

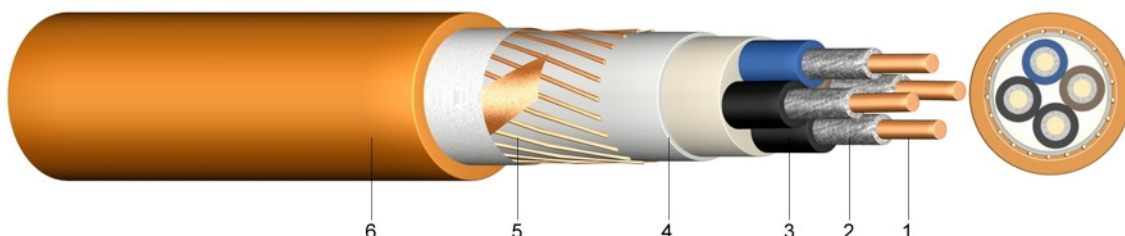
## Datasheet NHXCH E90

Version 1/2009

## Halogen-Free Cable with Concentric Conductor and Circuit Integrity of 90 Minutes

### Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. Circuit integrity of 90 minutes and insulation integrity of 180 minutes.



### Construction:

- 1 ..... solid or stranded bare copper
- 2 ..... flame protective wrapping
- 3 ..... core insulation of halogen-free polymer (HXI 1)
- 4 ..... halogen-free inner sheath
- 5 ..... concentric conductor formed by copper wires with counter helix of copper tape
- 6 ..... outer sheath of halogen-free polymer (HM 4), orange

### Information:

These cables comply the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. according to VDE 0100-710 and 0100-718.

### According to:

DIN VDE 0266  
DIN VDE 0276-604  
DIN EN 60228 class 1 and 2 (construction)  
HD 308 S2 (core identification)  
DIN VDE 0472-814  
DIN 4102-12

### Technical data:

|                         |               |                   |                                   |
|-------------------------|---------------|-------------------|-----------------------------------|
| Nominal voltage $U_0/U$ |               | [V]               | 600 / 1000 Volt                   |
| Test voltage            |               | [V] <sub>AC</sub> | 4000                              |
| Temperature range       | in motion     |                   | -5 °C till +90 °C                 |
| Operating temperature   | short circuit | °C                | 250                               |
| Short circuit time      | max.          | [sec]             | 5                                 |
| Bending radius          | in motion     | x diameter        | 12,0                              |
| Flammability            | standard      |                   | EN 50266-2-4<br>IEC 60332-3 Kat.C |

| Number of cores and nominal cross section mm <sup>2</sup> | Copper figure kg / km | Overall diameter appr.mm | Calorific potential kWh/m | Weight appr. kg/km |
|-----------------------------------------------------------|-----------------------|--------------------------|---------------------------|--------------------|
| 2 x 1,5 RE/1,5                                            | 54                    | 16,0                     | 0,72                      | 300                |
| 2 x 2,5 RE/2,5                                            | 83                    | 17,0                     | 0,81                      | 350                |
| 3 x 1,5 RE/1,5                                            | 73                    | 16,8                     | 1,12                      | 363                |
| 3 x 2,5 RE/2,5                                            | 113                   | 17,9                     | 1,24                      | 434                |
| 3 x 4 RE/4                                                | 168                   | 19,0                     | 1,35                      | 434                |
| 3 x 6 RE/6                                                | 250                   | 21,0                     | 1,49                      | 434                |

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| Number of cores and nominal cross section mm <sup>2</sup> | Copper figure kg / km | Overall diameter appr.mm | Calorific potential kWh/m | Weight appr. kg/km |
|-----------------------------------------------------------|-----------------------|--------------------------|---------------------------|--------------------|
| 3 x 10 RE/ 10                                             | 425                   | 24,1                     | 2,06                      | 949                |
| 3 x 16 RE/ 16                                             | 670                   | 27,3                     | 2,43                      | 1.340              |
| 3 x 25 RE/ 16                                             | 1.045                 | 30,7                     | 3,22                      | 1.766              |
| 3 x 35 RE/ 16                                             | 1.460                 | 33,3                     | 3,64                      | 2.172              |
| 3 x 50 RE/ 25                                             | 2.083                 | 37,4                     | 4,51                      | 2.857              |
| 3 x 70 RE/ 35                                             | 2.913                 | 42,5                     | 5,58                      | 3.839              |
| 3 x 95 RE/ 50                                             | 3.949                 | 47,8                     | 7,00                      | 5.082              |
| 3 x 120 RE/ 50                                            | 4.985                 | 51,4                     | 7,83                      | 6.204              |
| 3 x 150 RE/ 70                                            | 5.313                 | 55,7                     | 9,21                      | 7.340              |
| 3 x 185 RE/ 95                                            | 6.649                 | 61,7                     | 11,07                     | 9.142              |
| 3 x 240 RE/ 120                                           | 8.585                 | 67,9                     | 13,36                     | 11.582             |
| 4 x 1,5 RE/ 1,5                                           | 88                    | 18,0                     | 1,11                      | 450                |
| 4 x 2,5 RE/ 2,5                                           | 138                   | 19,2                     | 1,42                      | 505                |
| 4 x 4 RE/ 4                                               | 208                   | 20,3                     | 1,53                      | 608                |
| 4 x 6 RE/ 6                                               | 310                   | 22,5                     | 1,71                      | 777                |
| 4 x 10 RE/ 10                                             | 525                   | 26,4                     | 2,42                      | 1.153              |
| 4 x 16 RM/ 16                                             | 829                   | 29,3                     | 2,75                      | 1.584              |
| 4 x 25 RM/ 16                                             | 1.190                 | 33,1                     | 3,67                      | 2.120              |
| 4 x 35 RM/ 16                                             | 1.590                 | 36,0                     | 4,14                      | 2.634              |
| 4 x 50 RM/ 25                                             | 2.295                 | 41,1                     | 5,38                      | 3.524              |
| 4 x 70 RM/ 35                                             | 3.210                 | 46,2                     | 6,46                      | 4.695              |
| 4 x 95 RM/ 50                                             | 4.383                 | 52,0                     | 8,09                      | 6.242              |
| 4 x 120 RM/ 70                                            | 5.613                 | 56,0                     | 9,04                      | 7.622              |
| 4 x 150 RM/ 70                                            | 6.813                 | 61,0                     | 10,78                     | 9.096              |
| 4 x 185 RM/ 95                                            | 8.499                 | 67,5                     | 12,92                     | 11.307             |
| 4 x 240 RM/120                                            | 10.985                | 74,4                     | 15,60                     | 14.359             |
| 7 x 1,5 RE/ 1,5                                           | 139                   | 20,9                     | 1,67                      | 588                |
| 12 x 1,5 RE/ 2,5                                          | 214                   | 26,2                     | 2,57                      | 620                |
| 24 x 1,5 RE/ 6                                            | 430                   | 37,6                     | 5,66                      | 1.979              |
| 7 x 2,5 RE/ 2,5                                           | 208                   | 22,1                     | 1,91                      | 696                |
| 12 x 2,5 RE/ 2,5                                          | 348                   | 28,2                     | 2,83                      | 1.168              |
| 24 x 2,5 RE/ 2,5                                          | 725                   | 41,0                     | 6,56                      | 2.465              |

More types on enquiry