



## (N)HXH (FRHF) FE180/E90

Halogen-free installation cable 300/500 V, with improved properties under fire, and 90 minute circuit integrity maintenance

### APPLICATION

These cables are suitable for fixed installation in dry and damp environment, on or under plaster, on cable trays, same as in walls and concrete. Not intended for direct laying in ground or water. For outdoor application can be laid in tubes, but in that case should be taken all precautionary measures necessary to prevent water penetration into the tubes. Suitable for electric installations with marked fire-fighting and function preserving requirements, for alarm systems, fire sensors, evacuation elevators and other supply systems in an emergency. Appropriate for application in all situations where people and material goods need to be protected in case of fire. Recommended for public buildings frequented by a lot of people, and for buildings of high material value, for industrial complexes, electric power plants, transformer stations, municipal facilities, hotels, shopping malls, hospitals, schools, airports, underground railways and similar. Important - these cables should not be laid on common trays, but on fire-resistant trays which retain their geometry in case of fire. Keeping these cables in the same position in case of fire, enables additional protection of cable conductivity, by means of the mineral layer discharged around the cable at increased temperature.

### CONSTRUCTION

Conductors: Cu, class 1 or 2 according to EN 60228  
 Insulation: Ceramizable (silicone) compound  
 Sheath: LSZH compound, orange

### CORE IDENTIFICATION

According to HD 308 S2

#### Insulation Color:

2-core: ● Brown ● Blue  
 3-core (a): ● Green/Yellow ● Brown ● Blue  
 3-core (b): ● Black ● Brown ● Grey  
 4-core (a): ● Green/Yellow ● Brown ● Black ● Grey  
 4-core (b): ● Blue ● Brown ● Black ● Grey  
 5-core: ● Green/Yellow ● Blue ● Brown ● Black ● Grey

#### Outer Sheath Colour:

● Orange

*Other colours available on request*

### TECHNICAL CHARACTERISTICS

Test voltage: 300/500 V  
 Rated voltage: 0,6/1 kV  
 Bending radius (min): 12 x D  
 Min. laying temperature: -5°C  
 Max. working temperature: 90°C  
 Max. short-circuit temperature: 160°C  
 Flame retardant: IEC 60332-1-2  
 Fire retardant: IEC 60332-3-24, Cat. C  
 Halogen free: IEC 60754  
 Low smoke emission: IEC 61034  
 Circuit integrity, FE180: IEC 60331-21, IEC 60331-11  
 Circuit integrity, E30-E60: VDE 4102-12

### STANDARD

According to DIN VDE 0266, HD 604 S1

### CERTIFICATION



NOMINAL CROSS-SECTION	CONDUCTOR SHAPE	MAX. RESISTANCE AT 20°C	CURRENT CAPACITY IN AIR	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm <sup>2</sup>		Ω/km	A	mm	kg/km	kg/km
2x1,5	RE	12,1	23	6,9	28,8	63
2x2,5	RE	7,41	32	7,8	48,0	90
2x4	RE	4,61	42	9,3	76,8	132
2x6	RE	3,08	54	10,4	115,2	181

NOMINAL CROSS-SECTION	CONDUCTOR SHAPE	MAX. RESISTANCE AT 20°C	CURRENT CAPACITY IN AIR	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm <sup>2</sup>		Ω/km	A	mm	kg/km	kg/km
3x1,5	RE	12,1	23	7,3	43,2	85
3x2,5	RE	7,41	32	8,3	72,0	122
3x4	RE	4,61	42	10,0	115,2	185
3x6	RE	3,08	54	11,2	172,8	257

NOMINAL CROSS-SECTION	CONDUCTOR SHAPE	MAX. RESISTANCE AT 20°C	CURRENT CAPACITY IN AIR	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm <sup>2</sup>		Ω/km	A	mm	kg/km	kg/km
4x1,5	RE	12,1	23	8,1	57,6	109
4x2,5	RE	7,41	32	9,2	96,0	160
4x4	RE	4,61	42	10,9	153,6	237
4x6	RE	3,08	54	12,3	230,4	331

NOMINAL CROSS-SECTION	CONDUCTOR SHAPE	MAX. RESISTANCE AT 20°C	CURRENT CAPACITY IN AIR	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm <sup>2</sup>		Ω/km	A	mm	kg/km	kg/km
5x1,5	RE	12,1	23	8,9	72,0	134
5x2,5	RE	7,41	32	10,1	120,0	194
5x4	RE	4,61	42	12,2	192,0	295
5x6	RE	3,08	54	13,7	288,0	412
5x10	RE	1,15	75	16,8	480	658
5x16	RM	1,83	100	20,4	768	1023

NOMINAL CROSS-SECTION	CONDUCTOR SHAPE	MAX. RESISTANCE AT 20°C	CURRENT CAPACITY IN AIR	OUTER DIAM. (APPROX.)	METAL WEIGHT	CABLE WEIGHT (APPROX.)
mm <sup>2</sup>		Ω/km	A	mm	kg/km	kg/km
7x1,5	RE	12,1	23	9,8	100,8	179
7x2,5	RE	7,41	32	11,2	168,0	264

(Current capacity according DIN VDE 0298-4 standard. Air temperature: 30°C)