

H07RN-F

Industrial flexible cable, insulation and outer sheath in elastomer.
Oil resistant, flame retardant according to IEC/EN 60332-1-2 standard. H07RN-F

DESCRIPTION

Application

The TITANEX® flexible rubber cable range offers exceptional performances and is designed to release you from all your constraints. Robust yet flexible, TITANEX® is easy to use and withstands the toughest of conditions, such as hard-wearing situations, extreme temperatures and most chemicals. For more than 50 years the TITANEX® cable range properties have been recognized as the best choice for all mobile and fixed installations in industrial environments such as construction sites, cranes, machines tools, factories, generators etc.

TITANEX® is also suitable for public environments and temporary events such as festivals or sports competitions, where the cable is often laid directly on the ground with no protection.

The cable may be rated 0,6/1 kV where the installation has built-in protection and for motors in lifting appliances - machine tools - etc.

Installation

This cable can be installed in open air or be buried but with extra mechanical protection.

Conductors laid up

Assembled conductors.

NEW ! MArking : The cross section marking is enlarged to allow easy identification during installation.

USE $\langle \text{har} \rangle N (x \text{ or } G) S \text{ TITANEX}^\circledast$

- N = Number of conductor
- G = with Green/Yellow
- x = without Green/Yellow
- S = cross-section en mm²



STANDARDS

International EN 50525-2-21;
HD 22.4; HD 516;
IEC 60245-4 type 66

National NF C 32-102-4



Lead free
Yes



Cable flexibility
Flexible



Chemical
resistance
Accidental



Water proof
Good



RoHS compliant
Yes



Operating
temperature, range
-25 .. 55 °C



Oil resistance
Yes



Max. conductor
temperature in
service
90 °C

CHARACTERISTICS

Construction characteristics

| | |
|--------------------|--------------------------------|
| Conductor material | Bare copper |
| Insulation | Special cross-linked elastomer |
| Outer sheath | Special cross-linked elastomer |
| Sheath colour | Black |
| Lead free | Yes |

Mechanical characteristics

| | |
|-------------------|----------|
| Cable flexibility | Flexible |
|-------------------|----------|

Usage characteristics

| | |
|--|--------------|
| Silicone free | Yes |
| Chemical resistance | Accidental |
| Water proof | Good |
| RoHS compliant | Yes |
| Operating temperature, range | -25 .. 55 °C |
| Short-circuit max. conductor temperature | 200 °C |
| Oil resistance | Yes |
| Max. conductor temperature in service | 90 °C |

SINGLE CORE

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 6 | 58 | 5.9 | 9.8 | 7.9 | 109 |
| 10 | 80 | 3.4 | 11.9 | 9.5 | 182 |
| 25 | 138 | 1.4 | 15.8 | 12.7 | 369 |
| 35 | 169 | 1.04 | 17.9 | 14.3 | 482 |
| 50 | 207 | 0.75 | 20.6 | 16.5 | 662 |
| 70 | 268 | 0.56 | 23.3 | 18.6 | 895 |
| 95 | 328 | 0.44 | 26.0 | 20.8 | 1144 |
| 120 | 382 | 0.36 | 28.6 | 22.8 | 1430 |
| 150 | 441 | 0.31 | 31.4 | 25.2 | 1740 |
| 185 | 506 | 0.28 | 34.4 | 27.6 | 2160 |
| 240 | 599 | 0.23 | 38.3 | 30.6 | 2730 |
| 300 | 693 | 0.2 | 41.9 | 33.5 | 3480 |
| 400 | 825 | 0.18 | 46.8 | 37.4 | 4510 |

TWO CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 26 | 27.0 | 11.0 | 8.5 | 111 |
| 2.5 | 36 | 16.2 | 13.2 | 10.2 | 161 |

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 4 | 49 | 10.1 | 15.1 | 11.8 | 238 |
| 6 | 63 | 6.7 | 16.8 | 13.1 | 279 |
| 10 | 86 | 3.8 | 22.6 | 17.7 | 538 |
| 16 | 115 | 2.5 | 25.7 | 20.2 | 744 |
| 25 | 149 | 1.68 | 30.7 | 24.3 | 1074 |

THREE CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] | Green/ Yellow core |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|--------------------|
| 1 | 20 | 39.4 | 10.7 | 8.3 | 117 | Yes |
| 1.5 | 23 | 27.0 | 11.9 | 9.2 | 134 | No |
| 1.5 | 26 | 27.0 | 11.9 | 9.2 | 134 | Yes |
| 2.5 | 31 | 16.2 | 14.0 | 10.9 | 195 | No |
| 2.5 | 36 | 16.2 | 14.0 | 10.9 | 195 | Yes |
| 4 | 49 | 10.1 | 16.2 | 12.7 | 290 | Yes |
| 6 | 63 | 7.0 | 18.0 | 14.1 | 346 | Yes |
| 10 | 86 | 4.0 | 24.2 | 19.1 | 663 | Yes |
| 16 | 115 | 2.5 | 27.6 | 21.8 | 924 | Yes |
| 25 | 149 | 1.7 | 33.0 | 26.1 | 1345 | Yes |
| 35 | 185 | 1.21 | 37.1 | 29.3 | 1760 | Yes |
| 50 | 225 | 0.87 | 42.9 | 34.1 | 2390 | Yes |
| 70 | 289 | 0.64 | 48.3 | 38.4 | 3110 | Yes |
| 95 | 352 | 0.5 | 54.0 | 43.3 | 4170 | Yes |

FOUR CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1 | 18 | 34.08 | 12.0 | 9.6 | 144 |
| 1.5 | 23 | 23.3 | 13.1 | 10.2 | 165 |
| 2.5 | 31 | 14.0 | 15.5 | 12.5 | 245 |
| 4 | 42 | 8.71 | 18.0 | 14.0 | 357 |
| 6 | 54 | 5.84 | 20.0 | 15.7 | 443 |
| 10 | 75 | 3.42 | 26.5 | 20.8 | 818 |
| 16 | 100 | 2.2 | 30.1 | 23.8 | 1150 |
| 25 | 127 | 1.44 | 36.6 | 28.9 | 1700 |
| 35 | 158 | 1.04 | 41.1 | 32.5 | 2180 |
| 50 | 192 | 0.75 | 47.5 | 37.7 | 3030 |
| 70 | 246 | 0.56 | 54.0 | 42.7 | 3990 |
| 95 | 298 | 0.44 | 61.0 | 48.4 | 5360 |

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 120 | 346 | 0.36 | 66.0 | 53.0 | 6500 |
| 150 | 395 | 0.31 | 73.0 | 58.0 | 7990 |
| 185 | 450 | 0.28 | 80.0 | 64.0 | 9910 |
| 240 | 538 | 0.23 | 91.0 | 72.0 | 13120 |

FIVE CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1 | 18 | 34.1 | 14.0 | 10.9 | 180 |
| 1.5 | 23 | 23.6 | 14.4 | 11.2 | 238 |
| 2.5 | 31 | 14.0 | 17.0 | 13.3 | 297 |
| 4 | 42 | 8.72 | 19.9 | 15.6 | 453 |
| 6 | 54 | 5.84 | 22.2 | 17.5 | 557 |
| 10 | 75 | 3.43 | 29.1 | 22.9 | 1001 |
| 16 | 100 | 2.2 | 33.3 | 26.4 | 1430 |
| 25 | 127 | 1.44 | 40.4 | 32.0 | 2096 |
| 35 | 158 | 1.04 | 45.1 | 35.6 | 2690 |
| 50 | 192 | 1.04 | 53.0 | 41.8 | 3840 |
| 70 | 246 | 0.56 | 60.0 | 47.5 | 4996 |
| 95 | 298 | 0.44 | 67.0 | 54.0 | 6640 |

SEVEN CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 17 | 23.3 | 18.7 | 14.7 | 349 |
| 2.5 | 21 | 13.9 | 21.8 | 17.1 | 487 |

TWELVE CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 12 | 23.3 | 22.14 | 17.6 | 510 |
| 2.5 | 16 | 13.9 | 26.2 | 20.6 | 702 |

EIGHTEEN CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Max. outer diam. [mm] | Min. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 10 | 20.7 | 26.3 | 20.7 | 730 |
| 2.5 | 14 | 13.9 | 30.9 | 24.4 | 1018 |

TWENTY FOUR CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Min. outer diam. [mm] | Max. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 9 | - | 24.3 | 30.7 | 1000 |
| 2.5 | 12 | 23.3 | 28.8 | 36.4 | 1406 |

THIRTY SIX CORES

| Cross section [mm ²] | Perm. current rating open air [A] | Voltage drop, single phase [V/A.km] | Min. outer diam. [mm] | Max. outer diam. [mm] | Approx. weight [kg/km] |
|----------------------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|------------------------|
| 1.5 | 7 | 23.3 | 27.8 | 35.2 | 1325 |
| 2.5 | 9 | 13.9 | 33.2 | 41.8 | 1879 |

NEW CORES IDENTIFICATION

Core identification in accordance with HD 308 S2 - Identification of cores in cables and flexible cords.

| Number of cores | HD 308 S2 since January 2004 | |
|-----------------|--|-------------------------------------|
| | G (earth core) | X (without earth core) |
| 1 | | Black (preferential) |
| 2 | | Blue + Brown |
| 3* | Green - Yellow + Blue + Brown | Brown + Black + Grey |
| 3** | | Blue + Brown + Black |
| 4 | Green - Yellow + Brown + Black + Grey | Blue + Brown + Black + Grey |
| 5 | Green - Yellow + Blue + Brown + Black + Grey | Blue + Brown + Black + Grey + Black |
| > 5 | White printed numbers + 1 Green - Yellow | White printed numbers |

* For the cables without Green/Yellow with a cross-section >4mm²

** For the cables without Green/Yellow with a cross-section of 1,5mm² & 2,5mm²

COMPLEMENTS

Maximum Operating Temperature

Fixed and protected installation: 90°C

Mobile installation: 60°C

In short-circuit: 200°C

Minimum bending radius

- Dynamic use: 6 to 8x cable outer diameter
- Static use: 3x outer cable diameter if the outer diam is $<$ or $=12\text{mm}$,
4x outer cable diameter if the outer diam is $>12\text{mm}$.

NEW! PACKAGING

- Improved labelling for easy identification of the product
- Key features and specifications highlighted
- Scan QR code to get full technical specifications