THW-90 450/750 V from 16 mm2

THW-90 50 mm2



Nexans Ref.: P00008187-3
Country Ref.: 10000484

CONTACT

Local Sales
ventas.peru@nexans.com

APPLICATION

In fixed installations, in buildings, dry or wet indoor locations, in all installations requiring a current capacity greater than TW-80 cable.

STANDARDS

PRODUCT

NTP-IEC 60228; NTP 370.252; IEC 60228

TEST

UL 2556

CONSTRUCTION

1. Conductor: Compact soft copper, class 2.

2. Insulation: Compound polyvinyl chloride PVC.

MAIN CHARACTERISTICS

Good dielectric strength, resistance to moisture, grease, oil and heat up to serving temperature. Flame retardant VW-1.

CROSS SECTION

From 16 mm^2 up to 500 mm^2.

MARKING

INDECO S.A. THW-90 450/750 V - Section - OIL RESISTANCE II, DOES NOT PROPAGATE THE FLAME VW-1, MADE IN PERU - Year - Sequential length.

PACKING

Non returnable wooden reels.

COLOUR

To costumer request.

NATIONAL 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.

IEC 60228: Conductors of insulated cables.

Lead free
Yes

Conductor flexibility
Class 2 IEC 60228

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

Oil resistance
Oil resistance II

Maximum operating temperature
90 °C

Flame retardant
UL 1581 VW1

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.

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INTERNATIONAL STANDARDS

IEC 60228: Conductors of insulated cables.

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

UL 2556: Wire and Cable Test Methods. **Section 9.4:** VW1 (Vertical-Specimen) Flame Test.

UL 2556: Wire and Cable Test Methods. **Section 4.1:** Insulation, overall covering, and jacket materials tests.

UL 2556: Wire and Cable Test Methods. **Section 4.2:** Physical properties (ultimate elongation and tensile strength)

UL 2556: Wire and Cable Test Methods. **Section 4.2.8.4:** Gasoline Resistance.

UL 2556: Wire and Cable Test Methods. **Section 7.15:** Flexibility at room temperature after aging.

UL 2556: Wire and Cable Test Methods. **Section 7.2:** Heat shock.

UL 2556: Wire and Cable Test Methods. **Section 7.6:** Cold bend.

UL 2556: Wire and Cable Test Methods. **Section 7.8:** Deformation.

CHARACTERISTICS

Construction characteristics	
Conductor material	Soft copper
Insulating material	PVC
Lead free	Yes
Colour	Black
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	2.03 mm
Nominal outer diameter	12.2 mm
Approximate weight	502 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	1 min.
Max. DC resistance of the conductor at 20°C	0.387 Ohm/km
Nominal capacitance	1023.0 pF/m
Perm current rating in air 30°C	233 A
Perm current rating in duct 30°C	141 A
Usage characteristics	
Oil resistance	Oil resistance II
Maximum operating temperature	90 °C
Overload maximum core temperature	130 °C

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Usage characteristics	
Short-circuit max. conductor temperature	250 °C
Midspan	No
Fire safety characteristics	
Flame retardant	UL 1581 VW1

CALCULATION OF CURRENT CONDITION: BUILDING WIRE L.V.; 90°C

CURRENT CAPACITY VALUES AND CURRENT CALCULATION CONDITIONS BASED ON IEC 60364-5-52:2009 :

TABLE B.52.2 (METHOD A1: Two single-core cables in conduit in a thermally insulated wall).
TABLE B.52.10 (METHOD F: Two single-core cables in the air in flat formation and in contact).
Maximum conductor temperature : 90°C.
Ambient air temperature : 30°C.

The above values were corrected with a correction factor for the operating temperature of 90°C.

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