Southwire® Machine Flex® Power XHHW-2/RW90 1000V

Type XHHW-2 1000 Volts and Type RW90 1000 Volts. Rated 90°C Dry/Wet, -40°C. Flexible Bare 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 Bare Copper. 250 KCMIL - 750 KCMIL; Class I, Flexible Concentric Ropelay Stranded, Softdrawn Bare 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. The voltage rating for XHHW-2/RW90 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 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**

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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	60	0.318	110	BK
4	1	413	0.235	60	0.355	154	BK
2	1	651	0.302	60	0.422	239	BK
1	1	836	0.347	80	0.507	312	BK
1/0	1	1044	0.354	80	0.514	381	BK
2/0	1	1254	0.4	80	0.56	433	BK
3/0	1	1666	0.533	80	0.693	601	BK
4/0	1	2109	0.55	80	0.71	744	BK
250	1	627	0.605	90	0.785	849	BK
350	1	855	0.67	90	0.85	1154	BK
500	1	1225	0.858	90	1.038	1630	BK
600	1	1480	0.963	90	1.143	1988	BK
750	1	1850	1.094	90	1.274	2513	BK
777.7	1	1924	0.966	90	1.146	2375	BK
1000	1	2516	1.19	90	1.37	3202	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	1.3	55	65	75
4	0.263	0.326	0.048	333	333	1.4	70	85	95
2	0.167	0.207	0.045	530	530	1.7	95	115	130
1	0.133	0.165	0.046	669	669	2	110	130	145
1/0	0.105	0.13	0.044	844	844	2.1	125	150	170
2/0	0.085	0.105	0.043	1064	1064	2.2	145	175	195
3/0	0.067	0.083	0.042	1342	1342	2.8	165	200	225
4/0	0.053	0.066	0.041	1692	1692	2.8	195	230	260
250	0.045	0.056	0.041	2000	2000	3.1	215	255	290
350	0.032	0.041	0.04	2800	2800	3.4	260	310	350
500	0.022	0.029	0.039	4000	4000	5.2	320	380	430
600	0.018	0.024	0.039	4800	4800	5.7	350	420	475
750	0.015	0.021	0.038	6000	6000	6.4	400	475	535
777.7	0.015	0.021	0.038	6221	6221	5.7	400	483	543
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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