

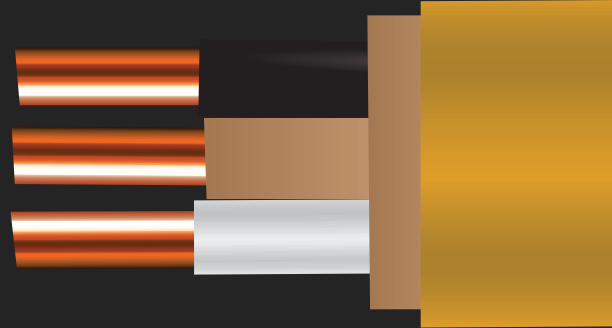
# Type NM-B (Nonmetallic Sheathed Cable) Copper Conductor - 600 Volt



Power Your Environment

## SCOPE / APPLICATION:

600 Volt, multi conductor cable constructed with copper conductors, thermoplastic insulation (PVC/Nylon) rated 90°C with a bare copper ground, enclosed within an overall polyvinyl chloride jacket. The allowable ampacity is limited to 60°C per the NEC. Type NM-B Cables are primarily used in dry locations for residential wiring as branch circuits for outlets, switches and other loads. Type NM-B Cables are permitted for both exposed and concealed work in normally dry locations except as prohibited by NEC and also permitted to be installed or fished in air voids in masonry block or tile walls where locations are not damp or wet. Voltage for all applications is 600 volts.



## CONSTRUCTION PARAMETERS:

Conductor:	Fully annealed bare copper: Solid conductor per ASTM B3 Stranded conductor per ASTM B3 & ASTM B8
Insulation:	Extruded flame retardant, heat and moisture resistant colored Polyvinyl Chloride (PVC) compound.
Overall Jacket:	Extruded tough Polyamide (nylon) compound.
Color Code:	2 Conductor: Black / White 3 Conductor: Black / White / Red 4 Conductor: Black / White / Red / Blue 2/2 Conductor: Black / White / Red / White with Red stripe
Ground:	Bare uncoated solid copper wrapped with a fire-retardant paper tape.
Assembly:	<ul style="list-style-type: none"><li>Flat configuration: Paper wrapped ground placed between the insulated conductors and laid parallel</li><li>Round configuration: Insulated conductors and ground twisted together.</li></ul>
Separator:	A suitable paper wrap applied over the assembled conductors
Jacket:	Overall colored Polyvinyl Chloride (PVC) compound color coded for quick conductor size identification as follows: i. 14 AWG ii. 12 AWG iii. 10 AWG iv. 8 AWG thru 2 AWG

## RATINGS / FEATURES:

- NM – Indicates a factory assembly of two or more insulated conductors enclosed within an overall nonmetallic jacket.
- THHN — Indicates a single conductor having flame-retardant and heat-resistant thermoplastic insulation with a jacket of extruded nylon or equivalent material. The wire is rated 90°C dry only.
- RoHS Compliant

## INDUSTRY STANDARDS / COMPLIANCES:

UL 719	Standard for Nonmetallic Sheathed Cables
UL 83	Standard for Safety Thermoplastic-Insulated Wires and Cables
ASTM B-3	Standard Specification for Soft or Annealed Copper Wire
ASTM B-8	Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
NEC, NFPA 70	National Electrical Code

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## SPECIFICATIONS TABLE:

Conductor			Insulation Thickness (mils)	Jacket Thickness (mils)	Ground Wire		Approx. Cable Dimension	Approx. Net Weight	Allowable Ampacities (1) @ 30°C Ambient
Size (AWG)	Conductor Type	Number of Conductors	PVC	Nylon	Size (AWG)	Conductor Type	(Inch)	(lbs./1000 ft.)	60°C
<b>TWO CONDUCTORS - FLAT CONFIGURATION</b>									
14	Solid	2	15	4	14	Solid	0.168 x 0.367	57	15
12	Solid	2	15	4	12	Solid	0.179 x 0.411	82	20
10	Solid	2	20	4	10	Solid	0.213 x 0.484	124	30
8	Stranded	2	30	5	10	Solid	0.283 x 0.614	189	40
6	Stranded	2	30	5	10	Solid	0.321 x 0.691	258	55
<b>THREE CONDUCTORS - FLAT &amp; ROUND CONFIGURATIONS</b>									
<b>Flat Configuration</b>									
14	Solid	3	15	4	14	Solid	0.177 x 0.456	75	15
12	Solid	3	15	4	12	Solid	0.193 x 0.525	110	20
10	Solid	3	20	4	10	Solid	0.235 x 0.640	164	30
<b>Round Configuration</b>									
14	Solid	3	15	4	14	Solid	0.300	75	15
12	Solid	3	15	4	12	Solid	0.342	108	20
10	Solid	3	20	4	10	Solid	0.424	168	30
8	Stranded	3	30	5	10	Solid	0.557	253	40
6	Stranded	3	30	5	10	Solid	0.627	355	55
4	Stranded	3	40	6	8	Solid	0.818	572	70
2	Stranded	3	40	6	8	Solid	0.936	834	95
<b>FOUR CONDUCTORS - ROUND CONFIGURATION</b>									
14	Solid	2/2	15	4	14	Solid	0.349	91	15
14	Solid	4	15	4	14	Solid	0.357	91	15
12	Solid	2/2	15	4	12	Solid	0.395	132	20
12	Solid	4	15	4	12	Solid	0.394	132	20
10	Solid	4	20	4	10	Solid	0.505	201	30

Notes:

1. Overall jacket thickness for all NM-B cables is 30 mils.
2. Dimensions and weights are nominal, subject to industry standards and manufacturing tolerances.

(1) Allowable ampacities shown are for general use as specified in the 2014 Edition of the National Electrical Code: Section 310.15 – Table 310.15(B)(16).

