

NHXX FE180/PH120/E90 MICA



Fire resistant, halogen free power cable



industrial application



internal application



EN 60332-1-2



EN 60332-3-24



halogen-free
EN 60754



low smoke emission
EN 61034



FE180
insulation
resistance
to fire 180 min.



PH120 fire
integrity function



E90 fire
integrity function



sprinkler
zones*

Technical data:

Thermal parameters:

Temperature range:

fixed installation: -30 °C to 90 °C
min. installation temp: -5 °C
max. installation temp: 50 °C

Electrical parameters:

Permissible conductor operating

temperature: 90 °C

Permissible conductor temperature during

short circuit: 250 °C

Operating voltage: $U_0/U = 0,6/1$ kV

Test voltage: 4 kV

Conductor resistance (at 20 °C): acc. to
EN 60288 cl. 1 and 2, IEC 60288 cl. 1 and 2

Mechanical parameters:

Minimum bending radius:

single core cables: 15 x Ø
multi core cables: 12 x Ø

Design:

Conductors:

bare copper conductor, solid (cl. 1) or stranded (cl. 2)
according to EN 60228 and IEC 60228

Insulation:

mica tape wrapping and cross-linked polymer HX11
acc. to DIN VDE 0266

Core colors:

acc. to information - chapter - Technical Data

Inner sheath:

special halogen-free compound

Outer sheath:

halogen-free polymer compound HM4

acc. to DIN VDE 207 p.24; colour: orange

Application:

Fire resistant power and control cables have E90 fire integrity function which means the assurance of power supply or control under fire conditions for 90 minutes. They are intended for use in buildings with increased fire safety requirements due to high concentration of people, material and cultural assets of high value (sky scrapers, hospitals, shopping centres, tunnels, museums, cinemas, theatres). Cables can be used for power supply or control (lighting, lifts, fire-fighting equipment, pumps). They can be used in fixed installations inside buildings. In case of outdoor application cables should be secured against UV radiation and the external factors. Cables with improved fire characteristic E90 must be installed on the supporting systems tested according to DIN 4102-12.

Tests:

Flame propagation test for a single insulated cable:

Flame propagation test for vertically-mounted bunched cables:

Test on corrosive gases emitted during burning:

Smoke density emission during burning:

Insulation resistance to long term fire exposure FE180:

Fire integrity function of cable support system E90:

Fire integrity function of cable installation (PH120):

*Water resistance under fire conditions:

EN 60332-1-2, IEC 60332-1-2, VDE 0482-332-1

EN 60332-3-24, IEC 60332-3-24, VDE 0482-332-3-24

EN 60754-2, IEC 60754-2, VDE 0482-754-2

EN 61034-2, IEC 61034-2, VDE 0482-1034-2

PN-IEC 60331-21, IEC 60331-21, VDE 0472-814

DIN 4102-12

EN 50200

EN 50200 Annex E (applies to cables with a diameter not exceeding 20 mm)

Cable characteristics:

- fire resistant (fire retardant, self extinguishing, flame retardant, without self-ignition properties)
- halogen-free
- flame retardant
- no corrosive gases
- low smoke emission
- increased insulation resistance (FE180)
- fire integrity function (E90)
- low fire load (calorific value)

NHXX FE180/PH120/E90 MICA

Fire resistant, halogen free power cable

cables without green-yellow core NHXX-O FE180/PH120/E90 MICA

Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]
B64235	1x10 RE	8,9	188
B64236	1x16 RM	10,5	278
B64237	1x25 RM	12,1	391
B64238	1x35 RM	13,2	497
B64239	1x50 RM	15,5	674
B64240	1x70 RM	16,9	882
B64241	1x95 RM	19,0	1178
B64242	1x120 RM	20,7	1410
B64243	1x150 RM	23,3	1789
B64244	1x185 RM	25,0	2164
B64245	1x240 RM	28,4	2739
B64246	1x300 RM	30,9	3311
B64247	1x400 RM	34,4	4169,0
B64248	1x500 RM	39,3	5347,2
B64249	3x1,5 RE	13,6	259
B64250	3x2,5 RE	14,4	308
B64251	3x4 RE	15,4	377
B64252	3x6 RE	16,5	461
B64253	3x10 RE	18,2	623
B64254	3x16 RM	21,6	921
B64255	3x25 RM	25,1	1318
B64256	3x35 RM	27,7	1693
B64257	3x50 RM	32,8	2355
B64258	3x70 RM	35,8	3032
B64259	3x95 RM	40,2	4054
B64260	3x120 RM	44,1	4905
B64261	3x150 RM	49,7	6258
B64262	3x185 RM	53,9	7565
B64263	3x240 RM	61,1	9646
B64264	4x1,5 RE	14,6	304
B64265	4x2,5 RE	15,5	365
B64266	4x4 RE	16,7	452
B64267	4x6 RE	17,9	559
B64268	4x10 RE	19,8	765
B64269	4x16 RM	23,6	1141
B64270	4x25 RM	27,6	1651
B64271	4x35 RM	30,6	2136
B64272	4x50 RM	36,3	2974
B64273	4x70 RM	39,6	3847
B64274	4x95 RM	44,8	5192
B64275	4x120 RM	49,0	6252
B64276	4x150 RM	55,7	8053
B64277	4x185 RM	59,8	9666
B64278	4x240 RM	67,9	12332

Cat. no.	n x mm ²	Outer diameter** [mm]	Approximate cable weight [kg/km]
B64279	5x1,5 RE	15,8	354
B64280	5x2,5 RE	16,8	430
B64281	5x4 RE	18,0	536
B64282	5x6 RE	19,4	667
B64283	5x10 RE	21,6	920
B64284	5x16 RM	25,8	1382
B64285	5x25 RM	30,4	2023
B64286	5x35 RM	34,0	2644
B64287	5x50 RM	40,1	3658
B64288	5x70 RM	44,2	4769
B64289	5x95 RM	49,7	6409
B64290	5x120 RM	54,8	7790
B64291	5x150 RM	61,8	9951
B64292	5x185 RM	66,5	11955
B64293	7x1,5 RE	16,9	417
B64294	7x2,5 RE	18,1	513
B64295	7x4 RE	19,5	649
B64296	7x6 RE	20,7	818,0
B64297	7x10 RE	23,1	1147,2
B64298	7x16 RM	27,9	1731,7
B64299	7x25 RM	33,6	2615,4
B64300	10x1,5 RE	20,8	557
B64301	10x2,5 RE	22,3	690
B64302	10x4 RE	24,2	881
B64303	12x1,5 RE	21,4	625
B64304	12x2,5 RE	23,0	781
B64305	12x4 RE	24,9	1005
B64306	14x1,5 RE	22,4	701
B64307	16x1,5 RE	23,5	787,1
B64308	14x2,5 RE	24,1	882
B64309	16x2,5 RE	25,3	990,3
B64310	14x4 RE	26,1	1140
B64311	19x1,5 RE	24,7	874
B64312	19x2,5 RE	26,6	1111
B64313	24x1,5 RE	28,7	1079
B64314	24x2,5 RE	31,4	1405
B64315	26x2,5 RE	31,5	1525,9
B64316	30x1,5 RE	30,4	1283
B64317	48x1,5 RE	37,5	1964,3
B64318	30x2,5 RE	33,2	1679
B64319	48x2,5 RE	40,8	2551,7

RE - round conductor, single-wire
RM - round conductor, multi-wire

**Outer diameter tolerance: +/- 5%

Cable Factory BITNER reserves the right to modify specifications without prior notification

Note: on customer's request other cross sections or number of cores can be produced

NHXXH FE180/PH120/E90 MICA

Fire resistant, halogen free power cable

cables with green-yellow core NHXX-J FE180/PH120/E90 MICA

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B64235	1x10 RE	8,9	188
B64236	1x16 RM	10,5	278
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