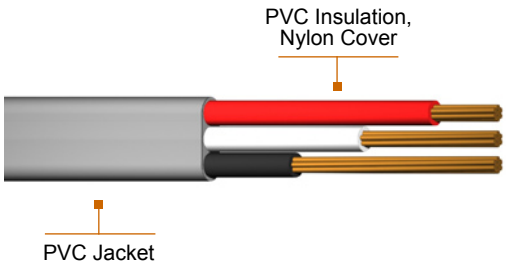
NM-B

600 V Copper Multiconductor Flat Cables



Detail Description or Construction

Type NM-B is an insulated multiconductor composed by solid or stranded bare annealed copper conductors, each single conductor has a thermoplastic insulation of PVC (Polyvinyl Chloride) and protected by a Nylon sheath, in addition, the whole multiconductor is protected by a thermoplastic flat insulation of PVC. Designed to operate at not more than 600V, the NM-B is manufactured in constructions duplex (two single conductors) and triplex (three single conductors), also in gauges from 18 AWG up to 10 AWG. The internal individual conductors are THHN or TFN type, therefore NM-B product was designed to operate at 90ºC of temperature inside the conductor in dry and wet conditions, as well as 75ºC in water immersed conditions.

The Nylon sheath provides mechanical protection against to chemical agents, petroleum derivatives and oils. Thermoplastic insulation does not propagate the flame. Product color identification according to its construction is the following:
Duplex: black - white
Triplex: black - white - red

Application

NM-B conductors have been designed to operate in dry and wet conditions; its main application is to perform electric circuits derivations to outlets and light turn out/turn off devices in residential and commercial systems.

Standards / Testing Specifications

- NM-B conductors have been designed according to ASTM B3, UL-83, UL-719 and UL-1581 specifications and requirements of the latest version of the National Electrical Code (NEC).

Marking

PHELPS DODGE NM-B (GAUGE) AWG (AREA MM2) 600 V.

Installation

NM-B can be installed in a visible way over walls or inside openings in concrete or wood divisions, whenever the conductors will not be exposed to nails or screws.

Not allowed use and recommendations:

- When the conductor is installed in a surface it must be totally adhered to such surface.
- When be necessary the conductor shall be protected using a metallic or plastic conduit.
- Sharp points shall be eliminated to ensure conductor integrity when wiring.
- If use staples it shall be carefully in order to avoid conductor damage, minimum separation between staples or any other attach element shall be 1.37m, except near electric cabinets where distance is reduced to 0.30m.
- When the conductor goes thru holes or openings in wood, concrete or metal it is considered as attached or held.
- NM-B conductors shall no be used in service entrance applications.
- NEC does not allow the use of NM-B conductors in places like cinemas, theaters, danger places classified by NEC Art. 511-3, buried under concrete or in building with more than 3 floors in height.
- NM-B conductors shall no be in corrosive environments.
- When the NM-B conductors need to be bend the minimum curvature shall be at least 5X the conductor height.

It is recommended that the installation instructions indicated by the Local Electric Code, or any equivalent, be followed, so that the safeguarding of persons and the integrity of the product will not be affected by deficiencies in the installation. For current ampacity details please refer to NEC table 310-16 at 60ºC column at 30ºC of ambient temperature.

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Conductor Size	Number of Wires	Insulation Thickness	Outer Jacket Thickness	External Diameter (aprox.)		Weight (aprox)	Standard Package
				mm			
AWG		mm	mm	Minor	Greater	kg / km	m / roll
2 x 18	1	0.38/0.10	0.64	3.6	5.8	33	100
2 x 16	1	0.38/0.10	0.64	3.9	6.4	44	100
2 x 14	1	0.38/0.10	0.64	4.3	7.1	61	100
2 x 12	1	0.38/0.10	0.64	4.7	8.0	88	100
2 x 10	1	0.51/0.10	0.64	5.6	9.8	135	100
3 x 14	1	0.38/0.10	0.64	4.3	10.0	90	100
3 x 12	1	0.38/0.10	0.64	4.7	11.3	130	100
3 x 10	1	0.51/0.10	0.64	5.6	14.0	199	100