# Southwire® Machine Flex® Power XHHW-2 600V and RW90 1000V

Type XHHW-2 600 Volts or 1000 Volts and Type RW90 1000 Volts. Rated 90°C Dry/Wet, -40°C. Flexible Tinned Copper Conductors. Cross-Linked Polyethylene (XLPE) Insulation. Rated High-Heat, Flame, Moisture, Gasoline, Oil and Sunlight Resistant.

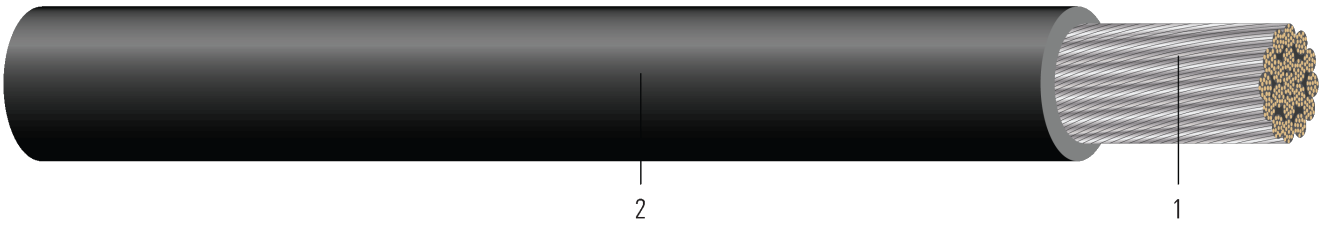



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** 8 AWG - 4/0 AWG: Class K, Flexible Stranded, Softdrawn Tinned Copper. 250 KCMIL - 750 KCMIL; Class I, Flexible Concentric Ropelay Stranded, Softdrawn Tinned Copper
2. **Insulation:** Black, Sunlight, Gas & Oil Resistant Cross-Linked Polyethylene (XLPE)

## APPLICATIONS AND FEATURES:

Southwire Type XHHW-2 & RW90 conductors are primarily used in conduit, cable tray or other recognized raceways for service, feeders, and branch circuit wiring as specified in the National Electric Code (NEC) and the Canadian Electrical Code (CEC). XHHW-2 & RW90 conductors may be used at conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. Voltage rating for XHHW-2 conductors is 600 volts and 1000 volts. Voltage rating for RW90 conductors is 1000 volts. Flexible tinned copper stranding allows for ease of installation in locations with limited space, as well as including for use in electrical equipment for industrial facilities with harsh chemical environments, telecommunications applications and data centers.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- CSA C22.2 No. 38 Thermoset-insulated wires and cables
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive**
- Sunlight Resistance

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## SAMPLE PRINT LEGEND:

8AWG-1AWG
SOUTHWIRE® E30117 (PLANT ID) (UL) (XX AWG) # OF STRANDS STRAND CLASS X XX mm² TYPE XHHW-2 1000V SR PRII GRII 90(D)C DRY OR WET -40(D)C VW-1 OR SIS 600V ---(CSA) LL90458 RW90 1000V SR -40(D)C XLPE ---(NOM) – ANCE LS ---CE RoHS-2 MADE IN USA --- (MM/DD/YYYY)

1/0 AWG-4/0 AWG
SOUTHWIRE® E30117 (PLANT ID) (UL) (XX AWG) # OF STRANDS STRAND CLASS X XX mm² TYPE XHHW-2 1000V SR PRII GRII 90(D)C DRY OR WET -40(D)C FOR CT USE FT4 OR SIS 600V ---(CSA) LL90458 RW90 1000V TC SR -40(D)C XLPE FT4 ---(NOM) – ANCE LS ---CE RoHS-2 MADE IN USA --- (MM/DD/YYYY)

250 Kcmil-750 Kcmil
SOUTHWIRE® E30117 (PLANT ID) (UL) (XX AWG) # OF STRANDS STRAND CLASS X XX mm² TYPE XHHW-2 1000V SR PRII GRII 90(D)C DRY OR WET -40(D)C FOR CT USE FT4 ---(CSA) LL90458 RW90 1000V TC SR -40(D)C XLPE FT4 ---(NOM) – ANCE LS ---CE RoHS-2 MADE IN USA --- (MM/DD/YYYY)

### Table 1 – Weights and Measurements

| Cond. Size | Cond. Number | Cond. Strands | Diameter Over Conductor | Insul. Thickness | Approx. OD | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|
| AWG/Kcmil | No. | No. | inch | mil | inch | lb/1000ft | |
| 8 | 1 | 168 | 0.153 | 45 | 0.243 | 64 | BK |
| 6 | 1 | 259 | 0.198 | 45 | 0.288 | 103 | BK |
| 4 | 1 | 413 | 0.235 | 45 | 0.325 | 147 | BK |
| 2 | 1 | 651 | 0.302 | 45 | 0.392 | 231 | BK |
| 1 | 1 | 836 | 0.347 | 55 | 0.457 | 296 | BK |
| 1/0 | 1 | 1044 | 0.354 | 55 | 0.464 | 364 | BK |
| 2/0 | 1 | 1254 | 0.4 | 55 | 0.51 | 415 | BK |
| 3/0 | 1 | 1666 | 0.533 | 55 | 0.643 | 579 | BK |
| 4/0 | 1 | 2109 | 0.55 | 55 | 0.66 | 721 | BK |
| 250 | 1 | 627 | 0.605 | 65 | 0.735 | 823 | BK |
| 350 | 1 | 855 | 0.67 | 65 | 0.8 | 1126 | BK |
| 500 | 1 | 1225 | 0.858 | 65 | 0.988 | 1595 | BK |
| 600 | 1 | 1480 | 0.963 | 80 | 1.123 | 1972 | BK |
| 750 | 1 | 1850 | 1.094 | 80 | 1.254 | 2496 | BK |
| 1000 | 1 | 2516 | 1.19 | 80 | 1.35 | 3183 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.


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## Table 2 – Electrical and Engineering Data

| Cond. Size | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance | Max Pull Tension | Max Pull Tension | Min Bending Radius | Allowable Ampacity At 60°C | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | Ω/1000ft | Ω/1000ft | Ω/1000ft | lb | lb | inch | Amp | Amp | Amp |
| 8 | 0.666 | 0.827 | 0.052 | 132 | 132 | 1 | 40 | 50 | 55 |
| 6 | 0.419 | 0.52 | 0.051 | 209 | 209 | 1.2 | 55 | 65 | 75 |
| 4 | 0.263 | 0.326 | 0.048 | 333 | 333 | 1.3 | 70 | 85 | 95 |
| 2 | 0.167 | 0.207 | 0.045 | 530 | 530 | 1.6 | 95 | 115 | 130 |
| 1 | 0.133 | 0.165 | 0.046 | 669 | 669 | 1.8 | 110 | 130 | 145 |
| 1/0 | 0.105 | 0.13 | 0.044 | 844 | 844 | 1.9 | 125 | 150 | 170 |
| 2/0 | 0.085 | 0.105 | 0.043 | 1064 | 1064 | 2 | 145 | 175 | 195 |
| 3/0 | 0.067 | 0.083 | 0.042 | 1342 | 1342 | 2.6 | 165 | 200 | 225 |
| 4/0 | 0.053 | 0.066 | 0.041 | 1692 | 1692 | 2.6 | 195 | 230 | 260 |
| 250 | 0.045 | 0.056 | 0.041 | 2000 | 2000 | 2.9 | 215 | 255 | 290 |
| 350 | 0.032 | 0.041 | 0.04 | 2800 | 2800 | 3.2 | 260 | 310 | 350 |
| 500 | 0.022 | 0.029 | 0.039 | 4000 | 4000 | 4 | 320 | 380 | 430 |
| 600 | 0.018 | 0.024 | 0.039 | 4800 | 4800 | 5.6 | 350 | 420 | 475 |
| 750 | 0.015 | 0.021 | 0.038 | 6000 | 6000 | 6.3 | 400 | 475 | 535 |
| 1000 | 0.011 | 0.016 | 0.037 | 8000 | 8000 | 6.8 | 455 | 545 | 615 |

† Ampacities based upon 2023 NEC Table 310.16. 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.


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