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 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 (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 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
- 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:

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 600V 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 600V 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 600V 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	Cond. Strands	Diameter Over Conductor	Insul. Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	inch	mil	inch	lb/1000ft
TBA	8	168	0.153	45	0.243	66
669542^	6	266	0.198	45	0.281	103
TBA	6	266	0.198	45	0.288	106
TBA	4	420	0.235	45	0.325	150
669603	2	665	0.302	45	0.392	240
TBA	1	836	0.397	55	0.507	306
TBA	1/0	1064	0.400	55	0.510	374
TBA	2/0	1323	0.400	55	0.510	421
TBA	3/0	1666	0.533	55	0.643	587
672963	4/0	2109	0.550	55	0.651	713
672912	250	608	0.605	65	0.746	848
672911	350	888	0.670	65	0.896	1177
672906	500	1221	0.858	65	1.036	1634
672042	600	1480	0.963	80	1.122	2023
672043	750	1850	1.094	80	1.262	2582
TBA	1000	2527	1.190	80	1.350	3211

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
^ Green with yellow stripe insulation

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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	0.715	0.861	0.052	132	132	0.9	40	50	55
6	0.450	0.541	0.051	209	209	1.1	55	65	75
6	0.450	0.541	0.051	209	209	1.1	55	65	75
4	0.282	0.340	0.048	333	333	1.3	70	85	95
2	0.179	0.216	0.045	530	530	1.5	95	115	130
1	0.143	0.172	0.046	669	669	2.0	110	130	145
1/0	0.113	0.136	0.044	844	844	2.0	125	150	170
2/0	0.090	0.108	0.043	1064	1064	2.0	145	175	195
3/0	0.072	0.087	0.042	1342	1342	2.5	165	200	225
4/0	0.057	0.069	0.041	1692	1692	2.6	195	230	260
250	0.047	0.057	0.041	2000	2000	2.9	215	255	290
350	0.033	0.042	0.040	2800	2800	3.5	260	310	350
500	0.023	0.031	0.039	4000	4000	5.1	320	380	430
600	0.019	0.027	0.039	4800	4800	5.6	350	420	475
750	0.016	0.024	0.038	6000	6000	6.3	400	475	535
1000	0.012	0.020	0.037	8000	8000	6.7	455	545	615

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