6
PHA-DEBD/10P18BK	10p	18	0.110	0.975	1.025	1.210	7.3	706 - 1051	6
PHA-DEBD/12P18BK	12p	18	0.110	1.004	1.054	1.235	7.4	749 - 1115	5
PHA-DEBD/16P18BK	16p	18	0.110	1.112	1.162	1.345	8.1	904 - 1345	5
PHA-DEBD/20P18BK	20p	18	0.110	1.231	1.281	1.465	8.8	1056 - 1571	5
PHA-DEBD/24P18BK	24p	18	0.110	1.366	1.416	1.600	9.6	1242 - 1848	4
PHA-DEBD/1P16BK	1p	16	0.122	0.357	0.407	0.510	3.1	154 - 229	19
PHA-DEBD/2P16BK	2p	16	0.122	0.579	0.629	0.765	4.6	292 - 434	13
PHA-DEBD/4P16BK	4p	16	0.122	0.666	0.716	0.900	5.4	421 - 626	11
PHA-DEBD/5P16BK	5p	16	0.122	0.731	0.781	0.965	5.8	485 - 722	8
PHA-DEBD/6P16BK	6p	16	0.122	0.795	0.845	1.030	6.2	550 - 818	8
PHA-DEBD/8P16BK	8p	16	0.122	0.907	0.957	1.140	6.8	677 - 1007	8
PHA-DEBD/10P16BK	10p	16	0.122	1.056	1.106	1.290	7.7	837 - 1245	8
PHA-DEBD/12P16BK	12p	16	0.122	1.089	1.139	1.320	7.9	894 - 1330	7
PHA-DEBD/16P16BK	16p	16	0.122	1.208	1.258	1.440	8.6	1091 - 1623	6
PHA-DEBD/20P16BK	20p	16	0.122	1.340	1.390	1.575	9.5	1283 - 1909	6
PHA-DEBD/24P16BK	24p	16	0.122	1.489	1.539	1.790	10.7	1590 - 2366	6
PHA-DEBD/1P14BK	1p	14	0.138	0.389	0.439	0.575	3.5	188 - 280	31
PHA-DEBD/2P14BK	2p	14	0.138	0.634	0.684	0.820	4.9	336 - 500	20
PHA-DEBD/4P14BK	4p	14	0.138	0.731	0.781	0.965	5.8	496 - 738	18
PHA-DEBD/5P14BK	5p	14	0.138	0.804	0.854	1.035	6.2	576 - 857	13
PHA-DEBD/6P14BK	6p	14	0.138	0.922	0.972	1.155	6.9	695 - 1034	13
PHA-DEBD/8P14BK	8p	14	0.138	0.997	1.047	1.230	7.4	813 - 1210	13
PHA-DEBD/10P14BK	10p	14	0.138	1.165	1.215	1.400	8.4	1012 - 1506	13
PHA-DEBD/12P14BK	12p	14	0.138	1.202	1.252	1.435	8.6	1087 - 1617	11
PHA-DEBD/16P14BK	16p	14	0.138	1.336	1.386	1.570	9.4	1341 - 1995	10
PHA-DEBD/20P14BK	20p	14	0.138	1.484	1.534	1.785	10.7	1661 - 2472	10
PHA-DEBD/24P14BK	24p	14	0.138	1.652	1.702	1.950	11.7	1965 - 2924	9
PHA-DEBD/1T18BK	1t	18	0.110	0.372	0.422	0.525	3.2	160 - 238	12
PHA-DEBD/2T18BK	2t	18	0.110	0.604	0.654	0.790	4.7	303 - 451	10
PHA-DEBD/3T18BK	3t	18	0.110	0.639	0.689	0.825	5.0	353 - 525	8
PHA-DEBD/4T18BK	4t	18	0.110	0.696	0.746	0.930	5.6	439 - 653	6
PHA-DEBD/5T18BK	5t	18	0.110	0.764	0.814	0.995	6.0	507 - 754	6
PHA-DEBD/6T18BK	6t	18	0.110	0.833	0.883	1.065	6.4	576 - 857	6
PHA-DEBD/8T18BK	8t	18	0.110	0.949	0.999	1.180	7.1	708 - 1054	5
PHA-DEBD/12T18BK	12t	18	0.110	1.141	1.191	1.375	8.3	936 - 1393	5
PHA-DEBD/16T18BK	16t	18	0.110	1.267	1.317	1.500	9.0	1144 - 1702	4
PHA-DEBD/1T16BK	1t	16	0.122	0.400	0.450	0.590	3.5	194 - 289	16
PHA-DEBD/2T16BK	2t	16	0.122	0.652	0.702	0.885	5.3	372 - 554	13
PHA-DEBD/3T16BK	3t	16	0.122	0.690	0.740	0.925	5.6	437 - 650	11
PHA-DEBD/4T16BK	4t	16	0.122	0.753	0.803	0.985	5.9	514 - 765	8
PHA-DEBD/5T16BK	5t	16	0.122	0.829	0.879	1.060	6.4	598 - 890	8
PHA-DEBD/6T16BK	6t	16	0.122	0.950	1.000	1.185	7.1	722 - 1074	8
PHA-DEBD/8T16BK	8t	16	0.122	1.028	1.078	1.260	7.6	845 - 1257	7
PHA-DEBD/12T16BK	12t	16	0.122	1.241	1.291	1.475	8.9	1132 - 1684	6
PHA-DEBD/16T16BK	16t	16	0.122	1.380	1.430	1.615	9.7	1398 - 2080	6

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

PK series

Flexible type P
Variable Frequency Drive Cable

2kV, 125°C

LOW SMOKE
LOW HALOGEN
FLAME
RETARDANT

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Assembly: 3 Conductors plus 3 Split Ground Wires cabled.

Overall Shield: Tinned Copper Braid plus Aluminum/Polyester Shield.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

2kV

CORE COLORS

To customer specification.

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	GROUND SIZE AWG	DIAMETER OVER SHIELD (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PKA-PFTD/3A8BK	3c 8	3 @ 14	0.632	0.775	4.7	382 - 568	52
PKA-PFTD/3A6BK	3c 6	3 @ 12	0.718	0.905	5.4	538 - 801	70
PKA-PFTD/3A4BK	3c 4	3 @ 12	0.826	1.010	6.1	728 - 1083	92
PKA-PFTD/3A2BK	3c 2	3 @ 10	0.955	1.140	6.8	1017 - 1513	122
PKA-PFTD/3A1BK	3c 1	3 @ 10	1.064	1.250	7.5	1243 - 1850	143
PKA-PFTD/3A1/0BK	3c 1/0	3 @ 10	1.161	1.345	8.1	1495 - 2225	164
PKA-PFTD/3A2/0BK	3c 2/0	3 @ 10	1.268	1.455	8.7	1806 - 2687	188
PKA-PFTD/3A3/0BK	3c 3/0	3 @ 8	1.376	1.560	9.4	2185 - 3251	218
PKA-PFTD/3A4/0BK	3c 4/0	3 @ 8	1.537	1.790	10.7	2770 - 4122	252
PKA-PPTD/3A262BK	3c 262	3 @ 6	1.732	1.985	11.9	3366 - 5009	294
PKA-PVTD/3A313BK	3c 313	3 @ 6	1.807	2.060	12.4	3918 - 5830	321
PKA-PFTD/3A373BK	3c 373	3 @ 6	1.925	2.180	13.1	4542 - 6758	361
PKA-PFTD/3A444BK	3c 444	3 @ 6	2.093	2.345	14.1	5208 - 7750	411

* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.

Flexible type P Armored Variable Frequency Drive Cable

2kV, 125°C

LOW SMOKE
LOW HALOGEN
FLAME RETARDANT

PL
series

APPLICATION

Offshore oil and gas drilling platforms,
land based oil and gas drilling rigs, and marine vessels.

CONSTRUCTION

Conductor: Finely stranded tinned annealed copper to ASTM B-33. Stranding significantly exceeds IEEE 1580 Table 11.

Insulation: P-10. Cross-linked, Thermoset, Flame retardant, Oil Resistant to IEEE 1580 Type P. Includes ripcord on 8 AWG and larger.

Assembly: 3 Conductors plus 3 Split Ground Wires cabled.

Overall Shield: Tinned Copper Braid plus Aluminum/Polyester Shield.

Ripcord: High strength ripcord under bedding.

Bedding: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

Armor: 88% Coverage Bronze Braid.

Ripcord: High strength ripcord under jacket.

Jacket: LSFLEX® S-50. Polyolefinic, Flame Retardant, Low Smoke, Zero Halogen to IEEE 1580 Type TPO.

OPERATING TEMPERATURE

-40ºc to +125ºc

VOLTAGE RATING

2kV

CORE COLORS

To customer specification.

JACKET COLOR

Black

STANDARDS

ASTM B-3
ASTM B-33
ASTM B-172
ASTM B-174
IEEE 45
IEEE 1580
IEEE 1202

IEC 60228
IEC 60092-350
IEC 60092-376
IEC 60332-1
IEC 60332-3(A)
UL 1309
CSA C22.2 No. 245

APPROVALS

ABS, USCG

CATALOG CODE	NUMBER OF CONDUCTORS (c) X AWG/kcmil	GROUND SIZE AWG	DIAMETER OVER BEDDING (inches)	DIAMETER OVER ARMOR (inches)	OVERALL DIAMETER Nom. (inches)	MINIMUM BENDING RADIUS (inches)	APPROX. WEIGHT (lbs/kft)-(kg/km)	AMPACITY* AT 100ºC (Amps)
PLA-PFWD/3A8BK	3c 8	3 @ 14	0.775	0.825	1.005	6.0	619 - 921	52
PLA-PFWD/3A6BK	3c 6	3 @ 12	0.905	0.955	1.135	6.8	812 - 1208	70
PLA-PFWD/3A4BK	3c 4	3 @ 12	1.010	1.060	1.240	7.4	1032 - 1536	92
PLA-PFWD/3A2BK	3c 2	3 @ 10	1.140	1.190	1.370	8.2	1356 - 2018	122
PLA-PFWD/3A1BK	3c 1	3 @ 10	1.250	1.300	1.480	8.9	1613 - 2400	143
PLA-PFWD/3A1/0BK	3c 1/0	3 @ 10	1.345	1.395	1.575	9.5	1892 - 2815	164
PLA-PFWD/3A2/0BK	3c 2/0	3 @ 10	1.455	1.505	1.750	10.5	2305 - 3430	188
PLA-PFWD/3A3/0BK	3c 3/0	3 @ 8	1.560	1.610	1.860	11.2	2718 - 4044	218
PLA-PFWD/3A4/0BK	3c 4/0	3 @ 8	1.790	1.840	2.090	12.5	3376 - 5023	252
PLA-PFWD/3A262BK	3c 262	3 @ 6	1.985	2.035	2.285	13.7	4035 - 6004	294
PLA-PFWD/3A313BK	3c 313	3 @ 6	2.060	2.110	2.360	14.2	4611 - 6861	321
PLA-PFWD/3A373BK	3c 373	3 @ 6	2.180	2.230	2.475	14.9	5272 - 7845	361
PLA-PFWD/3A444BK	3c 444	3 @ 6	2.345	2.395	2.645	15.9	5992 - 8916	411

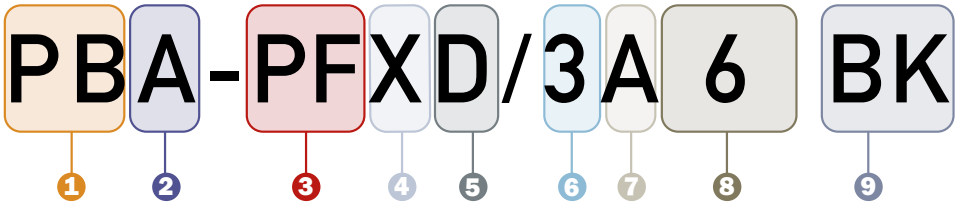
* Based on IEEE 45-2002 Table 25 for cables installed in free air, single banked, @ 45°C ambient.


BONGKOT-QP

TECHNICAL INFORMATION

Product Coding

OFFSHORE CABLE - PRODUCT CODES



1. PRODUCT SERIES
eg. (PB series)

2. JACKET TYPE
(Marine/Offshore Cables only)
A = TPO / TPE

3. CORE COLOR CONFIGURATION
eg. SEE COLOR CODES BELOW

4. BRAID/ARMOR
T= Tinned Copper Wire Braid
L= Tinned Copper Wire Braid + drain wire
A= Aluminum Braid Armor
B= Bronze Braid Armor
F= Tinned Copper Wire Braid + Aluminum Braid Armor
W= Tinned Copper Wire Braid + Bronze Braid Armor
X= Not Applicable

5. CONDUCTOR
N= Plain Annealed Copper Wire
D= Tinned Annealed Copper Wire

6. NUMBER OF CONDUCTORS/PAIRS/TRIADS

7. CORE TYPE
A= Power/Control
P= Pair
T= Triad
Q= Quad

8. CONDUCTOR CROSS SECTION AREA AWG OR MCM

9. JACKET COLOR
BK= Black

COLOR CODES

Power	1C	2C	3C	4C	5C	STANDARD
PF	WH	BK-WH	BK-WH-RE	BK-WH-RE-GN	BK-WH-RE-OR-GN	US (IEEE 45/1580)

Control		
CA	White with Numbers & Words + Earth	
CB	White with Numbers & Words No Earth	
CE	White with Number & Colors in Words	
Instrumentation	Pairs	Triads
DE	WH-BK with Numbers & Words "1 ONE-1 ONE", "2 TWO-2 TWO", etc	WH-BK-RE with Numbers & Words "1 ONE-1 ONE-1 ONE", "2 TWO-2 TWO-2 TWO", etc

Single Pair and Single Triad Wires are not printed.

Cable Stripping Recommendation

1. Use Tricab Approved Cable Stripping tool.

2. Check blade depth before stripping jacket.

3. Strip off 4-5" of Jacket.

4. Rotate cable stripper 2-3 times around jacket.

5. Continued.....

6. Bend jacket in all directions to ensure cut.

7. Pull off jacket piece & save piece for next step.

8. Use center of jacket piece to wrap ripcord around jacket piece.

9. Hold primes and pull on jacket piece to strip jacket.

10. Continue pulling to strip off jacket.

Installation Recommendation

CORRECTION FACTORS FOR CABLE CURRENT RATING

Bunching of cable

Where more than six cables are bunched together and operating at their maximum capacity, a correction factor of 0.85 should be applied (assuming insufficient free air circulation). Single core cables are exempted from this requirement

Ambient temperature

The maximum current ratings in this catalog are based on an ambient temperature of 45°C. For other ambient temperatures, the correction factors shown below should be applied.

Maximum conductor temperature	Ambient air temperature					
°C	35°C	40°C	45°C	50°C	55°C	60°C
60	1.29	1.15	1.00	0.82	-	-
65	1.22	1.12	1.00	0.87	0.71	-
70	1.18	1.10	1.00	0.89	0.77	0.63
75	1.15	1.08	1.00	0.91	0.82	0.71
80	1.13	1.07	1.00	0.93	0.85	0.76
85	1.12	1.06	1.00	0.94	0.87	0.79
110*	1.12	1.00	0.96	0.93	0.89	0.85

INSTALLATION

Cable runs should be fixed in straight lines as far as practicable. The minimum bending radius for cable should be selected in accordance with the table below.

CABLE CONSTRUCTION	OVERALL DIAMETER OF CABLE	MINIMUM BENDING RADIUS (TIMES OVERALL DIAMETER OF CABLE)
Non-Braided	all sizes	4X
Braided	all sizes	6X
Non-Braided, Fire resistant	all sizes	8X

The installation of cables across expansion joints in any structure should be avoided. Where this is not feasible, a loop of cable sufficient to accommodate the expansion of the joint should be provided. The internal radius of the loop is to be at least 12 times the overall diameter of the cable.

Cables should be installed away from heat sources as far as practicable. If this cannot be avoided and there is possibility of damage to the cable, then suitable shields, insulation or other protective measures should be installed.

Cables are not to be coated or painted with materials which may adversely affect their jacket or fire performance.

Cables should be installed away from sources of mechanical damage, as far as is practicable. If this cannot be avoided the cables should be protected with suitable metallic casing.

SECURING OF CABLES

Cables should be effectively supported and secured using flame retardant clips, saddles, or straps. Special care should be taken to avoid any damage caused by excessive tensioning during installation.

The distance between fixing points should be selected according to cable type and probability of vibration, but should not exceed 18 inches.

Where cables are installed below cable trays, ladder, or supports, the fixing distance for securing the cable should be in accordance with the table below.

OVERALL DIAMETER OF CABLE EXCEEDING	NOT EXCEEDING	NON-ARMORED CABLES	ARMORED CABLES
inches	inches	inches	inches
-	1/3	8	10
1/3	1/2	10	12
1/2	3/4	12	14
3/4	1 3/16	14	16
1 3/16	-	16	18

* All information above is intended as a guide only

Conductor Data

CONDUCTOR - CONSTRUCTION

Tricab uses very fine 0.0114 inch copper wires to ensure maximum flexibility and ease of use. The following table from IEC 60228 provides a comparative analysis.

SIZE	Number of Strands		Strand Size (in)	Number of Strands		Strand Size (in)
20 AWG	8	X	0.0114	7	X	0.0126
18 AWG	13	X	0.0114	7	X	0.0159
16 AWG	20	X	0.0114	19	X	0.0117
14 AWG	32	X	0.0114	19	X	0.0147
12 AWG	50	X	0.0114	19	X	0.0185
10 AWG	80	X	0.0114	37	X	0.0167
8 AWG	128	X	0.0114	37	X	0.0201
6 AWG	206	X	0.0114	61	X	0.0201
4 AWG	322	X	0.0114	105	X	0.0201
2 AWG	511	X	0.0114	150	X	0.0201
1 AWG	644	X	0.0114	209	X	0.0201
1/0 AWG	812	X	0.0114	266	X	0.0201
2/0 AWG	1022	X	0.0114	342	X	0.0201
3/0 AWG	1288	X	0.0114	418	X	0.0201
4/0 AWG	1638	X	0.0114	532	X	0.0201
262 MCM	2016	X	0.0114	646	X	0.0201
313 MCM	2432	X	0.0114	777	X	0.0201
373 MCM	2884	X	0.0114	925	X	0.0201
444 MCM	3344	X	0.0114	1110	X	0.0201
535 MCM	4104	X	0.0114	1332	X	0.0201
646 MCM	4900	X	0.0114	1591	X	0.0201
777 MCM	5985	X	0.0114	1924	X	0.0201
1111 MCM	8512	X	0.0114	2745	X	0.0201

* 20 AWG & 18 AWG IEEE 1580 Stranding per Table 10 Class B

CONDUCTOR - DC RESISTANCE

To calculate the DC Resistance of copper conductors for a given temperature (°C), the resistance at 20°C, as detailed must be multiplied by the appropriate correction factor below.

SIZE	Maximum DC Resistance (Ohms/1000 ft) Bare Copper	Tinned Copper
20 AWG	9.3300	10.3000
18 AWG	6.8200	7.0600
16 AWG	4.1900	4.4300
14 AWG	2.6300	2.7900
12 AWG	1.6600	1.7500
10 AWG	1.0700	1.1100
8 AWG	0.6560	0.6790
6 AWG	0.4130	0.4270
4 AWG	0.2710	0.2800
2 AWG	0.1660	0.1710
1 AWG	0.1320	0.1370
1/0 AWG	0.1050	0.1090
2/0 AWG	0.0837	0.0866
3/0 AWG	0.0669	0.0687
4/0 AWG	0.0528	0.0545
262 MCM	0.0436	0.0450
313 MCM	0.0364	0.0376
373 MCM	0.0302	0.0313
444 MCM	0.0255	0.0264
535 MCM	0.0212	0.0219
646 MCM	0.0176	0.0182
777 MCM	0.0146	0.0151
1111 MCM	0.0100	0.0104

* 20 AWG IEEE 1580 DC Res. per Table 10 Class B

AMBIENT TEMPERATURE (°C)	CORRECTION FACTOR
20	1.000
25	1.020
30	1.039
35	1.059
40	1.079
45	1.098
50	1.118
55	1.138
60	1.157
65	1.177
70	1.196
75	1.216
80	1.236
85	1.255
90	1.275

CONVERSION TABLE - CROSS-SECTIONAL AREA

AWG	mm2
20	0.519
18	0.823
16	1.31
14	2.08
12	3.31
10	5.26
8	8.37
6	13.3
4	21.15
2	33.62
1	42.41
1/0	53.49
2/0	67.43
3/0	85.01
4/0	107.2
McM	**mm2**
250	126.7
262	132.8
300	152.0
313	158.6
350	177.3
373	189.0
400	202.7
444	225.0
500	253.4
535	271.1
600	304.0
646	327.3
750	380.0
777	393.7
1000	506.7
1111	563.0
mm2	**McM**
0.75	1.48
1	1.97
1.5	2.96
2.5	4.93
4	7.89
6	11.8
10	19.7
16	31.6
25	49.3
35	69.1
50	98.7
70	138.1
95	187.5
120	236.8
150	296
185	365.1
240	473.7
300	592.1
400	789.4
500	986.8
630	1243.3
300	592.1
400	789.4
500	986.8
630	1243.3

Compound Data

INSULATION AND JACKET MATERIALS

Insulation

STANDARD	IEEE 1580	UL 1309 CSA C22.2 No. 245
Insulation Type	P	X110
Temperature Rating °C	100	110
Insulation resistance constant (K) at 15.6°C		
MΩ-km, min	3050	3050
MΩ-1000ft, min	10000	10000
Accelerated water absorption:[a]		
Electrical method in 75°C water:		
Dielectric constant, max	6.0	6.0
Increase in Capacitance, 1-14 days, max	3.0	4.0
Increase in Capacitance, 7-14 days, max	1.5	2.0
Stability factor after 14 days, max	0.5	1.0
Physical requirements: unaged		
Tensile strength, N/mm2 (psi), min	12.4 (1800)	12.4 (1800)
Elongation at rupture, %, min	250	150
Aging requirements:		
After air oven test temperature (°C)	158 ± 1	141 ± 1
Duration (hours)	168	168
Tensile strength, % of unaged, min	90	75
Elongation at rupture, % of unaged, min	50	75
Heat distortion, @ °C	150 ± 1	121 ± 1
4/0 AWG and smaller, % of unaged value, max	20	30
Larger than 4/0 AWG, % of unaged value, max	10	15
Ozone after 24 hours exposure in concentration of .03% by volume at 90°C ± 2°C[b]	no cracks	N/A
Set Nema WC 57 Clause 6.8 except gauge marks 4 in apart	3 specimens not to exceed tension set of 30%	N/A
~~**VW-1 flame test**[c]~~	~~Pass~~	~~Pass~~
Hot creep	ICEA T-28-562	UL 1072
Temperature of air oven (°C)	175 ± 1	150 ± 1
~~Hot creep elongation, %, max~~	~~25~~	~~175~~
Hot creep set, %, max	2	10
Hot oil resistance		
IRM 902 @ 150°C Allowable % swell	60	N/A
Diesel (fuel) oil @ 60°C Allowable % swell	60	N/A
Long Term Insulation resistance @ 75	N/A	Pass
Cold Bend, After 1 hour @ -30 ± 1°C,		
180° bend, 8X OD Mandrel	N/A	No Cracks

[a]For test procedure refer to NEMA WC57, UL 1581, CSA C22.2 No. 0.3

[b]For test procedure refer to NEMA WC57 or CSA C22.2 No. 0.3.

[c]For test procedure refer to UL 1581

Jacket

STANDARD	IEEE 1580	UL 1309 CSA C22.2 No. 245
Jacket Type	TPO	TPE
Temperature Rating °C	90	90
Physical requirements: unaged		
Tensile strength, N/mm2 (psi), min	9.6 (1400)	10.3 (1500)
Elongation at rupture, %, min	250	150
Aging requirements:		
After air oven test temperature (°C)	100 ± 1	121 ± 1
Duration (hours)	168	168
Tensile strength, % of unaged, min	75	75
Elongation at rupture, % of unaged, min	60	75
Oil Exposure Resistance:		
After oil immersion oven test temperature (°C)	70 ± 1	70 ± 1
Duration (hours)	4	4
Tensile strength, % of unaged, min	60	80
Elongation at rupture, % of unaged, min	60	60
Heat Distortion, @ °C	90 ± 1	121 ± 1
% of unaged value, max	25	30
Heat Shock, @ 121 ± 1°C	N/A	No Cracks
Mechanical Water Absorption, mg/in² (mg/cm²)	N/A	25 (3.9)
Weatherometer[a]	Pass	N/A
Acid Gas Equivalent, % max[b]	2	N/A
Halogen Content, % max[c]	0.2	N/A
Smoke Index, max[b]	25	N/A
Toxicity Index, max[b]	5	N/A
Tear, N/mm, min[d]	6.1	N/A

[a]For test procedure refer to UL 1581.

[b]For test procedure refer to MIL-DTL-24643B.

[c]For test procedure refer to NEMA WC57.

[d]For test procedure refer to ASTM D470.

International Marine Specifications

STANDARDS REFERRED TO WITHIN THIS CATALOG.

STANDARDS	TITLE OF TEST
ASTM B3-01	Construction - bare copper
ASTM B33-00	Construction - tinned copper
ASTM B-172	Rope-Lay-Stranded Copper Conductors having bunch-stranded members, for Electrical Conductors
ASTM B-174	Bunch-Stranded Copper Conductors for Electrical Conductors
CSA C22.2 No. 245	Marine Shipboard Cable
UL 1309	Marine Shipboard Cable
IEEE 45	Electrical installations on shipboard
IEEE 1580	Marine cable for use on shipboard and fixed or floating platforms
IEEE 1202	Flame testing of cables for use in cable tray in industrial and commercial occupances
IEC 60092-350	General construction and test requirements
IEC 60092-351	Insulating materials for marine, mobile and fixed offshore units–power, telecommunication and control cables
IEC 60092-353	Single and multicore cables with extruded solid insulation for rated voltages 1kV and 3kV.
IEC 60092-359	Jacketing materials for power, control and Instrumentation cables
IEC 60092-375	General instrumentation, control and communication cables
IEC 60092-376	Marine multicore cables for control circuits
IEC 60228	Conductors for insulated cables
IEC 60331	Fire resisting characteristics of electric cables
IEC 60331-11	Fire resisting characteristics of electric cables
IEC 60331-21	Fire resisting characteristics of electric cables

Fire Performance Testing

(IEEE 1202) (UL 1685)

IEEE 1202 / UL 1685 – FLAME TESTING OF CABLES

This test is conducted by placing cables together on a vertical ladder tray in a special enclosure and exposing them to the flames of a ribbon burner for 20 minutes.

After the removal of the flame, the cables are allowed to self-extinguish and wiped clean. The charring should not exceed:

Option A:

8ft (2.44mtrs)

Option B:

4ft (1.5mtrs)

IEEE 1202 / UL 1685 – SMOKE RELEASE

The smoke release test shall meet the requirements for smoke release test per UL Standard 1685. The cable shall comply with either Option A or Option B requirements:

Option A:

-The total smoke release shall be 95m^2 or less

-The peak smoke release rate shall be 0.25m^2/s or less

Option B:

-The total smoke release shall be 150m^2 or less

-The peak smoke release rate shall be 0.40m^2/s or less

Glossary of Terms

A

Abrasion Resistance: Ability of material or cable to resist surface wear.

ABS: Abbreviation for American Bureau of Shipping.

Alternating Current: An electric current that continually reverses its direction giving a definite plus and minus wave form at fixed intervals.

Armor: Mechanical protection usually accomplished by a metallic layer of tape, braid or galvanized steel wires.

Armored Cable: A cable provided with a wrapping of metal, usually steel wires, flat tapes, or interlocked tapes, primarily for the purpose of mechanical protection.

ASTM: Abbreviation for American Society for Testing and Materials.

Attenuation: The power drop or signal loss in a circuit, expressed in decibels (DB). Generally attenuation increases (signal level decreases) with both frequency and cable length.

AWG: Abbreviation for American Wire Gauge. A standard measurement of the size of a conductor.

B

B&S Gauge: Brown and Sharp wire gauge used for copper conductor (same as American Wire Gauge).

Binder: A helically applied tape used for holding assembled cable components in place.

Braid: A metallic group of wires interwoven to form a covering.

BV: Abbreviation for Bureau Veritas.

C

Cable Filler: The material used in multiple conductor cables to occupy the spaces formed by the assembly of components, thus forming a core of the desired shape.

Capacitance (capacity): That property of a system of conductors and dielectrics which permits the storage of electricity when potential difference exists between the conductors.

Charging current: The current produced when a d-c voltage is first applied to conductors of an unterminated cable. It is caused by the capacitive reactance of the cable and decreases exponentially with time.

Chlorinated Polyethylene: A synthetic rubber jacketing compound.(CPE)

Chlorosulfonated Polyethylene (CSP): A synthetic rubber jacketing compound manufactured by Du Pont under trade name of Hypalon.

Circular Mil: A unit of area of a circle whose diameter is 1 mil (0.001 inch). Used chiefly in specifying cross sectional areas of round conductors.

Conductor: A wire or combination of wires not insulated from one another, suitable for carrying an electric current.

Conductor Core: The centre strand or member about which one of more layers of wires or members are laid helically to form a concentric-lay or rope-lay conductor.

Corona: A luminous discharge due to ionization of the gas surrounding a conductor around which exists a voltage gradient exceeding a certain critical value

Cross-Linking: The establishment of chemical bonds between polymer molecule chains. It may be accomplished by heat, vulcanization, irradiation or the addition of a suitable chemical agent.

Cross-Linked: Setting up the chemical links between the molecule chains. A form of polyethylene material whose molecules are more closely linked to produce a greater balance of physical and electrical properties (XLPE-compound)

Cross Sectional Area of a Conductor: The sum of cross sectional areas of all the individual wires composing the conductor.

Crosstalk: Interference caused by audio frequencies. Undesired electrical currents in conductors caused by electromagnetic or electrostatic coupling from other conductors or from external sources. Also, leakage of optical power from one optical conductor to another.

CSA: Abbreviation for Canadian Standards Association.

Current rating: The maximum continuous electrical flow of current recommended by a given wire in a given situation, expressed in amperes.

CV (Continuous Vulcanization): Simultaneous extrusion and vulcanization of wire coating materials.

D

D.C: Abbreviation for direct current (d-c), Electricity that flows in one direction only.

Density: The weight per unit volume of a substance.

Derating Factor: A factor used to reduce a current carrying capacity of a wire when used in other environments from that for which the value was established.

Dielectric Constant: That property (K) of an insulating material which is the ratio of the parallel capacitance (C) of a given configuration of electrode with the material as the dielectric, to the capacitance of the same electrode configuration with a vacuum as the dielectric.

DNV: Abbreviation for Det Norske Veritas

Drain Wire: An un-insulated wire, usually placed directly beneath and in electrical contact with a grounded shield, which is used for making ground connections.

E

Elastomer: A material that at room temperature returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress.

Elongation: The fractional increase in length of a material stressed in tension

Embossing: A means of marker identification by means of thermal indentation leaving raised lettering on the jacket material of cable.

EMC: Electromagnetic Compatibility

EPR: Ethylene-propylene copolymer rubber. The copolymer is chemically cross-linked.

E-Rubber: Registered Proprietary Elastomeric Rubber compound

F

Fault Current: The maximum electrical current that will flow in a short-circuited system prior to the actuation of any current limiting device. It is far excess of normal current flow and is limited only by a system's generating capacity and the cables' impedance.

Filler: Any material used in multi-conductor cables to occupy interstices between insulated conductors or form a core into a desired shape (usually circular). Also, any substance, often inert, added to a plastic or elastomer to improve its properties.

Flame Resistance: The ability of burning material to extinguish its own flame, once its flame-initiating heat source is removed.

Flame Retardance: Ability of a material to prevent the spread of combustion by a low rate of travel so flame will not be conveyed

G

Gauge: A term used to denote the physical size of the wire.

GL: Abbreviation for Germanischer Lloyd

Ground: A conducting connection, intentional or accidental, between an electric circuit or equipment and the earth or some conducting body serving in place of the earth.

Grounding Conductor: A conductor used to connect equipment or grounded circuit of a wiring system to a grounding electrode or electrodes; usually colored green.

H

Halogen: Group of very toxic, strong oxidizing and very chemically reactive elements

Hard-drawn Wire: Solid wire that has been cold drawn to it's final size. Often stiff and inflexible.

Heat Shock: A test to determine stability of a material by sudden exposure to a high temperature for a short period of time.

Hypalon: Du Pont's trade name for their chlorosulfonated polyethylene, an ozone resistant synthetic rubber (90 degrees celsius)

Hygroscopic: Attracting or absorbing moisture.

Hz: Abbreviation for Hertz.

I

IEC: European Standardization agency; International Electrotechnical Commission.

IEEE: Abbreviation for Institute of Electrical and Electronics Engineers.

Impedance: Resistance to flow of an alternating current at a particular frequency, expressed in ohms. It is a combination of resistance R and reactance X, measured in ohms.

Inductance: An influence exerted by a charged body or by a magnetic field on adjacent bodies without apparent communication.

Glossary of Terms

J

Jacket: An overall covering of a cable, called also sheath-which protects against the environment and stress.

K

KV: Abbreviation for kilovolt=1000volts

KVA: Abbreviation for kilovolt ampere=1000volts x amperes.

KW: Abbreviation for kilowatt=1000watt.

L

Laminated Tape: A tape consisting of two or more layers of materials bonded together.

Loop resistance: The total resistance of two conductors in closed circuit, measured round trip from one end.

LR: Abbreviation for Lloyds Register of Shipping.

LSFLEX: Registered Proprietary cross-linked LSZH compounds..

LSZH: Abbreviation for Low Smoke Zero Halogen.

M

MCM: Cross section of greater AWG-sizes, 1 MCM=1000 circular mils=0.5067 mm^2

Mutual Capacitance: Capacitance between two conductors when all other conductors are connected together to shield and ground.

Mylar: Du Pont trademark for polyester material.

N

Neoprene: A synthetic rubber of thermosetting material with good resistance to oil, chemical, and flame, known as polychloroprene-mostly used as jacketing

Nylon: A group of polyamide polymers, used for wire and cable jacketings with good chemical and abrasion resistance.

Nitrile Rubber: A rubbery copolymer of butadiene and acrylonitrile.

O

Ohm: The electrical unit of resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.

P

Pair: Two insulated wires twisted together in a certain lay-length to built a single circuit of transmission line.

Polychloroprene: Chemical name of neoprene. A rubber like compound for jacketing and also for insulating where cables are subject to rough usage, oils, moisture, solvents, greases and chemicals.

Polyethylene (PE): This material is basically pure hydrocarbon resins with excellent dielectric properties, ie. Low dielectric constant, low dielectric loss across the frequency spectrum, mechanically rugged and resists abrasion and cold flow. The insulating material derived from polymerization of ethylene gas.

Polyolefin: A group of thermoplastics based upon the unsaturated hydrocarbons, known as olefins. When combined with butylene or styrene polymers, the form compounds such as polyethylene and polypropylene.

Polypropylene (PP): A thermoplastic similar to polyethylene but stiffer and having higher softening point(temperature) excellent electrical properties.

Polyurethane (PUR): Class of polymers known for good abrasion and solvent resistance. A copolymer of urethane is similar in properties to neoprene, usually used a a coldcuring moulding compound.

Polyvinyl Chloride (PVC): This is a group of thermoplastic compounds composed of polymers of polyvinyl chloride or its polymer, vinylacetate, in combination with certain stabilizers, fillers, plasticizers, pigments etc. widely used for wire and cable insulations and several jackets.

Polyester: A resin generally used as a thin film of tape form.

Potting: Applying a hydrostatic seal and mechanical reinforcement by mans of a thermosetting liquid, which cures either at room temperature or at a slightly elevated temperature.

Q

Quad: A structural unit employed in cables, consisting of four separately insulated conductors twisted together.

R

Resistance: Property of an electric circuit which determines for a given current the rate at which electric energy is converted into heat and has a value, is measured by ohms.

S

Separator: A layer of insulating material which is placed between a conductor and its dielectric, between a cable jacket and the component it covers, or between various components of a multiple-conductor cable.

Spark test: A test designed to locate pinholes in an insulated wire by application of an electrical potential across the material for a very short period of time while the wire is drawn through an electrode field.

Semi-conductor: A solid material characterized by comparatively high resistivities.

Sheath: The material, usually an extruded plastic or elastomer, applied outermost to a wire or cable. Very often referred to as a jacket, or a impervious metal covering usually lead.

Shield: Any barrier to the passage of interference-causing electromagnetic fields, formed by a conductive layer surrounding a cable core. It is usually fabricated from a metallic braid, foil or wire serving.

Shielding: The practice of confining the electrical field around a conductor to the primary insulation of the cable by putting a conducting layer over and/or under the insulation. (External shielding is a conducting layer on the outside of the insulation. Strand or internal shielding is a conducting layer over the conductor itself)

Specific Gravity: The density (mass per unit volume) of any material.

Stranded Conductor: A conductor composed of a group of wires, usually twisted, or of any combination of such groups of wires.

T

Teflon: Du Pont Company trade name for flurocarbon resins. FEP. PFA and TFE are typical materials.

Tefzel: Du Pont trade name for a flurocarbon material typically used a wire wrap insulation.

Temperature Rating: The maximum temperature at which an insulating material may be used in continuous operation without loss of its basic properties.

Twisted Pair: A cable composed of two small insulated conductors twisted together without common covering.

Tensile strength: The longitudinal stress required a break a specimen of prescribed dimension divided by the original cross sectional area at the point of rupture.

Thermoset: To cure through chemical reaction by heat to a point of not being re-softened by subsequent heating. A resin which cures by chemical reaction.

Tinned Wire: Copper wire that has been coated during manufacture with a layer of tin or solder to prevent corrosion or facilitate soldering.

Triad: Any grouping of three conductors or three assemblages of conductors, generally twisted together and found within a cable.

U

UL: Abbreviation for Underwriters Laboratories, Inc.

USCG: Abbreviation for United States Coast Guard

V

Voltage Drop: The amount of voltage loss from original input to point of electrical device.

Voltage rating: The highest voltage that may be continuously applied to a wire in conformance with standards.

Vulcanization: A irreversible process during which a rubber compound through a change in its chemical structure(for example, cross-linking, become less plastic and more resistant to swelling by organic liquids and elastic properties are conferred, improved, or extended, or extended over a greater range of temperature.

W

Wall Thickness: The thickness of the applied insulation or jacket/sheath.

X

XLPE: Cross linked polyethylene.

Tricab Flexible 125°C type P Offshore Cables

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