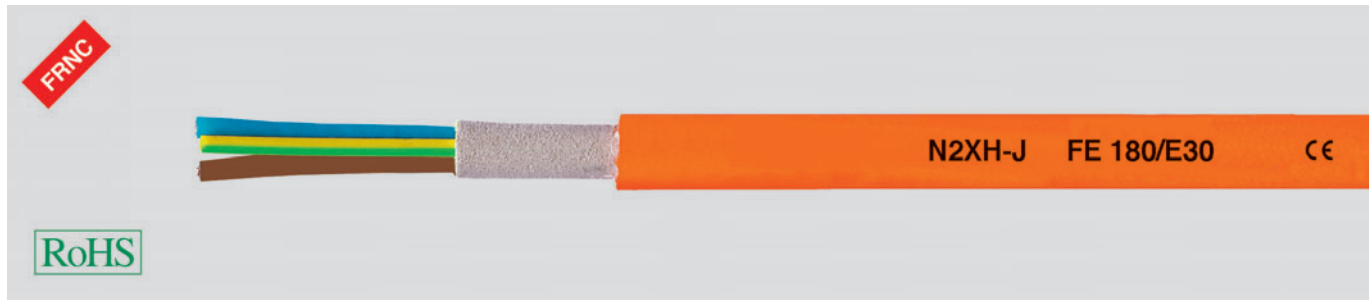


# N2XH-FE 180/E 30 security cable, halogen-free, 0,6/1 kV, with improved fire characteristics



## Technical data

- Halogen-free security cable with improved characteristics in the case of fire to DIN VDE 0266
- **Insulation integrity**  
180 minutes to DIN VDE 0472 part 814
- **Functionality**  
30 minutes to DIN VDE 4102 part 12
- **Temperature range**  
-30 °C to +70 °C
- Permissible **operating temperature**  
at conductor +90 °C
- **Nominal voltage**  $U_0/U$  0,6/1 kV
- **Test voltage** 4000 V
- **Minimum bending radius**  
approx. 15x cable  $\varnothing$
- **Radiation resistance**  
up to  $200 \times 10^6$  cJ/kg (up to 200 Mrad)
- **Caloric load values**  
see Technical Informations

## Cable structure

- Bare copper conductor, solid or stranded, to DIN VDE 0295 cl. 1 or cl. 2, BS 6360 cl. 1 or 2, IEC 60228 cl. 1/2, HD 383
- Core with double insulation: Flame retardant MICA-tapeover conductor Core insulation with cross-linked polyethylene, compound type 2X1 to DIN VDE 0276 part 604
- Cores colour coding to DIN VDE 0293-308 and 0276 part 604
- Green-yellow earth-core, 3 cores and above
- Cores stranded in layers Overall core covering, halogen-free filling compound, pressed
- Outer jacket of thermoplastic halogen-free polyolefine, compound type HM4 to DIN VDE 0276 part 604, flame retardant, colour orange

## Tests

- Flame test to VDE 0482-332-3, BS 4066 part 3/ DIN EN 60332-3/ IEC 60332-3 (equivalent DIN VDE 0472 part 804 test method C)
- Corrosiveness of combustion gases according to VDE 0482 part 267/ DIN EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Halogen-free according to DIN VDE 0482 part 267/ DIN EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density according to VDE 0482 part 1034-1+2 / IEC 61034-1+2 / DIN EN 61034-1+2 / BS 7622 part 1+2 (equivalent DIN VDE 0472 part 816)
- Insulation integrity under flame propagation to VDE 0472 part 814 IEC 60331, Burning behaviour in fire (functionality) of the complete cable system to DIN 4102 part 12 (30 minutes)
- **LSOH** = Low Smoke Zero Halogen-free.

## Properties

- Halogen-free; no evolution of corrosive and toxic gases
- Flame retardant
- Hardly flammable
- Self-extinguished and fire resistant
- No flame propagation, therefore security from fire
- Low smoke density, no darkening of emergency exits without hindering the fire extinguishing works
- Toxicological harmless
- No self-ignition
- Maintenance of functionality during the increased current load
- **FE 180: Insulation integrity** for 180 minutes. Tests to DIN VDE 0472 part 814 IEC 60331.
- **Insulation integrity** under direct flame propagation for the test period of 180 minutes.
- **E 30: Functionality** of electrical cable systems for minimum 30 minutes. Test to DIN 4102 part 12. This fulfils the demands of technical guide lines for fire protection (supplement 1 to DIN VDE 0108 part 1). The **functionality** for 30 minutes assures when persons and animals are to be saved from a burning building. 30 minutes secures the functional performance of the fire warning and alarm systems, safety and spare lighting, passenger lifts with evacuation circuits, except the cables which are installed within the ladder shafts and engine rooms.

## Note

- rm = round conductor, multiple-wire;  
re = round conductor, single-wire.

## Application

Security cables are ideal for use everywhere, where in case of fire human life and material assets are to be protected and safety consciousness take a special significance, e.g. in industrial complexes, power stations, communal establishment, hotels, airports, underground railway networks, hospitals and outpatients clinic (DIN VDE 0107), department stores, data processing centres, theaters, cinemas, in multi-storey buildings, public gatherings, schools etc. (DIN VDE 0108), mining works, offshore plants, leading centres, traffic communication, emergency power supply and alarm systems. The cables are suitable for fixed installation in dry and moist rooms, in, above, on and beneath plaster as well as in masonry walls and in concrete.

For the installation in conduit all precautions must be taken that no accumulation of water can occur in the pipes.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
52058	1 x 4 re	8,0	38,0	155,0	12
52059	1 x 6 re	9,0	58,0	190,0	10
52060	1 x 10 re	10,0	96,0	215,0	8
52061	1 x 16 re	10,5	154,0	240,0	6
52062	1 x 25 rm	13,0	240,0	380,0	4

Part no.	No. cores x cross-sec. mm²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
52063	1 x 35 rm	14,0	336,0	460,0	2
52064	1 x 50 rm	15,5	480,0	590,0	1
52065	1 x 70 rm	17,5	672,0	820,0	2/0
52066	1 x 95 rm	19,5	912,0	1090,0	3/0
52067	1 x 120 rm	21,0	1152,0	1350,0	4/0

Continuation ►

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Part no.	No. cores x cross-sec. mm²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
52068	1 x 150 rm	23,0	1440,0	1650,0	300 kcmil
52069	1 x 185 rm	25,0	1776,0	2030,0	350 kcmil
52070	1 x 240 rm	29,0	2304,0	2590,0	500 kcmil
52071	2 x 1,5 re	11,5	29,0	170,0	16
52072	2 x 2,5 re	12,0	48,0	190,0	14
52073	2 x 4 re	13,0	77,0	260,0	12
52074	2 x 6 re	14,0	115,0	310,0	10
52075	2 x 10 re	15,5	192,0	430,0	8
52076	2 x 16 re	17,5	307,0	600,0	6
52077	2 x 25 rm	22,0	480,0	930,0	4
52078	3 G 1,5 re	12,0	43,0	170,0	16
52079	3 G 2,5 re	12,5	72,0	220,0	14
52080	3 G 4 re	13,5	115,0	290,0	12
52081	3 G 6 re	14,5	173,0	370,0	10
52082	3 G 10 re	16,5	288,0	530,0	8
52083	3 G 16 re	18,5	461,0	760,0	6
52084	3 G 25 rm	23,5	720,0	1160,0	4
52088	3 G 25 / 16 rm	22,5	874,0	1430,0	4
52085	3 G 35 rm	26,0	1080,0	1560,0	2
52089	3 G 35 / 16 rm	28,0	1162,0	1810,0	2
52086	3 G 50 rm	29,0	1440,0	2030,0	1
52090	3 G 50 / 25 rm	32,0	1680,0	2340,0	1
52087	3 G 70 rm	34,0	2016,0	2890,0	2/0
52091	3 G 70 / 35 rm	35,0	2352,0	3190,0	2/0
52092	3 G 95 / 50 rm	40,0	3216,0	4350,0	3/0

Part no.	No. cores x cross-sec. mm²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
52093	3 G 120 / 70 rm	45,0	4128,0	5550,0	4/0
52094	3 G 150 / 70 rm	48,5	4992,0	6560,0	300 kcmil
52095	3 G 185 / 95 rm	54,0	6240,0	8240,0	350 kcmil
52096	4 G 1,5 re	12,5	58,0	210,0	16
52097	4 G 2,5 re	13,0	96,0	260,0	14
52614	4 G 4 re	13,0	154,0	310,0	12
52615	4 G 6 re	14,5	230,0	410,0	10
52616	4 G 10 re	16,0	384,0	620,0	8
52617	4 G 16 re	18,0	614,0	900,0	6
52628	4 x 25 rm	23,6	960,0	1600,0	4
52629	4 x 35 rm	26,4	1344,0	2050,0	2
52383	4 x 50 rm	29,5	1920,0	2761,0	1
52432	4 x 70 rm	34,6	2688,0	3785,0	2/0
52433	4 x 95 rm	39,0	3648,0	5010,0	3/0
52434	4 x 120 re	43,5	4608,0	6135,0	4/0
52618	5 G 1,5 re	12,0	72,0	210,0	16
52619	5 G 2,5 re	13,0	120,0	280,0	14
52620	5 G 4 re	14,5	192,0	380,0	12
52621	5 G 6 re	15,5	288,0	510,0	10
52622	5 G 10 re	18,0	480,0	760,0	8
52623	5 G 16 re	20,0	768,0	1120,0	6
52626	5 x 25 rm	24,5	1200,0	1840,0	4
52627	5 x 35 rm	33,5	1680,0	2510,0	2
52624	7 G 1,5 re	13,0	101,0	250,0	16
52625	12 G 1,5 re	16,5	173,0	390,0	16

Dimensions and specifications may be changed without prior notice. (RQ02)