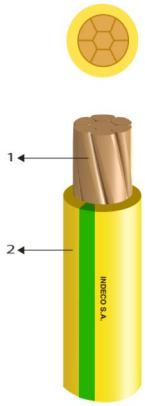
NH-90 450/750 V from 10 mm2; Grounding conductor

NH-90 450/750 V 50 mm2



Nexans Ref.: P00039331-3
Country Ref.: 10053701

CONTACT

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APPLICATION

Special application in places with poor ventilation, where, in case of fire, the emission of corrosive, toxic gases and smoke threatens life and destroys electrical and electronic equipment, for example in residential buildings, offices, industrial plants, movie, theaters, discotheques, hospitals, airports, underground stations, etc. In case of fire, possible victims have higher chances of surviving because they don't breath in toxic gases and have good visibility to escape the area. They are usually installed in conduits and in indoor areas in tray. Not recommended for outdoor installations. Not recommended for outdoor installations.

STANDARDS

PRODUCT

NTP 370.252; NTP-IEC 60228; NTP 370.266-3-31; NTP 370.264-7; IEC 60228

TEST

IEC 60332-1-2; IEC 60332-3-24; IEC 60754-1; IEC 60754-2; IEC 61034-2; UL 2556

CONSTRUCTION

1. Conductor: Compact soft copper, class 2.

2. Insulation: Halogen free thermoplastic compound HFFR.

MAIN CHARACTERISTICS

Fire retardant, zero emission dense smoke and halogen free.

CROSS SECTION

From 10 mm2 up to 95 mm2.

MARKING

INDECO BY NEXANS NH-90 450/750 V - Section - H07Z1-R TYPE 2 - MADE IN PERU - (- sequential length m. || sequential length m. +).

PACKING

Non returnable wooden reels.

COLOUR

Yellow/Green.

Lead free
Yes

Conductor flexibility
Class 2 IEC 60228

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

Maximum operating temperature
90 °C

Minimum operating temperature
-40 °C

Halogen free
Low content Halogen IEC 60754-1

Gases toxicity
Zero toxicity to IEC 60684-2

Gases corrosivity
Low Corrosivity IEC 60754-2

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.

NH-90 450/750 V from 10 mm2; Grounding conductor

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PRODUCT STANDARDS

NTP-IEC 60228: Conductors of insulated cables.

NTP 370.252: Thermoplastic and thermoset insulated cables of rated voltages up to and including 450/750 V.

NTP 370.266-3-31: Low voltage electrical cables. Cable with nominal voltage less than or equal to 450/750 V . **Part 3-31:** Cables with special properties before the fire. Single core cables without cover with halogen-free thermoplastic insulation and low smoke emission.

NTP 370.264-7: Insulation, covering and coating materials for low voltage electrical power cables. **Part 7:** Halogen-free thermoplastic compounds for insulation.

IEC 60228: Conductors of insulated cables.

TESTING STANDARDS

IEC 60332-1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame.

IEC 60332-3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C.

IEC 60754-1: Test on gases evolved during combustion of materials from cables - **Part 1:** Determination of the halogen acid gas content.

IEC 60754-2: Test on gases evolved during combustion of materials from cables - **Part 2:** Determination of acidity (by pH measurement) and conductivity.

IEC 61034-2: Measurement of smoke density of cables burning under defined conditions.

UL 2556: Wire and Cable Test Methods. **Section 9.3:**FT1 (Vertical-Specimen) Flame Test.

CHARACTERISTICS

Construction characteristics	
Conductor material	Soft copper
Insulation	Halogen free thermoplastic material
Colour	Yellow / green
Lead free	Yes
Conductor flexibility	Class 2 IEC 60228
Conductor shape	Compact stranded
Dimensional characteristics	
Conductor cross-section	50 mm²
Total number of wires	19
Conductor diameter	7.9 mm
Minimum insulation thickness	1.4 mm
Nominal outer diameter	10.8 mm
Approximate weight	473 kg/km
Number of cores	1
Electrical characteristics	
Rated Voltage Uo/U (Um)	450/750 V
Dielectric strength	2.5 kV
Time of application Dielectric strength core to screen AC	5 min.

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Electrical characteristics	
Max. DC resistance of the conductor at 20°C	0.387 Ohm/km
Nominal capacitance	1421.0 pF/m
Perm current rating in air 30°C	248 A
Perm current rating in duct 30°C	164 A
Usage characteristics	
Metric marking	Double marking of sequential footage METRIUM
Maximum operating temperature	90 °C
Midspan	No
Minimum operating temperature	-40 °C
Overload maximum core temperature	100 °C
Short-circuit max. conductor temperature	160 °C
Fire safety characteristics	
Halogen free	Low content Halogen IEC 60754-1
Gases toxicity	Zero toxicity to IEC 60684-2
Gases corrosivity	Low Corrosivity IEC 60754-2
Smoke density	Low Smoke Emission IEC 61034-2
Flame retardant	IEC 60332-1-2; FT1
Fire retardant	EN IEC 60332-3-24 (cat C)

CALCULATION OF CURRENT CONDITION L.V.; NH-90

CALCULATION OF CURRENT CONDITION

Calculation of current capacity based on NEC (National Electrical Code NFPA 70) table 310.16 and table 310.17.

Maximum conductor temperature : 90°C.
Ambient air temperature : 30°C.

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