Millimetric Fleximax

Flexible Milimetric THHN/THWN

GENERAL INFORMATION

Fleximax THHN/THWN millimetric is a copper core of twisted class 5 conductor, insulated with thermoplastic polyvinyl chloride (PVC) with a thermoplastic nylon outer jacket.

FEATURES

- The Fleximax THHN/THWN conductor is manufactured from 1.5 mm2 to 240 mm2 in class 5 conductors.
- The nylon jacket provides mechanical protection and resistance against petroleum derivatives, chemical agents and oils (GRI and GRII).
- Due to the nylon's jacket low friction coefficient, the conductors require low pull tension and provides ease of installation.
- The lead-free PVC insulation is ecologically friendly and has low smoke emissions per unit length.

CERTIFICATIONS AND DESIGN STANDARDS

Standards of design: ASTM B3, ASTM B172, IEC 60228 and UL 83

Certifications: CIDET 06062

CABLE DESIGN

Conductor material	Copper
Core insulation material	Polyvinyl chloride (PVC)

ELECTRICAL & THERMAL PARAMETERS

Nominal voltage U [V]	600

INSTALLATION DETAILS

Application	Building Installations;Residential Installations;Industrial Installations
Outdoor installation	Yes
Underground installation	No
Suitable as installation cable	Yes

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PHYSICAL & CHEMICAL PROPERTIES

Flame retardant	Yes
Oil resistant	Yes
Moisture resistance	Yes

SPECIFIC APPLICATIONS

- Due to its smaller external diameter, high current capacity and its ease of installation, the Fleximax THHN/THWN millimetric 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 to be installed in petrochemical plants, gas stations and where oil is present. Its high insulation operating temperature (90°C) makes it suitable for industrial applications connecting motors, control panels, as well as internal wiring of machine tools and household appliances.
- The 50 mm2 gauge and larger sizes can be installed in cable trays (pans or baskets) covered or exposed to sunlight. Also, the conductors can be installed directly exposed on support messenger.

LEGEND ON THE CABLE

This cable, in some gauges, contains a legend indicating meter-by-meter sequential marking, which allows for easy identification of the required length and cutting point.

For 1.5 mm2 to 2.5 mm2 gauges, the legend to be printed is:

PRYSMIAN (R) PHELPS DODGE (R) FLEXIMAX (R) ELECTRIC CABLE THHN OR THWN (GAUGE) mm2 GAS AND OIL RES II VW-1 600V - ACCORDING TO IEC60228/UL83 (year)

For 4 mm2 to 16 mm2 gauges, the legend to be printed is:

PRYSMIAN (R) PHELPS DODGE (R) FLEXIMAX (R) ELECTRIC CABLE THHN OR THWN (GAUGE) mm2 GAS AND OIL RES II VW-1 600V CIDET CERTIFICATE NUMBER 06062 - ACCORDING TO IEC60228/UL83 (year)

For 25 mm2 to 35 mm2 gauges, the legend to be printed is:

PRYSMIAN (R) PHELPS DODGE (R) FLEXIMAX (R) ELECTRIC CABLE THHN OR THWN (GAUGE) mm2 GAS AND OIL RES II VW-1 600V CIDET CERTIFICATE NUMBER 06062 - ACCORDING TO IEC60228/UL83 (year) ▪(SEQUENTIAL)m (GAUGE) mm2

For 50 mm2 to 240 mm2 gauges in color black, the legend to be printed is:

PRYSMIAN (R) PHELPS DODGE (R) FLEXIMAX (R) ELECTRIC CABLE THHN OR THWN (GAUGE) mm2 GAS AND OIL RES II SUN RES VW-1 600V CIDET CERTIFICATE NUMBER 06062 - ACCORDING TO IEC60228/UL83 (year) ▪(SEQUENTIAL)m (GAUGE) mm2

For 50 mm2 to 240 mm2 gauges in colors different than black, the legend to be printed is:

PRYSMIAN (R) PHELPS DODGE (R) FLEXIMAX (R) ELECTRIC CABLE THHN OR THWN (GAUGE) mm2 GAS AND OIL RES II VW-1 600V CIDET CERTIFICATE NUMBER 06062 - ACCORDING TO IEC60228/UL83 (year) ▪(SEQUENTIAL)m (GAUGE) mm2

DIMENSIONS & NOMINAL FEATURES

Nominal cross section conductor [mm²]	Nominal thickness insulation [mm]	Diameter conductor [mm]	Cable weight [kg/km]	Conductor resistance at 20° C [Ohm/km]
1.5	0.38	2.74	17.77	13.3
2.5	0.38	3.15	26.92	7.98
4	0.38	3.66	40.65	4.95
6	0.51	4.42	60.25	3.3
10	0.76	5.92	104.37	1.91
16	0.76	7.6	163.14	1.21
25	1.02	9.59	252.32	0.78
35	1.02	10.85	366.9	0.55
50	1.27	12.02	504.97	0.39
70	1.27	13.65	718.6	0.27
95	1.52	15.36	965.3	0.21
120	1.52	17.54	1,222.46	0.16
150	1.52	19.12	1,496.92	0.13
185	1.52	20.52	1,756.34	0.11
240	1.52	23.34	2,402.77	0.08

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