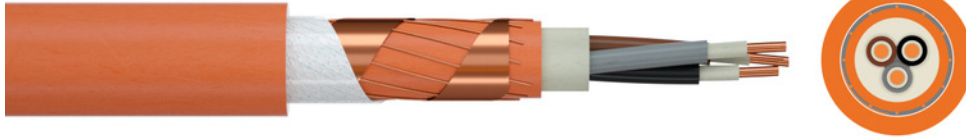


# FRNC power cable (N)HXCH FE180/E90



**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 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 Civil Engineering Materials Testing Institute-. 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.

## Construction and technical data:

<b>Standard:</b>	VDE 0266
<b>Conductor material:</b>	copper, bare
<b>Conductor construction:</b>	class 1, from 25 sqmm class 2
<b>Insulation:</b>	FRNC-compound HI1
<b>Concentric conductor:</b>	Cu
<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 60331-11 (FE 180)
<b>Circuit integrity:</b>	E90
<b>Max. temperature at conductor, °C:</b>	90 °C
<b>Permitted outer cable temperature, fixed, °C:</b>	-30 - +90 °C
<b>Permitted outer cable temperature, moved, °C:</b>	-5 °C
<b>Bending radius, fixed installation:</b>	12 x Ø



*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)HXCH E90****Nominal voltage U<sub>o</sub>:** 0.6 kV**Nominal voltage U:** 1 kV**Maximum permitted operating voltage in** 1.2 kV**three-phase systems:****Test voltage:** 4 kV**Core identification:** 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]
013312	02X2.5/2.5	RE	7.41	32	204	16.8	87	370
011042	03X1.5/1.5	RE	12.1	24	204	14.5	66	348
011043	03X2.5/2.5	RE	7.41	32	216	17.9	104	410
011209	03X4/4	RE	4.61	42	228	18.9	161	500
011208	03X6/6	RE	3.08	53	240	20.9	240	614
011207	03X10/10	RE	1.83	73	264	24.1	408	830
011206	03X16/16	RE	1.15	97	312	27.3	643	1073
011205	03X25/16	RM	0.727	135	360	30.7	902	1450
011204	03X35/16	RM	0.524	165	396	33.3	1190	1798
011197	03X50/25	RM	0.387	201	432	37.4	1723	2394
011203	03X70/35	RM	0.268	255	492	42.5	2410	2796
011213	03X95/50	RM	0.193	314	564	47.8	3296	4434
011202	03X120/70	RM	0.153	364	612	51.4	4236	5534
011201	03X150/70	RM	0.124	416	660	55.7	5100	6546
011200	03X185/95	RM	0.0991	480	744	61.7	6383	8303
011198	03X240/120	RM	0.0754	565	816	67.9	8242	10605
010995	04X1.5/1.5	RE	12.1	24	216	17.9	81	398
010996	04X2.5/2.5	RE	7.41	32	228	19.2	128	470
010997	04X4/4	RE	4.61	42	240	20.3	200	578
010987	04X6/6	RE	3.08	53	252	22.5	297	726
010994	04X10/10	RE	1.83	73	288	26.4	504	983
010998	04X16/16	RE	1.15	97	324	29.3	796	1370
010999	04X25/16	RM	0.727	135	372	33.1	1142	1904
010993	04X35/16	RM	0.524	165	420	35.9	1526	2427
011000	04X50/25	RM	0.387	201	468	41.1	2203	3177
011001	04X70/35	RM	0.268	255	528	46.2	3082	4378
011002	04X95/50	RM	0.193	314	600	51.9	4208	5803
011003	04X120/70	RM	0.153	364	648	55.9	5388	7230
011004	04X150/70	RM	0.124	416	720	60.9	6540	8707
011005	04X185/95	RM	0.0991	480	804	67.5	8159	10894
011006	04X240/120	RM	0.0754	565	876	74.4	10546	13933
011749	05X4/4	RE	4.61	42	246	20.5	238	600
010988	07X1.5/2.5	RE	12.1	24	264	20.9	133	498
011007	07X2.5/2.5	RE	7.41	32	282	22.1	200	680
015551	07X6/6	RE	3.08	53	275	22.9	530	969
015364	10X1.5/2.5	RE	12.1	24	276	23.1	176	591.5
011008	12X1.5/2.5	RE	12.1	24	366	26.2	205	718
011009	12X2.5/4	RE	7.41	32	384	28.4	334	1050
011210	24X1.5/6	RE	12.1	24	444	37.6	413	1305
011211	24X2.5/10	RE	7.41	32	468	40.9	696	1400
011212	30X1.5/6	RE	12.1	24	468	39.8	499	1519
011199	30X2.5/10	RE	7.41	32	498	42.9	840	1550

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