

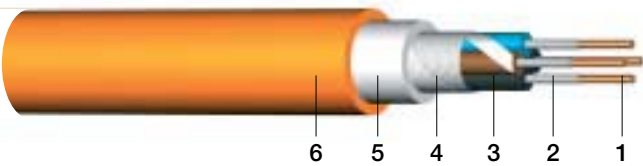
# NHXH FE180/E90

Power cables with insulation integrity FE180 and functional integrity E90

Standard: DIN VDE 0266

## Usage:

For fixed installation in interior premises and in the open air and for direct burial in cable ducts and conduit. Since they are free from halogens and exhibit enhanced fire performance, these cables are used in those applications where in the event of fire, the negative effects on concentrations of people and valuable material goods must be minimised.



## Construction:

- 1 Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 Flame protection by conductor taping (mica tape)
- 3 Core insulation (halogen-free polymer compound, cross linked)
- 4 Taping (halogen-free glass fabric tape)
- 5 Inner covering (halogen-free polymer compound) in case of multicore constructions
- 6 Sheath (halogen-free polyolefin compound, orange)



**Rated voltage:** 0.6/1 kV



**Test voltage:** 4000 Veff



**Temperature range:**

laying temperature: min. -5 °C  
operating temperature: fixed -40 °C to +80 °C  
in motion -5 °C to +50 °C

conductor temperature: max. +90 °C

short-circuit

temperature: max. +250 °C/5 s



**Bending radius (min.):** 15 x Ø of cable (single core)  
12 x Ø of cable (multi core)



**Core identification:** coloured (DIN VDE 0293)



**Fire properties:**

flame retardant (EN 50265-2-1, IEC 60332-1)  
halogen-free, no corrosive combustion gases (EN 50267-2-2, IEC 60754-2)  
reduced fire propagation (EN 50266-2-2, IEC 60332-3 Cat. A)  
minimum smoke emission (EN 50268-2, IEC 61034)  
insulation integrity FE180 (IEC 60331, DIN VDE 0472-814)  
functional integrity E90 (DIN VDE 4102-12)



**Test certificate:** VDE Germany

Number of cores x nominal cross section (mm <sup>2</sup> )	Max. conductor resistance (Ω/km)	Outer diameter (mm) ca.	Metal weight (kg/km)	Total weight (kg/km) ca.	Standard lengths/packing (m)
<b>NHXH FE180/E90</b>					
1 x 16 RE	1.1500	11.0	160	230	500 T, 1000 T
1 x 25 RM	0.7270	13.0	250	340	500 T, 1000 T
1 x 35 RM	0.5240	14.0	350	440	500 T, 1000 T
1 x 50 RM	0.3870	16.0	500	620	500 T, 1000 T
1 x 70 RM	0.2680	18.0	700	850	500 T, 1000 T
1 x 95 RM	0.1930	20.0	950	1,100	500 T, 1000 T
1 x 120 RM	0.1530	21.0	1,200	1,350	500 T, 1000 T
1 x 150 RM	0.1240	24.0	1,500	1,650	500 T, 1000 T
1 x 185 RM	0.0991	26.0	1,850	2,100	500 T, 1000 T
1 x 240 RM	0.0754	29.0	2,400	2,600	500 T, 1000 T
1 x 300 RM	0.0601	32.0	3,000	3,300	500 T, 1000 T

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Number of cores x nominal cross section (mm <sup>2</sup> )	Max. conductor resistance (Ω/km)	Outer diameter (mm) ca.	Metal weight (kg/km)	Total weight (kg/km) ca.	Standard lengths/packing (m)
<b>NHXH FE180/E90</b>					
2 x 1.5 RE	12.1000	14.0	30	210	500 T, 1000 T
3 x 1.5 RE	12.1000	15.0	45	240	500 T, 1000 T
4 x 1.5 RE	12.1000	16.0	60	280	500 T, 1000 T
5 x 1.5 RE	12.1000	17.0	75	330	500 T, 1000 T
2 x 2.5 RE	7.4100	14.0	50	250	500 T, 1000 T
3 x 2.5 RE	7.4100	15.0	75	290	500 T, 1000 T
4 x 2.5 RE	7.4100	17.0	100	350	500 T, 1000 T
5 x 2.5 RE	7.4100	19.0	125	410	500 T, 1000 T
2 x 4 RE	4.6100	16.0	80	310	500 T, 1000 T
3 x 4 RE	4.6100	17.0	120	360	500 T, 1000 T
4 x 4 RE	4.6100	19.0	160	440	500 T, 1000 T
5 x 4 RE	4.6100	20.0	200	520	500 T, 1000 T
2 x 6 RE	3.0800	17.0	120	380	500 T, 1000 T
3 x 6 RE	3.0800	18.0	180	450	500 T, 1000 T
4 x 6 RE	3.0800	20.0	240	560	500 T, 1000 T
5 x 6 RE	3.0800	22.0	300	660	500 T, 1000 T
2 x 10 RE	1.8300	19.0	200	510	500 T, 1000 T
3 x 10 RE	1.8300	20.0	300	620	500 T, 1000 T
4 x 10 RE	1.8300	22.0	400	760	500 T, 1000 T
5 x 10 RE	1.8300	24.0	500	950	500 T, 1000 T
2 x 16 RE	1.1500	21.0	320	680	500 T, 1000 T
3 x 16 RE	1.1500	22.0	480	850	500 T, 1000 T
4 x 16 RE	1.1500	25.0	640	1,100	500 T, 1000 T
5 x 16 RE	1.1500	27.0	800	1,300	500 T, 1000 T
3 x 25 RM	0.7270	26.0	750	1 300	500 T, 1000 T
4 x 25 RM	0.7270	30.0	1,000	1 600	500 T, 1000 T
5 x 25 RM	0.7270	32.0	1,250	2 000	500 T, 1000 T
3 x 35 RM	0.5240	29.0	1,050	1,650	500 T, 1000 T
4 x 35 RM	0.5240	32.0	1,400	2,100	500 T, 1000 T
3 x 50 RM	0.3870	32.0	1,500	2,300	500 T, 1000 T
4 x 50 RM	0.3870	37.0	2,000	2,900	500 T, 1000 T
3 x 70 RM	0.2680	36.0	2,100	3,000	500 T, 1000 T
4 x 70 RM	0.2680	41.0	2,800	3,900	500 T, 1000 T
3 x 95 RM	0.1930	41.0	2,850	4,000	500 T, 1000 T
4 x 95 RM	0.1930	47.0	3,800	5,200	500 T, 1000 T
3 x 120 RM	0.1530	45.0	3,600	4,900	500 T, 1000 T
4 x 120 RM	0.1530	49.0	4,800	6,300	500 T, 1000 T
3 x 150 RM	0.1240	50.0	4,500	6,100	500 T
4 x 150 RM	0.1240	51.0	6,000	6,450	500 T
3 x 185 RM	0.0991	53.0	5,550	7,500	500 T

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Number of cores x nominal cross section (mm <sup>2</sup> )	Max. conductor resistance (Ω/km)	Outer diameter (mm) ca.	Metal weight (kg/km)	Total weight (kg/km) ca.	Standard lengths/ packing (m)
<b>NHXH FE180/E90</b>					
4 x 185 RM	0.0991	55.0	7,400	8,200	500 T
3 x 240 RM	0.0754	56.0	7,200	8,300	500 T
4 x 240 RM	0.0754	62.0	9,600	10,700	500 T
7 x 1.5 RE	12.1000	19.0	105	380	500 T, 1000 T
10 x 1.5 RE	12.1000	23.0	150	520	500 T, 1000 T
12 x 1.5 RE	12.1000	24.0	180	580	500 T, 1000 T
14 x 1.5 RE	12.1000	25.0	210	660	500 T, 1000 T
19 x 1.5 RE	12.1000	27.0	285	850	500 T, 1000 T
24 x 1.5 RE	12.1000	31.0	360	1,050	500 T, 1000 T
30 x 1.5 RE	12.1000	33.0	450	1,200	500 T, 1000 T
7 x 2.5 RE	7.4100	20.0	175	480	500 T, 1000 T
10 x 2.5 RE	7.4100	25.0	250	680	500 T, 1000 T
12 x 2.5 RE	7.4100	26.0	300	780	500 T, 1000 T
14 x 2.5 RE	7.4100	27.0	350	900	500 T, 1000 T
19 x 2.5 RE	7.4100	29.0	475	1,100	500 T, 1000 T
24 x 2.5 RE	7.4100	34.0	600	1,350	500 T, 1000 T
30 x 2.5 RE	7.4100	36.0	750	1,650	500 T, 1000 T
7 x 4 RE	4.6100	22.0	280	640	500 T, 1000 T
10 x 4 RE	4.6100	27.0	400	900	500 T, 1000 T
12 x 4 RE	4.6100	28.0	480	1,050	500 T, 1000 T
7 x 6 RE	3.0800	23.0	420	800	500 T, 1000 T
10 x 6 RE	3.0800	29.0	600	1,150	500 T, 1000 T
12 x 6 RE	3.0800	30.0	720	1,300	500 T, 1000 T
3 x 25 + 16 RM	0.727/1.150	28.0	910	1,500	500 T, 1000 T
3 x 35 + 16 RM	0.524/1.150	30.0	1,210	1,800	500 T, 1000 T
3 x 50 + 25 RM	0.387/0.727	35.0	1,750	2,600	500 T, 1000 T
3 x 70 + 35 RM	0.268/0.524	39.0	2,450	3,400	500 T, 1000 T
3 x 95 + 50 RM	0.193/0.387	44.0	3,350	4,600	500 T, 1000 T
3 x 120 + 70 RM	0.153/0.268	49.0	4,300	5,700	500 T, 1000 T
3 x 150 + 70 RM	0.124/0.268	52.0	5,200	6,800	500 T
3 x 185 + 95 RM	0.0991/0.193	59.0	6,500	8,500	500 T
3 x 240 + 120 RM	0.0754/0.153	68.0	8,400	11,000	500 T

Subject to technical changes.