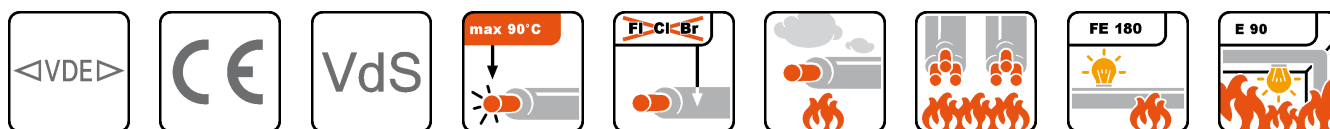


# FRNC power cable NHXH FE180/E90 acc. to VDE 0266



<b>conductor material:</b>	bare copper
<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>flame retardant:</b>	VDE 0482-266-2-4/IEC 60332-3-24
<b>smoke density:</b>	DIN EN 61034/IEC 61034
<b>halogen free:</b>	DIN EN 50267/IEC 60754
<b>fire resistance:</b>	FE 180
<b>circuit integrity:</b>	E 90
<b>maximum temperature at conductor:</b>	90 °C
<b>max. operating temperature, fixed:</b>	-5 - +70 °C
<b>bending radius, fixed installation:</b>	12 x DA
<b>core identification:</b>	colours acc. VDE 0293 (HD308)
<b>nominal voltage U<sub>0</sub>:</b>	0,6 kV
<b>nominal voltage U:</b>	1 kV
<b>maximum permitted operating voltage in 3-phase systems:</b>	1,2 kV
<b>test voltage:</b>	4 kV

**Application:** For installation in dry and wet rooms, also for direct bedding in concrete, but not for direct burial in ground and not for use in water. The cable has improved flame retardant and may be used in public buildings with high safety requirements. Cables are halogen free, low smoke density and are fire resistant according to VDE 0472 part 814 (180 min., = IEC 331) Furthermore the cable passed the test of 90 min. circuit integrity according to DIN 4102 part 12 (E 90) 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 "Amtlichen Materialprüfanstalt für das Bauwesen". For calculation of electrical systems with circuit integrity has to be considered that electrical resistance of copper conductors at 1000 °C is approximately 4,5 times higher than at 20 °C and the current carrying capacity has to be reduced respectively.



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.

table: technical data NHXH-J/-O E90

Art.-Nr.	part-name	RI [Ω/km]	I <sub>bl</sub> [A]	R <sub>bf</sub> [mm]	DA [mm]	CU	G [kg/km]
012020	NHXH-O E90 01X16 OR	1,15	131	165	10,5	154	230
012021	NHXH-O E90 01X25 RM OR	0,727	177	195	12,5	240	340
012022	NHXH-O E90 01X35 RM OR	0,524	217	210	13,5	336	440
011757	NHXH-O E90 01X50 RM OR	0,387	265	240	13,9	480	600
011843	NHXH-O E90 01X70 RM OR	0,268	336	270	16,5	672	800
011756	NHXH-O E90 01X95 RM OR	0,193	415	300	18,9	912	1100
011744	NHXH-O E90 01X120 RM OR	0,153	485	315	20,5	1152	1350
011177	NHXH-O E90 01X150 RM OR	0,124	557	360	22,5	1440	1650
011755	NHXH-O E90 01X185 RM OR	0,0991	646	390	24,9	1776	2000
011754	NHXH-O E90 01X240 RM OR	0,0754	747	435	27,9	2304	2600

table: technical data NHXH-J/-O E90

Art.-Nr.	part-name		RI [Ω/km]	Ibl [A]	Rbf [mm]	DA [mm]	CU	G [kg/km]
011178	NHXXH-O E90 01X300 RM OR	RM	0,0601	901	480	30,9	2880	3200
012221	NHXXH-O E90 01X400 RM OR	RM	0,047	1060	544	34,9	3840	4200
012011	NHXXH-O E90 02X1,5 RE OR	RE	12,1	24	168	13,9	29	210
013223	NHXXH-O E90 02X4 RE OR					14,7	77	335
013224	NHXXH-O E90 02X6 RE OR					15,7	115	400
013225	NHXXH-O E90 02X10 RE OR					17,2	192	525
013226	NHXXH-O E90 02X16 RE OR					19	307	693
010951	NHXXH-J E90 03X1,5 RE OR	RE	12,1	24	162	14,9	43	210
010952	NHXXH-J E90 03X2,5 RE OR	RE	7,41	32	175	15,9	72	243
012623	NHXXH-O E90 03X2,5 RE OR	RE	7,41	32	175	15,9	72	243
010953	NHXXH-J E90 03X4 RE OR	RE	4,61	42	186	16,7	115	302
010954	NHXXH-J E90 03X6 RE OR	RE	3,08	53	198	17,8	173	399
010955	NHXXH-J E90 03X10 RE OR	RE	1,83	74	228	19,4	288	546
010956	NHXXH-J E90 03X16 OR		1,15	98	264	22,3	461	765
010957	NHXXH-J E90 04X1,5 RE OR	RE	12,1	24	178.8	16,1	58	245
010958	NHXXH-J E90 04X2,5 RE OR	RE	7,41	32	192	16,9	96	299
010959	NHXXH-J E90 04X4 RE OR	RE	4,61	42	207.6	17,9	154	376
010960	NHXXH-J E90 04X6 RE OR	RE	3,08	53	222	19,2	230	474
010961	NHXXH-J E90 04X10 RE OR	RE	1,83	74	246	21,1	384	657
010962	NHXXH-J E90 04x16 OR		1,15	98	289.2	24,3	614	973
010963	NHXXH-J E90 04X25 RM OR	RM	0,727	133	321.6	28,1	960	1422
010964	NHXXH-J E90 04X35 RM OR	RM	0,524	162	360	30,9	1344	1858
011950	NHXXH-J E90 04X50 RM OR	RM	0,387	197	403	35,1	1920	2900
011955	NHXXH-J E90 04X70 RM OR	RM	0,268	250	459	39,9	2688	3900
011949	NHXXH-J E90 04X95 RM OR	RM	0,193	308	520	45,2	3648	5200
011956	NHXXH-J E90 04X120 RM OR	RM	0,153	359	758	48,9	4608	6300
011869	NHXXH-J E90 04X150 RM OR	RM	0,124	412	789	50,9	5760	6800
011963	NHXXH-J E90 04X240 RM OR	RM	0,0754	564	1005	64,9	9216	10700
010965	NHXXH-J E90 05X1,5 RE OR	RE	12,1	24	190.8	17,4	72	290
010966	NHXXH-J E90 05X2,5 RE OR	RE	7,41	32	204	18,4	120	359
010967	NHXXH-J E90 05X4 RE OR	RE	4,61	42	223.2	19,5	192	457
010968	NHXXH-J E90 05X6 RE OR	RE	3,08	53	242.4	20,9	288	577
010969	NHXXH-J E90 05X10 RE OR	RE	1,83	74	267.6	22,9	480	807
010970	NHXXH-J E90 05x16 OR		1,15	98	318	26,6	768	1145
010971	NHXXH-J E90 05X25 RM OR	RM	0,727	133	360	30,9	1200	1765
010989	NHXXH-J E90 07X1,5 RE OR	RE	12,1	24	216	18,6	101	350
011124	NHXXH-J E90 07X2,5 RE OR	RE	7,41	32	228	19,8	168	443
012928	NHXXH-J E90 07X6 RM OR	RE	3,08	53		18,9	403,2	718
013128	NHXXH-J E90 10X1,5 RE OR					20	144	538
011020	NHXXH-J E90 12X1,5 RE OR	RE	12,1	24	282	23,5	173	545
011982	NHXXH-J E90 12X2,5 RE OR	RE	7,41	32	312	25,2	288	780
011162	NHXXH-J E90 24X1,5 RE OR	RE	12,1	24	348	26,9	346	735