



NMWU Copper

Copper Conductors, 300V / -40°C MIN, 60°C MAX, PVC / Nylon Insulation, PVC Jacket



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid per ASTM B3 or Combination unilay-stranded copper conductors per ASTM B787.
2. **Insulation:** All phases are insulated with heat-resistant thermoplastic polyvinyl chloride (PVC) insulation and nylon sheath
3. **Jacket:** Polyvinyl Chloride PVC jacket, sunlight, moisture, and fungus-resistant

- Conductor Colors: 2/C Black, White
- Conductor Colors: 3/C Black, Red, White

APPLICATIONS AND FEATURES:

Southwire's CSA-NWMU cables may be used for underground installations, including direct burial. It may also be used for environments exposed to the weather in dry and wet locations. The maximum allowable conductor temperature is 60°C. The minimum recommended installation temperature is -40°C for two-conductor cables (sizes AWG 14 to AWG 6) and -25°C for all other sizes. For three-conductor cables the minimum recommended installation temperature is -10°C (with suitable handling procedures). Material should be properly stored above 0°C for 24 hours prior to installation. The maximum voltage rating for all intended applications is 300 volts. Consult the Canadian Electrical Code¹ for further information related to applications.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B787 19 Wire Combination Unilay-Stranded Copper Conductors
- CSA C22.2 No. 48 non-metallic sheathed cable
- FT1 Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)

SAMPLE PRINT LEGEND:

SOUTHWIRE CSA LL90458 12 AWG 2 CDRS BLACK/WHITE NMD90 NYLON ROMEX(R) BRAND SIMpull (TM) (-25C) 300 VOLTS FT1 COVERED & MADE UNDER U.S. PAT. NOS 7557301 & 7411129. [Jacket Colour is yellow]





Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Conductor Number | Diameter Over Conductor | Conductor Stranding | Insulation Thickness | Ground Size | Jacket Thickness | Approx. OD | Copper Weight | Overall Weight |
|--------------|---------------|------------------|-------------------------|---------------------|----------------------|--------------|------------------|-------------|---------------|----------------|
| | AWG/ Kcmil | | inch | | mils | No. x AWG | mil | inch | lbs/1000ft | lbs/1000ft |
| 471870◇ | 8 | 2 | 0.143 | 7 | 40 | 1 x 10 | 45 | 0.382x0.775 | 133 | 253 |

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

| Cond. Size | Conductor Number | Min. Bend Radius | DC Resistance at 25°C | AC Resistance at 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity Raceway 75°C | Allowable Ampacity Raceway 90°C |
|---------------|------------------|------------------|-----------------------|-----------------------|----------------------------|---------------------------------|---------------------------------|
| AWG/ Kcmil | | Inches | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 8 | 2 | 3.100 | 0.653 | 0.786 | 0.052 | 50 | 55 |

† Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

† Ampacities have been adjusted for more than Three Current-Carrying Conductors.

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

