

THW-90 +PLUS AWG 450/750 V



CONTACT

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DESCRIPTION

Copper cable with Low Smoke PVC insulation and **smooth surface**, whose operating temperature is 90°C. General application in fixed installations, resistant to humidity and heat. **The ribbed surface offers better cable sliding during installation.**

APPLICATION

Special application in those poorly ventilated residential environments in which a fire increases the possibility of survival of possible victims by having a good visibility for rescue and escape from the place due to: low emission of dense smoke, low emission of harmful gases and does not spread the fire. They are generally installed in pipes for fixed installations, in buildings, inside places with dry or humid environment and in general in all installations that require higher current capacity than the TW-80 +PLUS cable. Not recommended for outdoor installations.

STANDARDS

PRODUCT

NTP 370.250; NTP 370.252; UL 83

TEST

IEC 61034-2; UL 2556; IEC 60332-3-25

CONSTRUCTION

1. Conductor: Soft copper, class B.
2. Insulation: Compound polyvinyl chloride PVC Low Smoke.

From 14 AWG up to 10 AWG in double-layer insulation.

MAIN CHARACTERISTICS

Good dielectric strength, resistance to moisture, grease and heat up to serving temperature. The insulation has the following characteristics when the cable is exposed to fire:

Low dense emission smoke: Delayed dense smoke emission.

Fire retardant according IEC 60332-3-25 CAT. D.

GAUGE

From 14 AWG up to 10 AWG.



Conductor flexibility
Class B



Rated Voltage U_0/U (Um)
450/750 V



Maximum operating temperature
90 °C



Smoke density
Low IEC 61034-2



Flame retardant
UL 2556 VW1



Fire retardant
EN IEC 60332-3-25 (cat D)

MARKING

INDECO S.A. CB/THW-90 +PLUS - Gauge(AWG) - Section(mm²) - 450/750 V - LOW SMOKE - DOES NOT PROPAGATE THE FIRE CAT. D - MADE IN PERU

PACKING

Rolls of 100 meters or on non-returnable wooden reels.

COLOUR

See identification in product list.

PRODUCT STANDARDS

NTP 370.250: Conductors of insulated cables.

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

UL 83: Thermoplastic-Insulated Wires and Cables.

TESTING STANDARDS

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

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

IEC 60332-3-25: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category D.

CHARACTERISTICS

Construction characteristics

Conductor material	Soft copper
Insulating material	PVC Low Smoke
Conductor flexibility	Class B

Electrical characteristics

Rated Voltage U ₀ /U (Um)	450/750 V
Dielectric strength	2.0 kV
Time of application Dielectric strength core to screen AC	1 min.

Usage characteristics

Maximum operating temperature	90 °C
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Fire safety characteristics

Smoke density	Low IEC 61034-2
Flame retardant	UL 2556 VW1
Fire retardant	EN IEC 60332-3-25 (cat D)

DIMENSIONAL DATA

Reference	Cond.cross sect.(AWG/ KCMIL)	Total nb wires	Conductor diam. [mm]	Min. insulation thick. [mm]	Nom. outer diam. [mm]	Approx. weight [kg/km]
01	14 AWG	7	1.7	0.76	3.4	27

THW-90 +PLUS AWG 450/750 V

Reference	Cond.cross sect.(AWG/ KCMIL)	Total nb wires	Conductor diam. [mm]	Min. insulation thick. [mm]	Nom. outer diam. [mm]	Approx. weight [kg/km]
02	12 AWG	7	2.2	0.76	3.9	39
03	10 AWG	7	2.8	0.76	4.4	58

ELECTRICAL DATA

Reference	Cond.cross sect.(AWG/ KCMIL)	Max. DC Resist. Cond. 20°C [Ohm/km]	Perm rating in duct 30°C [A]	Nominal capacitance [pF/m]
01	14 AWG	8.97	25	641.0
02	12 AWG	5.65	30	776.0
03	10 AWG	3.547	40	983.0

PRODUCT LIST

Nexans Ref.	Country Ref.	Name	Colour
 P00040570-1	10055737	THW-90 +PLUS 450/750 V 14 AWG, C400	Blue
 P00040569-1	10055743	THW-90 +PLUS 450/750 V 14 AWG, C400	Red
 P00040568-1	10055721	THW-90 +PLUS 450/750 V 14 AWG, C400	Black
 P00040574-1	10055730	THW-90 +PLUS 450/750 V 12 AWG, C300	Red
 P00040563-1	10055703	THW-90 +PLUS 450/750 V 12 AWG, R100	Black
 P00040532-2	10055667	THW-90 +PLUS 450/750 V 14 AWG, R100	Red
 P00040565-1	10055714	THW-90 +PLUS 450/750 V 14 AWG, R100	Blue
 P00040566-1	10055715	THW-90 +PLUS 450/750 V 14 AWG, R100	White
 P00040530-2	10055666	THW-90 +PLUS 450/750 V 12 AWG, R100	Red
 P00040562-1	10055701	THW-90 +PLUS 450/750 V 12 AWG, R100	Blue
 P00040561-1	10055702	THW-90 +PLUS 450/750 V 12 AWG, R100	White
 P00040531-3	10055665	THW-90 +PLUS 450/750 V 10 AWG, R100	Red
 P00040559-1	10055683	THW-90 +PLUS 450/750 V 10 AWG, R100	Blue
 P00040558-1	10055684	THW-90 +PLUS 450/750 V 10 AWG, R100	White
 P00040557-1	10055685	THW-90 +PLUS 450/750 V 10 AWG, R100	Black
 P00040564-1	10055716	THW-90 +PLUS 450/750 V 14 AWG, R100	Black
 P00040575-1	10055725	THW-90 +PLUS 450/750 V 12 AWG, C300	Blue
 P00040571-1	10055727	THW-90 +PLUS 450/750 V 12 AWG, C300	Black

 = Make to order,  = In stock,

CALCULATION OF CURRENT CONDITION L.V.; 90°C

CALCULATION OF CURRENT CONDITION

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