Southwire® Machine Flex® Power XLPE RW90

Type XHHW-2 600 Volts or 1000 Volts and Type RW90 600V. 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, soft-drawn bare copper. 250 kcmil - 750 kcmil; Class I, flexible concentric ropelay stranded, soft-drawn 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 (CE Code). 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 600 volts. Flexible bare 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**
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661
- Sunlight Resistance

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SAMPLE PRINT LEGEND:

8 AWG - 1 AWG:

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

Table 1 – Weights and Measurements

Stock Number	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	
TBA	8	1	168	0.153	45	0.243	64	BK
TBA	6	1	266	0.198	45	0.288	103	BK
TBA	4	1	420	0.235	45	0.325	147	BK
TBA	2	1	665	0.302	45	0.392	231	BK
TBA	1	1	836	0.347	55	0.457	296	BK
TBA	1/0	1	1064	0.354	55	0.464	364	BK
459838!	2/0	1	1330	0.4	55	0.51	415	GN
457126	3/0	1	1672	0.533	55	0.603	578	BK
457084	4/0	1	2109	0.55	55	0.642	730	BK
457085	250	1	627	0.605	65	0.745	850	BK
457086	300	1	741	0.638	65	0.778	1020	BK
457087	350	1	893	0.67	65	0.81	1177	BK
459839	500	1	1221	0.858	65	0.988	1595	BK
459840	600	1	1480	0.963	80	1.123	1972	BK
138906	750	1	1850	1.094	80	1.266	2553	BK
TBA	1000	1	2527	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
! Green insulation
^ Green with yellow stripe insulation
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	2.4	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	3	215	255	290
300	0.038	0.048	0.041	2400	2400	3.1	240	285	320
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

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

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