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Evolucable Industria de Cabos Especiais
Av. Minasa, 25 - Galpão B1 - Condomínio Industrial
Business Park -Sumaré/SP - Cep 13.180-400
Sumaré/SP (Fábrica): +55 19 3090-3350
São Paulo/SP: +55 11 3090-6855
Rio de Janeiro/RJ: +55 21 2042-0087

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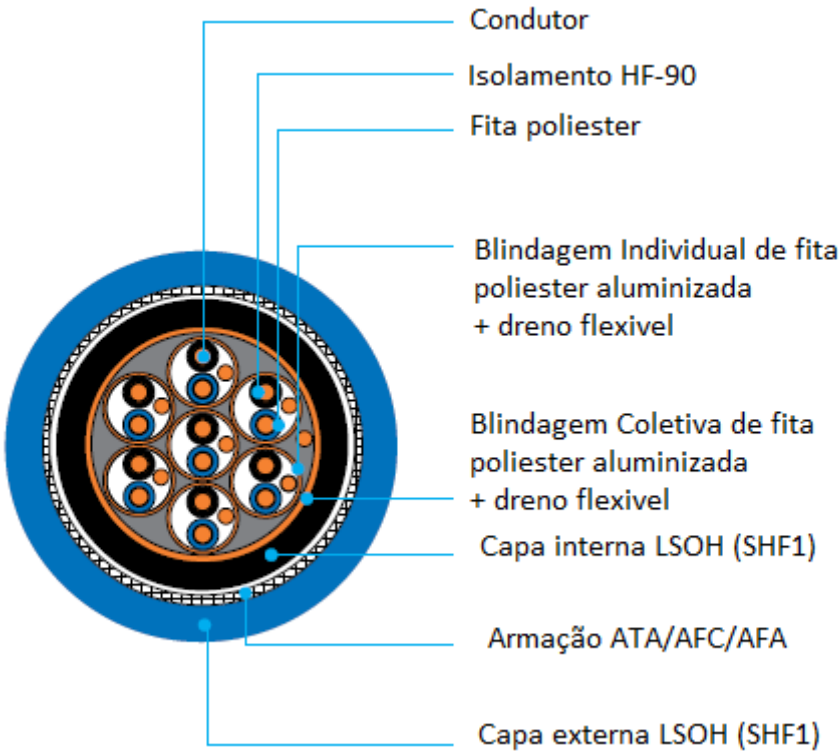
INNOVCABLE INNOVSHORE ARMED/PLUGGED ATA/AFC/AFA BFIC 0.6/1kV



1) Conductor formed by electrolytic bare copper wires or tinned, soft temper, class 5 stranding. IEC 60228. *1,7
2) Insulation in special halogen-free compound LSOH (HF-90). *4
3) Communication conductor with section 0,5mm², in LSOH (HF-90) compound, Identification through insulation in blue colour (only for cables with 2 or more pairs, suits or blocks) - (Optional). *4
4) Individual shielding in aluminum-polyester tape, with flexible drain conductor, formed by tinned electrolytic copper wires, soft temper.
5) Collective shield in aluminum-polyester tape, with flexible drainage conductor, formed by electrolitic tinned copper wires, soft temper.
6) Internal cover in halogen-free polyolefinic compound (SHF1). *5
7) Frame: braided galvanised steel wire (ATA) with coverage >90%; copper tape (AFC) or galvanised

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steel tape (AFA) applied with overlap. *8
8) Cover in LSOH halogen-free polyolefin compound (SHF1), in grey colour. *2,5

Identification

- External Recording:
INNOVCABLE INNOVSHORE INSTRUMENTATION ATA/AFC/AFA BFIC __mm² 0.6/1kV 90°C
OF: XXXX/YEAR.

Of the conductors - through the colours of the insulation, being:
black and white (cables in pairs)
black, white and red (cables in pairs).
black, white, red and green (cables in blocks).*3

Identification through sequential numbering.

Applicable Specifications

Strings: IEC 60228

Electrical installations in ships - Power cables for 1 kV and 3 kV voltages - IEC 60092-353

Selection and installation of electrical cables: IEC 60092-352.

Meets the requirements for firing test - IEC 60332-1 and IEC 60332-3-22 , category "A".

Mobile and fixed offshore units - Electrical installations - Part 4: Cables - IEC 61892-4

Low Smoke emission: IEC 61034- 1/2

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Certifications can be Batch Approval or Type Approval (depending on certification and certifier) - Please contact us for further details.

Shipborne energy cables - General construction and testing requirements: IEC 60092-350

Insulation materials and outer jacket for use on board offshore units, power, control, instrumentation and telecommunication cables: IEC 60092-360

Common test methods for insulation and outer jacket of materials of electric cables: IEC 60811

Halogen Free: IEC-60754-1/2

Application: IEC 60092 series.

Applications

Built and designed for the demanding environment of offshore drilling and the marine industry. Armoured cable provides protection where required.
They are used in fixed installations, for conducting analog (4 - 20mA) and digital signals, point-to-point instrumentation, Hart ® protocol, connections of various sensors and meters, power supply to conventional and electronic relays, in industrial environments in general. INNOVSHORE INSTRUMENTATION ARMED/PLUGGED ATA/AFC/AFA BFIC 0,6/1kV Instrumentation Cables are recommended in cases where excellent levels of protection against external electromagnetic interference are required, and maximum immunity against the emergence of "crosstalk" (crosstalk) between the various pairs/pairs, providing electrical discharge of the same. Excellent flexibility, resistance to chemical products, humidity and UV rays. Cable armed with galvanized steel wires. Non-halogen and anti-flame, not producing toxic and corrosive gases.

Maximum Conductor Temperature

CONTINUOUS DUTY: 90°C - IEC 60092-360
SHORT CIRCUIT: 250°C

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Notes

* We manufacture with other configurations:
1) Tinned copper conductor can be manufactured in class 2.
2) External layer colours: Nomenclature to be added at the end of the code: VM - Red // VD - Green // BR - White // PT - Black // AZ - Blue // CZ - Gray.
We can manufacture other colours on request.
3) Different sections and amount of veins, maximum up to:
- 71 x 2 x 0,50mm² / 71 x 2 x 2,50mm²
- 71 x 3 x 0,50mm² / 71 x 3 x 2,50mm².
- 36 x 4 x 0,50mm² / 36 x 4 x 2,50mm².
4) Vein insulation material:
EPR - 90 ºC
HEPR - 90 ºC
XLPE - 90 ºC
5) Material of the intermediate layer and the cover:
ST2
SE
SHF2
6) At Innovcable's discretion, separators and/or fillers of compatible material may be used.
7) Nomenclature to be added at the end of the code according to the conductor type:
Bare copper conductor - CN
Tinned copper conductor - SN
8) Types of armatures:
ATA - Galvanized steel wire braid frame
AFC - Copper tape frame
AFA - Galvanized steel tape frame

**Innovcable reserves the right to change this catalogue without prior notice.

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Dimensional mm²	Diametro (in)	Diametro mm	Diametro Interno(in)	Diametro Interno mm	Diametro Externo (in)	Diametro Externo mm	Peso lbs/kft	Peso kg/km
1 x 2 x 0.75	0.109	2.77	0.312	7.92	0.462	11.73	148	220
2 x 2 x 0.75	0.109	2.77	0.473	12.01	0.635	16.13	288	429
4 x 2 x 0.75	0.109	2.77	0.552	14.02	0.735	18.67	397	591
7 x 2 x 0.75	0.109	2.77	0.667	16.94	0.861	21.87	541	805
8 x 2 x 0.75	0.109	2.77	0.724	18.39	0.922	23.42	604	899
12 x 2 x 0.75	0.109	2.77	0.888	22.56	1.103	28.02	849	1263
16 x 2 x 0.75	0.109	2.77	0.986	25.04	1.184	30.07	927	1379
19 x 2 x 0.75	0.109	2.77	1.053	26.75	1.283	32.59	1143	1701
24 x 2 x 0.75	0.109	2.77	1.294	32.87	1.537	39.04	1327	1974
32 x 2 x 0.75	0.109	2.77	1.385	35.18	1.610	40.89	1620	2410
1 x 2 x 1.0	0.114	2.90	0.322	8.18	0.472	11.99	160	238
2 x 2 x 1.0	0.114	2.90	0.487	12.37	0.654	16.61	325	484
4 x 2 x 1.0	0.114	2.90	0.570	14.48	0.743	18.87	406	604
7 x 2 x 1.0	0.114	2.90	0.687	17.45	0.866	22.00	547	814
8 x 2 x 1.0	0.114	2.90	0.747	18.97	0.932	23.67	611	909
12 x 2 x 1.0	0.114	2.90	0.920	23.37	1.116	28.35	861	1281
16 x 2 x 1.0	0.114	2.90	1.023	25.98	1.225	31.12	943	1403
19 x 2 x 1.0	0.114	2.90	1.104	28.04	1.323	33.60	1198	1782
24 x 2 x 1.0	0.114	2.90	1.313	33.35	1.534	38.96	1407	2093
32 x 2 x 1.0	0.114	2.90	1.462	37.13	1.761	44.73	1865	2775

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Dimensional mm²	Diametro (in)	Diametro mm	Diametro Interno(in)	Diametro Interno mm	Diametro Externo (in)	Diametro Externo mm	Peso lbs/kft	Peso kg/km
1 x 2 x 1.5	0.135	3.43	0.362	9.19	0.515	13.08	178	265
2 x 2 x 1.5	0.135	3.43	0.557	14.15	0.729	18.52	368	548
4 x 2 x 1.5	0.135	3.43	0.654	16.61	0.833	21.16	483	719
7 x 2 x 1.5	0.135	3.43	0.837	21.26	1.026	26.06	686	1021
8 x 2 x 1.5	0.135	3.43	0.864	21.93	1.059	26.90	787	1171
12 x 2 x 1.5	0.135	3.43	1.063	27.00	1.271	32.28	1035	1540
16 x 2 x 1.5	0.135	3.43	1.191	30.25	1.408	35.76	1280	1905
19 x 2 x 1.5	0.135	3.43	1.306	33.17	1.527	38.79	1446	2151
24 x 2 x 1.5	0.135	3.43	1.550	39.37	1.804	45.82	1884	2803
32 x 2 x 1.5	0.135	3.43	1.678	42.62	1.940	49.28	2341	3483
1 x 2 x 2.5	0.153	3.89	0.392	9.96	0.557	14.15	210	312
2 x 2 x 2.5	0.153	3.89	0.619	15.72	0.806	20.47	529	787
4 x 2 x 2.5	0.153	3.89	0.716	18.19	0.901	22.89	591	879
7 x 2 x 2.5	0.153	3.89	0.939	23.85	1.135	28.83	987	1469
8 x 2 x 2.5	0.153	3.89	1.003	25.48	1.207	30.66	1135	1689
12 x 2 x 2.5	0.153	3.89	1.169	29.69	1.386	35.20	1301	1936
16 x 2 x 2.5	0.153	3.89	1.353	34.37	1.582	40.18	1847	2748
19 x 2 x 2.5	0.153	3.89	1.504	38.20	1.753	44.53	2199	3272
24 x 2 x 2.5	0.153	3.89	1.714	43.54	2.007	50.98	2786	4145
32 x 2 x 2.5	0.153	3.89	1.902	48.31	2.180	55.37	3203	4766
1 x 3 x 0.75	0.109	2.77	0.327	8.31	0.479	12.17	151	225
2 x 3 x 0.75	0.109	2.77	0.568	14.43	0.736	18.69	336	500
4 x 3 x 0.75	0.109	2.77	0.668	16.97	0.842	21.39	464	690
7 x 3 x 0.75	0.109	2.77	0.809	20.55	0.991	25.17	637	948
8 x 3 x 0.75	0.109	2.77	0.885	22.48	1.074	27.28	773	1150
12 x 3 x 0.75	0.109	2.77	1.086	27.58	1.286	32.66	1018	1515
16 x 3 x 0.75	0.109	2.77	1.235	31.37	1.454	36.93	1302	1937
19 x 3 x 0.75	0.109	2.77	1.306	33.17	1.529	38.84	1423	2117
24 x 3 x 0.75	0.109	2.77	1.606	40.79	1.833	46.56	1723	2564
32 x 3 x 0.75	0.109	2.77	1.732	43.99	1.983	50.37	2353	3501
1 x 3 x 1.0	0.114	3.51	0.338	8.59	0.492	12.50	175	260
2 x 3 x 1.0	0.114	3.51	0.595	15.11	0.765	19.43	387	576
4 x 3 x 1.0	0.114	3.51	0.706	17.93	0.883	22.43	509	757
7 x 3 x 1.0	0.114	3.51	0.856	21.74	1.041	26.44	700	1042
8 x 3 x 1.0	0.114	3.51	0.933	23.70	1.124	28.55	802	1193
12 x 3 x 1.0	0.114	3.51	1.153	29.29	1.356	34.44	1063	1582
16 x 3 x 1.0	0.114	3.51	1.293	32.84	1.505	38.23	1347	2004
19 x 3 x 1.0	0.114	3.51	1.369	34.77	1.585	40.26	1502	2235
24 x 3 x 1.0	0.114	3.51	1.669	42.39	1.917	48.69	1985	2953
32 x 3 x 1.0	0.114	3.51	1.822	46.28	2.081	52.86	2537	3775
1 x 3 x 1.5	0.135	3.43	0.383	9.73	0.538	13.67	200	298
2 x 3 x 1.5	0.135	3.43	0.688	17.48	0.865	21.97	467	695
4 x 3 x 1.5	0.135	3.43	0.813	20.65	0.998	25.35	627	933
7 x 3 x 1.5	0.135	3.43	0.989	25.12	1.184	30.07	879	1308
8 x 3 x 1.5	0.135	3.43	1.074	27.28	1.278	32.46	985	1466
12 x 3 x 1.5	0.135	3.43	1.336	33.93	1.552	39.42	1382	2056
16 x 3 x 1.5	0.135	3.43	1.517	38.53	1.746	44.35	1758	2616
19 x 3 x 1.5	0.135	3.43	1.607	40.82	1.855	47.12	2033	3025
24 x 3 x 1.5	0.135	3.43	1.954	49.63	2.218	56.34	2530	3764
32 x 3 x 1.5	0.135	3.43	2.135	54.23	2.413	61.29	3217	4787
1 x 3 x 2.5	0.153	3.89	0.380	9.65	0.548	13.92	221	329
2 x 3 x 2.5	0.153	3.89	0.727	18.47	0.908	23.06	572	851
4 x 3 x 2.5	0.153	3.89	0.895	22.73	1.086	27.58	788	1172
7 x 3 x 2.5	0.153	3.89	1.108	28.14	1.311	33.30	1193	1775
8 x 3 x 2.5	0.153	3.89	1.209	30.71	1.423	36.14	1368	2035
12 x 3 x 2.5	0.153	3.89	1.494	37.95	1.723	43.76	1798	2675
16 x 3 x 2.5	0.153	3.89	1.718	43.64	1.975	50.17	2389	3555
19 x 3 x 2.5	0.153	3.89	1.810	45.97	2.073	52.65	2666	3967
24 x 3 x 2.5	0.153	3.89	2.170	55.12	2.450	62.23	3333	4959
32 x 3 x 2.5	0.153	3.89	2.396	60.86	2.693	68.40	4100	6100