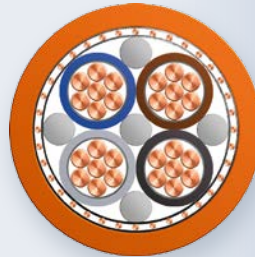


# BETAflam® Safety cables

DIN VDE 0266



## Advantages

- Very high safety standards
- System circuit integrity acc. to DIN 4102 part 12
- DIN approved with LEONI BETAfixss® cable support system
- Halogen-free
- In compliance with RoHS directive
- One source for cables and laying system

## BETAflam® NHXCH FE180 / E30-E60

### Applications

Power cable 0,6 / 1 kV with concentric conductor for fixed installation in cable systems with improved fire performance and system circuit integrity acc. to DIN 4102 part 12, e.g. for:

- lighting of escape routes
- fire alarm systems
- smoke exhaust systems
- recommended in areas where people gather and for protection of valuables

### Construction

■ Conductors	Bare annealed copper
■ Flame barrier	MICA tape
■ Insulation	BETAflam® cross-linked
■ Inner covering	Tape or filler
■ conc. conductor	Copper wires, with helix of copper tape
■ Sheath	BETAflam® copolymer
■ Core identification	acc. to VDE 0266 resp. HD 308 S2
■ Sheath colour	Orange

### Electrical characteristics

Rated voltage	U <sub>0</sub> /U 0.6 / 1 kV
Test voltage	4 kV with 50 Hz

### Thermal characteristics

Operation temperature	- 30 °C up to + 90 °C
Laying temperature	- 5 °C up to + 70 °C
Short circuit temperature (temperature peak < 5 s)	up to + 250 °C

### Bending radius

cable design	single core	multiple core
during laying	> 15 × outer Ø	> 12 × outer Ø
fixed	> 8 × outer Ø	> 7 × outer Ø

### Laying conditions

- Fixed installation indoor, in air or concrete
- Laying in earth or water only in water-proof dry tubes
- Outdoor laying only when protected from direct sunlight and other external impacts

### Standards / Material properties

- Halogen-free: IEC 60754-1, EN 50267-2-1, VDE 0482-267-2-1
- No corrosive gases: IEC 60754-2, EN 50267-2-2, VDE 0482-267-2-2
- No toxic gases: NF X 70-100
- Low smoke density: IEC 61034-1 and -2, EN 61034-1 and -2, VDE 0482-1034-1 and -2
- Flame retardant: IEC 60332-1, EN 60332-1, VDE 0482-332-1
- No flame propagation: IEC 60332-3-10 and -3-24, EN 60332-3-10, -24, VDE 0482-332-3-24
- Circuit integrity FE180: IEC 60331-11 and -21, VDE 0472-814
- Circuit integrity with shock: EN 50200 PH90 (bis Ø 20 mm)
- System circuit integrity: DIN 4102-12, E30 or E60, depending on laying system

Cable type	Construction n × mm <sup>2</sup>	Core function	Outer Ø mm	Weight kg/km	Cu factor kg/km	Order no.	
						Germany	Switzerland
NHXCH FE180/E30-E60	2 × 1.5 RE/1.5	LN	14.8	287	52	LKI 8001 6700 0000	
NHXCH FE180/E30-E60	2 × 2.5 RE/2.5	LN	15.6	331	80	LKI 8001 6800 0000	305103
NHXCH FE180/E30-E60	2 × 4 RE/4	LN	16.1	408	123	LKI 8001 6900 0000	305104
NHXCH FE180/E30-E60	2 × 6 RE/6	LN	17.2	463	182	LKI 8001 7000 0000	
NHXCH FE180/E30-E60	2 × 10 RE/10	LN	18.7	643	312	LKI 8001 7100 0000	
NHXCH FE180/E30-E60	3 × 1.5 RE/1.5	3L	15.7	392	66	LKI 2177 2700 0000	217727
NHXCH FE180/E30-E60	3 × 2.5 RE/2.5	3L	17.2	430	104	LKI 2177 3000 0000	217730
NHXCH FE180/E30-E60	3 × 4 RE/4	3L	17.5	510	161	LKI 8001 7600 0000	
NHXCH FE180/E30-E60	3 × 6 RE/6	3L	17.7	600	240	LKI 8001 7700 0000	
NHXCH FE180/E30-E60	3 × 10 RE/10	3L	19.9	736	408	LKI 8001 7800 0000	
NHXCH FE180/E30-E60	3 × 16 RM/16	3L	23.6	1161	643	LKI 8001 7900 0000	
NHXCH FE180/E30-E60	3 × 25 RM/16	3L	27.3	1707	902	LKI 8001 8000 0000	
NHXCH FE180/E30-E60	3 × 35 RM/16	3L	29.5	2190	1190	LKI 8001 8100 0000	
NHXCH FE180/E30-E60	3 × 50 RM/25	3L	34.3	3646	1728	LKI 8001 8200 0000	
NHXCH FE180/E30-E60	3 × 70 RM/35	3L	38.2	4042	2415	LKI 8001 8300 0000	
NHXCH FE180/E30-E60	3 × 95 RM/50	3L	46.2	5134	3311	LKI 8001 8400 0000	303537
NHXCH FE180/E30-E60	3 × 120 RM/70	3L	47.2	6300	4261	LKI 8001 8500 0000	
NHXCH FE180/E30-E60	3 × 150 RM/70	3L	51.8	7020	5100	LKI 8001 8600 0000	
NHXCH FE180/E30-E60	3 × 185 RM/95	3L	57.2	8378	6383	LKI 3004 0900 0000	300409
NHXCH FE180/E30-E60	3 × 240 RM/120	3L	64.2	11323	8242	LKI 8001 8700 0000	
NHXCH FE180/E30-E60	4 × 1.5 RE/1.5	3LN	17.2	332	81	LKI 2172 4400 0000	217244
NHXCH FE180/E30-E60	4 × 2.5 RE/2.5	3LN	17.3	358	128	LKI 8001 9500 0000	303890
NHXCH FE180/E30-E60	4 × 4 RE/4	3LN	17.7	516	200	LKI 2139 4200 0000	213942
NHXCH FE180/E30-E60	4 × 6 RE/6	3LN	18.5	612	297	LKI 3005 5800 0000	300558
NHXCH FE180/E30-E60	4 × 10 RE/10	3LN	22.0	879	504	LKI 2139 6300 0000	213963
NHXCH FE180/E30-E60	4 × 16 RM/16	3LN	25.6	1196	796	LKI 2139 6400 0000	213964
NHXCH FE180/E30-E60	4 × 25 RM/16	3LN	27.7	1654	1142	LKI 2139 6500 0000	213965
NHXCH FE180/E30-E60	4 × 35 RM/16	3LN	30.3	2113	1526	LKI 2139 6600 0000	213966
NHXCH FE180/E30-E60	4 × 50 RM/25	3LN	35.2	2774	2203	LKI 2139 6700 0000	213967
NHXCH FE180/E30-E60	4 × 70 RM/35	3LN	39.5	3833	3082	LKI 2139 6800 0000	213968
NHXCH FE180/E30-E60	4 × 95 RM/50	3LN	45.8	5216	4208	LKI 2139 6900 0000	213969
NHXCH FE180/E30-E60	4 × 120 RM/70	3LN	50.4	6519	5388	LKI 2139 7000 0000	213970
NHXCH FE180/E30-E60	4 × 150 RM/70	3LN	55.4	7849	6540	LKI 2139 7100 0000	213971
NHXCH FE180/E30-E60	4 × 185 RM/95	3LN	61.6	9769	8159	LKI 2139 7200 0000	213972
NHXCH FE180/E30-E60	4 × 240 RM/120	3LN	69.0	12983	10546	LKI 3004 7000 0000	300470
NHXCH FE180/E30-E60	7 × 1.5 RE/2.5	NR	18.7	412	133	LKI 8001 9600 0000	
NHXCH FE180/E30-E60	7 × 2.5 RE/2.5	NR	18.3	488	200	LKI 8001 9700 0000	
NHXCH FE180/E30-E60	12 × 1.5 RE/2.5	NR	21.5	612	205	LKI 2177 3600 0000	217736
NHXCH FE180/E30-E60	12 × 2.5 RE/4	NR	25.3	780	334	LKI 8002 0200 0000	305565
NHXCH FE180/E30-E60	24 × 1.5 RE/6	NR	28.5	1052	413	LKI 8002 1100 0000	
NHXCH FE180/E30-E60	24 × 2.5 RE/10	NR	30.4	1398	696	LKI 8002 1200 0000	

RE = round solid, class 1  
RM = round stranded, class 2

L = colour phase conductor br/bk/gr ● ● ●  
N = colour neutral conductor bl ●  
NR = colour phase conductors bk ● / numbered