



INNOVCABLE CONTROL CABLE SB ATOX HEPR/SHF1 - NBR 16442



- 1) Stranded conductor formed by electrolytic bare copper wires, soft temper, class 5 NBR NM 280 stranding.
- 2) Composite insulation (HEPR - ethylene-propylene rubber) 90°C.
- 3) Polyester tape separator.
- 4) Halogen-free, flame-retardant thermoplastic compound (SHF1) cover in black.

- Insulation voltage:

Up to 1,0mm² - 500V

From 1,50mm² to 10,00mm² - 1000V

- Routine tests:

Electrical resistance of the conductor at 20°C

Electric tension in Alternate Current

Insulation resistance.

Identification

Black or white veins numbered sequentially, can be manufactured on customer request with a green track (protective conductor). It can also be built with coloured veins.

Applicable Specifications



ABNT/MERCOSUR: NM-280 and NM-IEC

NBR NM IEC 60332-3-23 (Category B)

ABNT: NBR 16442 - Low smoke and non-halogenated control cables for voltages up to 1 kV -
Performance requirements

ABNT: NBR 6251

Applications

They are used in fixed installations in control, command and signaling circuits of electrical equipment, structured cabling, machine connections, push buttons, power supply, microprocessor systems, in the automation of substations, power plants, industrial and chemical areas, among others. Due to its properties of low emission of smoke and toxic gases and flame retardancy, they are recommended for installation in power supply and distribution circuits in places where there is a high concentration of people, as prescribed by NBR 5410 and NBR 13570 standards. They do not emit corrosive gases

They are recommended for installations in places with critical systems and equipment where greater reliability and less risk are required.

They are applied in fixed systems of conduits (embedded or exposed), ducts, duct banks, trays, electrical ducts, electrical panels, among other applications. This cable has good flexibility, resistance to UV, weather, humidity and certain chemicals.

Maximum Conductor Temperature

In steady state: +90°C

Maximum short circuit temperature: +250°C (5s)

Notes



The INNOVCABLE SB ATOX HEPR/SHF1 - NBR 16442 control cables can be manufactured in other sections, dimensions or materials, at the customer's request. Innovcable reserves the right to modify this catalogue without prior notice.

OTHER CONSTRUCTION OPTIONS:

We can manufacture on request in other configurations.

1- Tinned Copper Conductor.

Class 2 stranding.

2- Different sections and number of veins, maximum up to:

- 71 x 0,50mm² / 71 x 2,50mm²

- 52 x 4,00mm² / 52 x 4,00mm².

- 42 x 6,00mm²

- 20 x 10,0mm²

3- Vein insulation material / other temperatures:

PVC/E -105°C

PVC/A - 70 °C

PE - 80 °C

4- Material of the intermediate layer and the cover:

PE

PVC/E

PVC/ST2

Special PVC resistant to oils, grease and other chemical products.

5- Cover perfectly cylindrical for applications with cable glands in classified areas (Ex)



DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 0,50 mm ²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802001	2		6,77	48,73
802002	3		6,90	56,66
802003	4		7,46	70,89
802004	5		8,09	85,74
802005	6		8,74	98,37
802006	7		8,74	103,38
802007	8		9,42	116,11
802008	9		11,17	146,86
802009	10		11,67	163,62
802010	11		11,67	168,64
802011	12		11,88	179,24
802012	13		12,45	196,66
802013	14		12,45	201,67
802014	15		13,08	223,92
802015	16		13,08	228,94
802016	17		13,74	246,90
802017	18		13,74	251,93
802018	19		13,74	256,94
802019	20		14,62	281,94
802020	21		15,28	295,81
802021	22		15,28	305,24
802022	23		16,13	324,85
802023	24		15,95	328,69
802024	25		16,46	345,92

DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 0,75 mm ²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802101	2		6,98	53,68
802102	3		7,35	67,94
802103	4		7,97	85,61
802104	5		8,65	103,62
802105	6		9,37	119,57
802106	7		9,37	127,60
802107	8		10,11	143,67
802108	9		11,67	167,67
802109	10		12,12	187,20
802110	11		12,54	206,95
802111	12		12,75	220,98
802112	13		13,37	241,77
802113	14		13,37	249,79
802114	15		14,07	275,44
802115	16		14,07	283,48
802116	17		14,79	304,86
802117	18		14,79	312,90
802118	19		14,79	320,93
802119	20		15,74	349,90
802120	21		16,45	367,21
802121	22		16,45	379,66
802122	23		17,39	402,84
802123	24		17,20	409,58
802124	25		17,75	430,16



DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 1,00 mm ²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802201	2		7,33	61,32
802202	3		7,73	78,65
802203	4		8,40	99,62
802204	5		9,13	120,68
802205	6		9,90	139,84
802206	7		9,90	150,80
802207	8		10,70	170,08
802208	9		12,27	197,56
802209	10		12,86	220,23
802210	11		13,28	243,63
802211	12		13,49	260,95
802212	13		14,16	284,97
802213	14		14,16	295,93
802214	15		14,90	324,85
802215	16		14,90	335,83
802216	17		15,68	360,48
802217	18		15,68	371,46
802218	19		15,68	382,43
802219	20		16,68	415,14
802220	21		17,45	435,76
802221	22		17,45	451,14
802222	23		18,46	477,74
802223	24		18,25	487,32
802224	25		18,84	511,12

DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 1,50 mm ²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802301	2		8,73	85,04
802302	3		9,24	111,34
802303	4		10,09	142,19
802304	5		11,02	172,13
802305	6		12,00	200,75
802306	7		12,00	220,16
802307	8		13,02	248,94
802308	9		15,01	286,94
802309	10		15,77	318,85
802310	11		16,19	353,45
802311	12		16,40	380,59
802312	13		17,25	414,20
802313	14		17,25	433,61
802314	15		18,19	472,24
802315	16		18,19	491,67
802316	17		19,18	526,09
802317	18		19,18	545,52
802318	19		19,18	564,92
802319	20		20,40	609,21
802320	21		21,38	639,70
802321	22		21,38	663,52
802322	23		22,66	700,41
802323	24		22,39	718,06
802324	25		23,15	751,40



DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 2,50 mm²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802401	2		9,62	110,82
802402	3		10,20	148,16
802403	4		11,17	190,61
802404	5		12,23	231,54
802405	6		13,34	271,51
802406	7		13,34	301,61
802407	8		14,49	341,77
802408	9		16,76	391,81
802409	10		17,61	434,91
802410	11		18,03	481,98
802411	12		18,24	520,70
802412	13		19,21	565,75
802413	14		19,21	595,85
802414	15		20,29	646,00
802415	16		20,29	676,12
802416	17		21,40	722,09
802417	18		21,40	752,21
802418	19		21,40	782,31
802419	20		22,76	839,31
802420	21		23,88	881,41
802421	22		23,88	915,92
802422	23		25,33	964,70
802423	24		25,03	992,80
802424	25		25,89	1037,53

DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 4,00 mm²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802501	2		11,78	164,95
802502	3		12,49	220,96
802503	4		14,31	305,76
802504	5		14,98	343,69
802505	6		16,36	403,58
802506	7		16,36	451,01
802507	8		17,78	511,17
802508	9		20,57	583,79
802509	10		21,63	646,20
802510	11		21,63	693,66
802511	12		21,84	751,42
802512	13		23,03	815,23
802513	14		23,03	862,66
802514	15		24,36	931,74
802515	16		24,36	979,19
802516	17		25,73	1044,13
802517	18		25,73	1091,59
802518	19		25,73	1139,02
802519	20		27,36	1217,24
802520	21		28,73	1278,44
802521	22		28,73	1330,29
802522	23		30,52	1398,69
802523	24		30,15	1443,65
802524	25		31,21	1507,07



DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 6,00 mm²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802601	2		13,05	218,09
802602	3		13,86	297,49
802603	4		15,21	385,40
802604	5		16,70	457,90
802605	6		18,27	551,73
802606	7		18,27	621,98
802607	8		19,88	706,11
802608	9		23,07	803,84
802609	10		24,27	889,93
802610	11		24,27	960,20
802611	12		24,48	1042,05
802612	13		25,83	1129,72
802613	14		25,83	1199,97
802614	15		27,35	1293,04
802615	16		27,35	1363,31
802616	17		28,91	1452,28
802617	18		28,91	1522,55
802618	19		28,91	1592,80
802619	20		30,74	1696,71
802620	21		32,30	1782,04
802621	22		32,30	1856,70
802622	23		34,34	1949,62
802623	24		33,92	2017,05
802624	25		35,12	2104,29

DADOS DIMENSIONAIS				
SEÇÃO NOMINAL - 10,00 mm²				
Código do Produto	Número de Condutores		Diâmetro Externo	Peso Nominal
			mm	(kg/km)
802700	2		15,71	343,57
802701	3		16,68	471,03
802702	4		18,30	611,20
802703	5		20,08	741,05
802704	6		21,95	875,10
802705	7		21,95	991,09
802706	8		23,88	1125,60
802707	9		27,69	1278,17
802708	10		29,12	1413,44
802709	11		29,12	1529,45
802710	12		29,12	1645,44