

# (N)HXH FE180/E90

Halogen-free energy cable with insulation integrity FE180 and circuit integrity E90

## DESIGN



- 1 | Copper conductor, round solid (RE), resp. round stranded (RM)
- 2 | Primary core insulation (silicone rubber)
- 3 | Secondary core insulation (silicone rubber)
- 4 | Inner covering (halogen-free polymer compound)
- 5 | Sheath (halogen-free polymer compound, orange)

## APPLICATION

These cables are intended for the stationary distribution of electrical energy in dry or damp premises and for fixed installations in air or concrete. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). Not allowed for installations underground or in water. These cables are not UV-protected (UV-protection available on request only).

## TECHNICAL DATA



**Standard:**  
adapted to DIN VDE 0266



**Rated voltage:**  
0.6/1 kV



**Test voltage:**  
4 kV/50 Hz



**Temperature range:**  
laying temperature: min. -5 °C  
operating temperature: -50 °C to +90 °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:**  
HD 308 S2



**Fire properties:**  
flame retardant:  
EN 60332-1-2  
halogen-free, non-corrosive combustion gases:  
EN 50267-2-2  
reduced flame propagation:  
EN 60332-3-24  
low smoke emission:  
EN 61034-2  
insulation integrity FE 180:  
IEC 60331-21, DIN VDE 0472-814  
circuit integrity E90:  
DIN 4102-12



**Certificate:**  
EZÚ Czech Republic, VDE Germany,  
GOST-R Russia

Number of cores x nominal cross section (mm <sup>2</sup> )	Max. conductor resistance (Ω/km)	Current rating in the air <sup>1)</sup> (A)	Outer diameter (mm) ca.	Total weight (kg/km) ca.	Standard lengths/packing (m)
(N)HXH FE180/E90					
2 x 1.5 RE	12.100	29	13.0	225	1,000 D
3 x 1.5 RE	12.100	24	13.6	250	1,000 D
4 x 1.5 RE	12.100	24	14.5	290	1,000 D
5 x 1.5 RE	12.100	24	15.5	335	1,000 D
7 x 1.5 RE	12.100	14	16.6	400	1,000 D
10 x 1.5 RE	12.100	13	20.2	535	500 D
12 x 1.5 RE	12.100	12	20.7	605	500 D
14 x 1.5 RE	12.100	11	21.6	670	500 D
19 x 1.5 RE	12.100	11	23.7	835	500 D
24 x 1.5 RE	12.100	10	27.3	1,020	500 D

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(N)HXH FE180/E90					
30 x 1.5 RE	12.100	9	28.8	1,210	500 D
40 x 1.5 RE	12.100	8	32.0	1,570	500 D
2 x 2.5 RE	7.410	38	13.8	270	1,000 D
3 x 2.5 RE	7.410	32	14.4	305	1,000 D
4 x 2.5 RE	7.410	32	15.5	355	1,000 D
5 x 2.5 RE	7.410	32	16.6	410	1,000 D
7 x 2.5 RE	7.410	20	17.8	510	1,000 D
10 x 2.5 RE	7.410	18	21.7	685	500 D
12 x 2.5 RE	7.410	17	22.4	780	500 D
14 x 2.5 RE	7.410	16	23.4	870	500 D
19 x 2.5 RE	7.410	16	25.7	1,100	500 D
24 x 2.5 RE	7.410	13	29.9	1,370	500 D
30 x 2.5 RE	7.410	12	31.7	1,680	500 D
40 x 2.5 RE	7.410	11	35.0	2,180	500 D
2 x 4 RE	4.610	51	14.8	330	1,000 D
3 x 4 RE	4.610	42	15.4	380	1,000 D
4 x 4 RE	4.610	42	16.6	450	1,000 D
5 x 4 RE	4.610	42	17.9	525	1,000 D
7 x 4 RE	4.610	28	19.2	650	500 D
10 x 4 RE	4.610	25	23.6	895	500 D
12 x 4 RE	4.610	23	24.3	1,030	500 D
14 x 4 RE	4.610	22	25.5	1,140	500 D
19 x 4 RE	4.610	22	28.1	1,490	500 D
2 x 6 RE	3.080	64	15.8	400	500 D
3 x 6 RE	3.080	53	16.5	470	500 D
4 x 6 RE	3.080	53	17.8	560	500 D
5 x 6 RE	3.080	53	19.2	660	500 D
2 x 10 RE	1.830	86	17.7	565	500 D
3 x 10 RE	1.830	74	18.6	680	500 D
4 x 10 RE	1.830	74	20.0	815	500 D
5 x 10 RE	1.830	74	21.6	965	500 D
1 x 16 RM	1.150	131	12.1	310	500 D, 1,000 D
2 x 16 RM	1.150	110	19.5	750	500 D
3 x 16 RM	1.150	98	20.5	625	500 D
4 x 16 RM	1.150	98	22.2	1,110	500 D
5 x 16 RM	1.150	98	24.1	1,340	500 D
1 x 25 RM	0.727	177	13.7	425	500 D, 1,000 D
3 x 25 RM	0.727	133	23.8	1,370	500 D
3 x 25 + 16 RM/RM	0.727/1.150	133	27.1	1,560	500 D
4 x 25 RM	0.727	133	27.1	1,680	500 D
5 x 25 RM	0.727	133	30.4	2,010	500 D
1 x 35 RM	0.524	217	14.7	535	500 D, 1,000 D

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<b>(N)HXH FE180/E90</b>					
3 x 35 RM	0.524	162	29.8	2,030	500 D
3 x 35 + 16 RM/RM	0.524/1.150	162	27.6	1,930	500 D
4 x 35 RM	0.524	162	27.6	2,200	500 D
5 x 35 RM	0.524	162	32.9	2,590	500 D
1 x 50 RM	0.387	265	16.5	680	500 D, 1,000 D
3 x 50 RM	0.387	197	31.5	2,370	500 D
3 x 50 + 25 RM/RM	0.387/0.727	197	34.4	2,680	500 D
4 x 50 RM	0.387	197	34.4	3,030	500 D
5 x 50 RM	0.387	197	37.8	3,450	500 D
1 x 70 RM	0.268	336	18.3	910	500 D, 1,000 D
3 x 70 RM	0.268	250	36.7	3,560	500 D
3 x 70 + 35 RM/RM	0.268/0.524	250	40.1	3,510	500 D
4 x 70 RM	0.268	250	40.1	4,430	500 D
5 x 70 RM	0.268	250	43.1	4,710	500 D
1 x 95 RM	0.193	415	20.4	1,190	500 D, 1,000 D
3 x 95 RM	0.193	308	41.6	4,510	500 D
3 x 95 + 50 RM/RM	0.193/0.387	308	46.0	4,750	500 D
4 x 95 RM	0.193	308	46.0	5,680	500 D
5 x 95 RM	0.193	308	49.3	6,230	500 D
1 x 120 RM	0.153	485	22.1	1,450	500 D, 1,000 D
3 x 120 RM	0.153	359	45.5	5,470	500 D
3 x 120 + 70 RM/RM	0.153/0.268	359	49.8	5,810	500 D
4 x 120 RM	0.153	359	49.8	6,840	500 D
5 x 120 RM	0.153	359	53.4	7,630	500 D
1 x 150 RM	0.124	557	25.3	1,740	500 D, 1,000 D
3 x 150 RM	0.124	412	48.6	6,420	300 D
3 x 150 + 70 RM/RM	0.124/0.268	412	54.5	7,100	300 D
4 x 150 RM	0.124	412	54.5	7,650	300 D
5 x 150 RM	0.124	412	59.3	9,400	300 D

1) basic rated current acc. to DIN VDE 0266  
Subject to technical changes.