

# FRNC power cable (N)HXH FE180/E30



**Application:** For installation in dry and wet rooms, also for direct bedding in concrete, but not for direct burial in the ground and not for use in water. The cable has improved properties in case of fire and may be used in public buildings with high safety requirements. The cable is halogen-free, has a low smoke density and is fire-resistant according to VDE 0472 part 814/IEC 60331-11 for 180 minutes. Furthermore the cable passed the test of 30 min. circuit integrity according to DIN 4102 part 12 (E 30) for all so-called standard installation systems (ladder, tray and ceiling) and is suitable for installation in fire alarm systems, safety lightning and other emergency electrical supply systems according to VDE 0108. A special test certificate about the circuit integrity is issued by -The Civil Engineering Materials Testing Institute-. For calculation of electrical systems with circuit integrity has to be considered that electrical resistance of copper conductors at 800 °C is approximately four times higher than at 20 °C and the current carrying capacity is reduced respectively.

## Construction and technical data:

<b>Standard:</b>	VDE 0266 (with ref. to)
<b>Conductor material:</b>	copper, bare
<b>Conductor construction:</b>	class 1, from 25 sqmm class 2
<b>Insulation:</b>	FRNC-compound HI1
<b>Sheathing material:</b>	FRNC-compound HM1
<b>Colour of outer sheath:</b>	orange
<b>Flame-retardant:</b>	VDE 0482-266-2-4/IEC 60332-3-24 (Cat. C)
<b>Smoke density:</b>	DIN EN 61034/IEC 61034
<b>Halogen-free:</b>	DIN EN 50267/IEC 60754
<b>Fire-resistant:</b>	VDE 0472-814/IEC 60331-1/IEC 60331-11 (FE 180)/EN 50200
<b>Circuit integrity:</b>	E30
<b>Max. temperature at conductor, °C:</b>	90 °C
<b>Permitted outer cable temperature, fixed, °C:</b>	-5 - +70 °C



*The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.*

**(N)HXH-O E30**

<b>Nominal voltage U<sub>o</sub>:</b>	0.6 kV
<b>Nominal voltage U:</b>	1 kV
<b>Maximum permitted operating voltage in three-phase systems:</b>	1.2 kV
<b>Test voltage:</b>	4 kV
<b>Protective conductor:</b>	no
<b>Core identification:</b>	colours acc. to HD 308; more than 5 cores: numbers

part no.	part name		RI [Ohm/km]	I <sub>bl</sub> [A]	R <sub>bv</sub> [mm]	Ø [mm]	Cu	G [kg]
011238	01X4	RE	4.61	44	104	6.9	38	100
011240	01X6	RE	3.08	56	119	7.9	58	120
011229	01X10	RE	1.83	77	122	8.1	96	160
011232	01X16	RE	1.15	102	134	8.9	154	200
011235	01X25	RM	0.727	138	164	10.9	240	310
011237	01X35	RM	0.524	170	179	11.9	336	410
011239	01X50	RM	0.387	207	194	12.9	480	540
011241	01X70	RM	0.268	263	239	15.9	672	740
011242	01X95	RM	0.193	325	269	17.9	912	1020
011230	01X120	RM	0.153	380	284	18.9	1152	1380
011231	01X150	RM	0.124	437	314	20.9	1440	1560
011233	01X185	RM	0.0991	507	359	23.9	1776	1930
011234	01X240	RM	0.0754	604	404	26.9	2304	2540
011236	01X300	RM	0.0601	697	494	32.9	2880	3180
011243	02X1.5	RE	12.1	24	122	10.2	29	190
011246	02X2.5	RE	7.41	32	131	10.9	48	220
011248	02X4	RE	4.61	42	143	11.9	77	270
011249	02X6	RE	3.08	53	154	12.8	115	320
011244	02X10	RE	1.83	73	173	14.4	192	430
011245	02X16	RE	1.15	97	208	17.3	307	620
011247	02X25	RM	0.727	135	253	21.1	480	900

**(N)HXH-J E30**

<b>Nominal voltage U<sub>o</sub>:</b>	0.6 kV
<b>Nominal voltage U:</b>	1 kV
<b>Maximum permitted operating voltage in three-phase systems:</b>	1.2 kV
<b>Test voltage:</b>	4 kV
<b>Protective conductor:</b>	yes
<b>Core identification:</b>	colours acc. to VDE 0293 (HD 308); more than 5 cores: gn-ye + numbers

part no.	part name		RI [Ohm/km]	I <sub>bl</sub> [A]	R <sub>bv</sub> [mm]	Ø [mm]	Cu	G [kg]
012034	01X185	RM	0.0991		359	23.9	1776	1930
012198	01X240	RM	0.0754		404	26.9	2304	2540
011044	03X1.5	RE	12.1	24	131	10.9	43	210
011171	03X2.5	RE	7.41	32	143	11.9	72	260
011172	03X4	RE	4.61	42	155	12.9	115	320
011194	03X6	RE	3.08	53	167	13.9	173	400
011182	03X10	RE	1.83	73	191	15.9	288	550
011185	03X16	RE	1.15	97	215	17.9	461	790

part no.	part name		RI [Ohm/km]	Ibl [A]	Rbv [mm]	Ø [mm]	Cu	G [kg]
011251	03X25	RM	0.727	135	287	23.9	720	1150
011253	03X35	RM	0.524	165	311	25.9	1008	1490
011255	03X50	RM	0.387	201	347	28.9	1440	1980
011257	03X70	RM	0.268	255	383	31.9	2016	2830
011252	03X25/16	RM	0.727	135	281	23.4	874	1500
011254	03X35/16	RM	0.524	165	323	26.9	1162	1800
011256	03X50/25	RM	0.387	201	359	29.9	1680	2600
011258	03X70/35	RM	0.268	255	419	34.9	2352	3400
011186	03X95/50	RM	0.193	314	467	38.9	3216	4600
011269	03X120/70	RM	0.153	364	515	42.9	4128	5700
011270	03X150/70	RM	0.124	416	563	46.9	4992	6800
011271	03X185/95	RM	0.0991	480	635	52.9	6240	8500
011272	03X240/120	RM	0.0754	565	706	58.8	8064	11000
011188	04X1.5	RE	12.1	24	143	11.9	58	240
011045	04X2.5	RE	7.41	32	155	12.9	96	300
011217	04X4	RE	4.61	42	167	13.9	154	390
011218	04X6	RE	3.08	53	179	14.9	230	490
011219	04X10	RE	1.83	73	203	16.9	384	670
011220	04X16	RE	1.15	97	239	19.9	614	950
011221	04X25	RM	0.727	135	299	24.9	960	1430
011189	04X35	RM	0.524	165	335	27.9	1344	1890
011222	04X50	RM	0.387	201	383	31.9	1920	2510
011196	04X70	RM	0.268	255	443	36.9	2688	3650
011261	04X95	RM	0.193	314	491	40.9	3648	4750
011259	04X120	RM	0.153	364	539	44.9	4608	5910
011260	04X150	RM	0.124	416	599	49.9	5760	7240
013794	04X185	RM	0.0991	480	718	59.8	7104	9704
011190	05X1.5	RE	12.1	24	155	12.9	72	280
011046	05X2.5	RE	7.41	32	167	13.9	120	354
011192	05X4	RE	4.61	42	179	14.9	192	450
011193	05X6	RE	3.08	53	203	16.9	288	570
011173	05X10	RE	1.83	73	227	18.9	480	820
011195	05X16	RE	1.15	97	275	22.9	768	1140
011262	05X25	RM	0.727	135	319	26.6	1200	1710
012469	05X35	RM	0.524	165	366	30.5	1680	2384
015736	05X50	RM	0.387	201	418	34.8	2400	2958
014456	07X4	RE	4.61	42	170	16.7	269	415
014457	07X6	RE	3.08	53	218	18.2	403	579
015580	07X10	RE	1.83	73	247	20.6	672	957
011047	07X1.5	RE	12.1	24	167	13.9	101	330
013127	10X1.5	RE	12.1	24	216	18	144	580
011214	12X1.5	RE	12.1	24	227	18.9	173	500
011263	19X1.5	RE	12.1	24	263	21.9	274	720
011265	24X1.5	RE	12.1	24	299	24.9	346	890
011267	30X1.5	RE	12.1	24	311	25.9	432	1090
011223	07X2.5	RE	7.41	32	186	15.5	168	430
012838	10X2.5	RE	7.41	32	216	18	240	522
011180	12X2.5	RE	7.41	32	263	21.9	288	650
013662	14X2.5	RE	7.41	32	259	21.6	336	676
011264	19X2.5	RE	7.41	32	287	23.9	456	950
011266	24X2.5	RE	7.41	32	323	26.9	576	1210
011268	30X2.5	RE	7.41	32	347	28.9	720	1470

RI	Conductor resistance
Ibl	Ampacity in air (30 °C)
Rbv	Bending radius, fixed installation
Ø	outer diameter approx.
Cu	Copper weight (GER)
G	net weight per 1000