

THW-90 450/750 V from 16 mm²

THW-90 16 mm²



Nexans Ref.: P00008087-6
Country Ref.: 10000473

CONTACT

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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 mm² up to 500 mm².

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 U₀/U (Um)
450/750 V



Oil resistance
Oil resistance II



Maximum operating temperature
90 °C



Flame retardant
UL 1581 VW1

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	16 mm ²
Total number of wires	7
Conductor diameter	4.6 mm
Minimum insulation thickness	1.5 mm
Nominal outer diameter	7.9 mm
Approximate weight	182 kg/km
Number of cores	1

Electrical characteristics

Rated Voltage U ₀ /U (U _m)	450/750 V
Dielectric strength	2.0 kV
Time of application Dielectric strength core to screen AC	1 min.
Max. DC resistance of the conductor at 20°C	1.15 Ohm/km
Nominal capacitance	822.0 pF/m
Perm current rating in air 30°C	117 A
Perm current rating in duct 30°C	72 A

Usage characteristics

Oil resistance	Oil resistance II
Maximum operating temperature	90 °C
Overload maximum core temperature	130 °C

Usage characteristics

Short-circuit max. conductor temperature	250 °C
Midspan	No

Fire safety characteristics

Flame retardant	UL 1581 VW1
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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.