

# TITANEX® H07RN-F

H07RN-F TITANEX 5G4 D500m

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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

## DESCRIPTION

### Advantages

- Very high flexibility
- Very high crush resistance
- Good resistance to chemicals, oils and vibrations

TITANEX® H07RN-F cables with EPR rubber insulation and rubber sheathing offer outstanding mechanical properties to meet your most varied requirements. No matter what the installation conditions are, whether indoors or outdoors, in cramped and hazardous environments or in the presence of oils and chemicals, TITANEX combines strength and flexibility to meet all your requirements.

For more than 50 years the TITANEX® cables have been recognized and are the guarantee of reliable installations in industrial environments (factories, construction sites, ports, ...) whether they are fixed or mobile such as for cranes, machines tool connections, motor power supplies .... The mechanical qualities of TITANEX cables also make them suitable for use in event environments, such as festivals, concerts and sport events, where the cable is exposed without protection and can be used several times.

- Core temperature : 90°C
- Operating Voltage : 450/750V mobile, 0.6/1kV fixed. TITANEX H07RN-F cables have been designed to limit the generation and spread of fire and smoke.
- Reaction to fire : Eca (according to EN 50575:2014+A1:2016)
- Flame retardant (IEC 60332-1, C2)

### Installation

TITANEX H07RN-F cables can be laid in cable trays, on shelves, inside ducts or fixed to walls, outside with or without protection. They can also be immersed with additional mechanical protection. Additionally, they can also be installed outdoors without protection (UV resistance).

### Minimum bending radius

- Dynamic : 6 to 8 x outer diameter of the cable.
- Static : 3 x outer diameter of the cable if OD < or = 12mm ; 4x if OD > 12mm.



## DECLARATION OF PERFORMANCE

Eca

## STANDARDS

**International** 2014/68/EU; EN 50525-2-21;  
EU Directive 2011/65/  
EU (RoHS); HD 516;  
IEC 60245-4 type 66

**National** NF C 32-102-4



Conductor flexibility  
**Flexible class 5**



Lead free  
**Yes**



Rated Voltage Uo/U  
(Um)  
**450 / 750 V**



Mechanical  
resistance to  
impacts  
**AG3**



Cable flexibility  
**Flexible**



Chemical  
resistance  
**Accidental**



Water proof  
**Good**



Flame retardant  
**C2, NF C 32-070 &  
IEC 60332-1**

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.

Generated 11/29/22 www.nexans.se Page 1 / 4

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## Laying cable conductors

When pulling the cable, all conductors must be equally stressed. The tensile force must never exceed 15N/mm<sup>2</sup> of total cross-sections.

The maximum tensile force should never exceed 1000N in total, although the above rule may lead to higher values for large cross-sections.

## Marking

TITANEX 90°C n (x or G) s NEXANS CE «har» USEH07RN-F - factory n° Made in France Y Eca n°DoP



Conductor flexibility  
**Flexible class 5**



Lead free  
**Yes**



Rated Voltage Uo/U  
(Um)  
**450 / 750 V**



Mechanical  
resistance to  
impacts  
**AG3**



Cable flexibility  
**Flexible**



Chemical  
resistance  
**Accidental**



Water proof  
**Good**



Flame retardant  
**C2, NF C 32-070 &  
IEC 60332-1**

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Generated 11/29/22 www.nexans.se Page 2 / 4

# TITANEX® H07RN-F

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## CHARACTERISTICS

### Construction characteristics

Conductor material	Bare copper
Conductor flexibility	Flexible class 5
Insulation	Special cross-linked elastomer
Outer sheath	Special cross-linked elastomer
Sheath colour	Black
Lead free	Yes
With Green/Yellow core	Yes
Conductor shape	Circular
With smaller neutral conductor	No

### Dimensional characteristics

Number of cores	5
Conductor cross-section	4 mm <sup>2</sup>
Average insulation thickness	1.0 mm
Average sheath thickness	- mm
Approximate weight	453 kg/km
Maximum outer diameter	19.9 mm
Minimum outer diameter	15.6 mm
Neutral conductor section (when smaller)	- mm <sup>2</sup>

### Electrical characteristics

Rated Voltage U <sub>0</sub> /U (U <sub>m</sub> )	450 / 750 V
Permissible current rating in open air	42 A
Voltage drop, single phase	8.72 V/A.km

### Mechanical characteristics

Mechanical resistance to impacts	AG3
Cable flexibility	Flexible

### Usage characteristics

Silicone free	Yes
Chemical resistance	Accidental
Water proof	Good
Flame retardant	C2, NF C 32-070 & IEC 60332-1
Packaging	Drum
Field of application	-
Length	- m
Max. conductor temperature in service	90 °C
Minimum dynamic operating bending radius	119.4 mm
Minimum static operating bending radius	59.7 mm
Oil resistance	Yes
Operating temperature, range	-25 - 55 °C
RoHS compliant	Yes
Short-circuit max. conductor temperature	250 °C

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Generated 11/29/22 www.nexans.se Page 3 / 4



### ADDITIONAL INFORMATION TITANEX

#### Core identification

(In accordance with European harmonization HD308 S2)

- 1x: black
- 2x: brown - blue
- 3x: brown - black - grey (brown - black - blue if the conductor cross-section is 1.5 or 2.5mm²)
- 3G: brown - blue - green/yellow
- 4x: brown - black - grey - blue
- 4G: brown - black - grey - green/yellow
- 5x: black cores with printed numbers
- 5G: blue - brown - black - grey - green/yellow
- 7 cores and above : black cores with printed numbers

#### Current rating capacities

The data are indicated for continuous duty operation and apply to:

- Maximum conductor temperature = 90 °C
- Nominal frequencies = 50 or 60 Hz
- One cable in free air (on perforated trays)
- Ambient temperature = 30 °C

Data recording from IEC 60364-5-52 or NF C 15-100

#### Voltage drop

The data are based on  $\cos \phi = 0.8$

#### Minimum bending radius

- Static use: 3 x cable outer diameter
- Dynamic use: 6 to 8 x outer cable diameter.