

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.

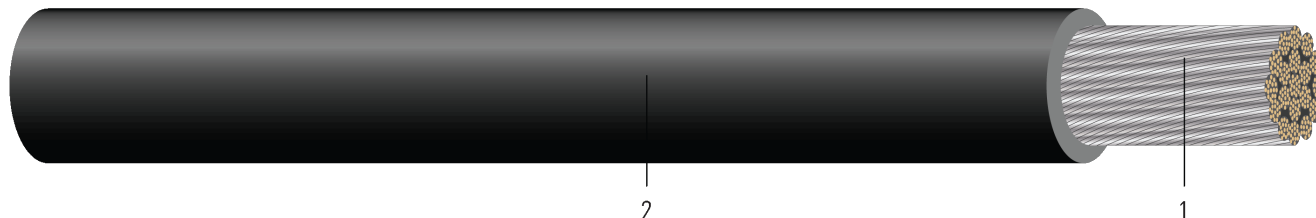


Image not to scale. See Table 1 for dimensions.

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 PR II
 GR II 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 PR II
 GR II 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 PR II
 GR II 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

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	inch	lb/1000ft	lb/1000ft
TBA	8	168	0.153	45	0.249	52	67
TBA	6	259	0.198	60	0.324	89	114
TBA	4	413	0.235	60	0.361	130	159
TBA	2	651	0.302	60	0.428	210	246
TBA	1	836	0.340	80	0.500	266	329
TBA	1/0	1044	0.354	80	0.520	334	391
TBA	2/0	1254	0.400	80	0.566	381	444
TBA	3/0	1666	0.533	80	0.699	535	616
TBA	4/0	2109	0.550	80	0.716	676	759
TBA	250	627	0.605	90	0.791	764	867
TBA	350	855	0.670	90	0.856	1061	1173
TBA	500	1225	0.858	90	1.044	1514	1654
TBA	600	1480	0.963	90	1.149	1859	2015
TBA	750	1850	1.094	90	1.280	2368	2543
TBA	1000	2516	1.190	90	1.376	3045	3234

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item



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Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
TBA	8	0.9	132	0.715	0.861	0.052	40	50	55
TBA	6	1.2	209	0.450	0.541	0.051	55	65	75
TBA	4	1.4	333	0.282	0.340	0.048	70	85	95
TBA	2	1.7	530	0.179	0.216	0.045	95	115	130
TBA	1	2.0	669	0.143	0.172	0.046	110	130	145
TBA	1/0	2.1	844	0.113	0.136	0.044	125	150	170
TBA	2/0	2.2	1064	0.090	0.108	0.043	145	175	195
TBA	3/0	2.7	1342	0.072	0.087	0.042	165	200	225
TBA	4/0	2.8	1692	0.057	0.069	0.041	195	230	260
TBA	250	3.1	2000	0.047	0.057	0.041	215	255	290
TBA	350	3.4	2800	0.033	0.042	0.040	260	310	350
TBA	500	5.2	4000	0.023	0.031	0.039	320	380	430
TBA	600	5.7	4800	0.019	0.027	0.039	350	420	475
TBA	750	6.4	6000	0.016	0.024	0.038	400	475	535
TBA	1000	6.8	8000	0.012	0.020	0.037	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.

