

EcoPlus

THHN/THWN-2 Copper Conductor



Description

EcoPlus THHN/THWN-2 is an electrical copper conductor twisted Class 2 cable, insulated with thermoplastic polyvinyl chloride (PVC) with a thermoplastic nylon outer jacket.

Standard Specifications

The EcoPlus THHN/THWN-2 conductors are built based on the following:

- Standards: **UL 83** and **IEC 60228**.
- Certificate: **CIDET # 06062**.

Features

- The EcoPlus THHN/THWN-2 conductor is manufactured from 1.5mm² to 240mm² in Class 2 Cable.
- Designed to operate at 90°C maximum temperature in dry, damp and wet locations at 600 V maximum voltage.
- The nylon jacket provides mechanical protection and resistance against petroleum derivatives, chemical agents and oils (GRII).
- Requires low pull tension and provides ease of installation due to the nylon jacket low friction coefficient.
- Conductors from 1.5 mm² to 35 mm² are manufactured in multiple colors: black, red, white, blue and green.
- Conductors 50.0 mm² and larger are manufactured in black color only, the black insulation is ultraviolet rays resistant (SR) and certified to be installed in cable trays (CT).



- The EcoPlus THHN/THWN-2 conductor is VW-1 (Vertical flame capable) certified, it does not propagate flame.
- The lead-free PVC insulation is ecologically friendly.
- The conductor complies with RoHS (*Restriction of Hazardous Substances*) regulation.
- The conductor can be marked with a series of legends, according to their features and options, they are identified as follows:

Grabado	Interpretación
THHN	For dry and humid locations*
THWN-2	For dry, humid and wet locations*
MTW	Machine tools wiring approved
AWM	Household appliances wiring approved
GRI and GRII	Hydrocarbons and oils resistant
For CT USE	Capable to be installed in cable trays (pans or baskets)
SUN RES	Ultraviolet rays and Sunlight Resistant (SRII)
VW-1	Vertical Flame test compliant (does not propagate flames)

* 90°C maximum temperature in the conductor

Aplicaciones

- Due to its smaller external diameter, high current capacity and its ease of installation, the EcoPlus THHN/THWN-2 conductor is ideal for fixed electrical installations in residential, commercial and industrial buildings: power and lighting feeders, wiring of electrical connections and for the circuits' branches.
- Due to the nylon protective jacket it is capable

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to be installed in petrochemical plants, gas stations and where oil is present. Its high insulation operating temperature (90°C) are approved to for industrial applications connecting motors, control panels, as well as in the internal wiring of machine tools and household appliances.

- The 50.0 mm² gauge and larger sizes allows be installed in cable trays (pans or baskets) covered or exposed to sunlight. Also, in the air, with supported messenger.

Technical Information

Dimensions and nominal features

The conductor operating amperage is defined by the installation conditions and operating temperatures identified in TABLE B.52.5 of IEC 60364-5-52 latest version

Gauge	Wires	Insulation Thickness		Jacket Thickness		External Diameter		Weight	DC Max. @ 20°C Resistance
		in	mm	in	mm	in	mm		
1,5	7	0,015	0,38	0,004	0,10	0,100	2,54	17,36	12,100
2,5	7	0,015	0,38	0,004	0,10	0,117	2,98	26,70	7,410
4	7	0,015	0,38	0,004	0,10	0,138	3,50	41,07	4,610
6	7	0,020	0,51	0,004	0,10	0,170	4,33	61,86	3,080
10	7	0,030	0,76	0,005	0,13	0,230	5,83	107,33	1,830
16	7	0,030	0,76	0,005	0,13	0,270	6,87	163,74	1,150
25	19	0,040	1,02	0,006	0,15	0,345	8,76	257,10	0,727
35	19	0,040	1,02	0,006	0,15	0,390	9,90	348,50	0,524
50	19	0,050	1,27	0,007	0,18	0,452	11,48	474,72	0,387
70	19	0,050	1,27	0,007	0,18	0,520	13,21	673,55	0,268
95	19	0,050	1,27	0,007	0,18	0,592	15,03	914,52	0,193
120	37	0,060	1,52	0,008	0,20	0,694	17,62	1163,85	0,153
150	37	0,060	1,52	0,008	0,20	0,755	19,17	1421,18	0,124
240	37	0,060	1,52	0,008	0,20	0,929	23,60	2291,21	0,075

Note: The values given may vary according to the manufacturing tolerances



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