

Copper SIMpull XHHW-2® / RW90

Power Cable 600 or 1000 Volt Single Conductor Copper, Cross Linked Polyethylene (XLPE) with SIMpull technology for easier pulling.



See Table 3 For Other Color Options



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Cross Linked Polyethylene (XLPE) with SIMpull technology

APPLICATIONS AND FEATURES:

APPLICATION

Southwire® SIMpull XHHW-2® copper conductors are primarily used in conduit, cable tray or other recognized raceways for services, feeders, and branch circuit wiring, as specified in the National Electrical Code. SIMpull XHHW-2® copper conductors may be used in wet or dry locations at temperatures not to exceed 90°C. Voltage rating for XHHW-2 conductors is 600 volts or 1000 volts for all sizes. Suitable for use in Health Care Facilities per Section 517.160 of the National Electrical Code where a dielectric constant of less than 3.5 maybe specified. This cable is designed to be installed without the application of pulling lubricant.

Note: Simpull technology on Sizes # 8 and Larger. Non-Simpull technology on #14, #12, #10.

FEATURES

- Sunlight resistant - #8 AWG and larger
- Gasoline and Oil Resistant II - #8 AWG and larger
- CT Rated - 1/0 AWG and Larger
- FT1 - #8 AWG and lager
- FT4 - 350 kcmil and lager
- SIS - Sizes 14 through 8 AWG
- RW90 - #8 AWG and larger
- -40°C cold bend - #8 AWG and larger
- RoHS/REACH Compliant

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B787 19 Wire Combination Unilay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 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



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Southwire

**CABLETECH
SUPPORT™**

Services

- IEEE 1202/FT4 Flame Test (70,000 BTU/hr) 350kcmil and Larger
- Federal Specification A-A-59544
- NMJ-J-451-ANCE Thermoset insulated wires and cables
- NOM-063-SCFI Electrical Products – Conductors – Safety Requirements

SAMPLE PRINT LEGEND:

14 AWG thru 10 AWG

SOUTHWIRE E30117 (UL) XX AWG (XXXmm²) CU TYPE XHHW-2 600V/1000V OR SIS 600 VOLTS NOM-ANCE

350 kcmil and Larger

{SQFTG} SOUTHWIRE{R} {NOLUBE}{R} {SIMPULL}{R} E30117 {UL} TYPE XHHW-2 XXX KCMIL (XXX{MM²}) CU 600V/1000V SR FOR CT USE GRII PRII FT4 - LL90458 {CSA} RW90 XLPE XXX KCMIL (XXX{mm²}) CU 600V GRI PRI -40{D}C SR FT4 - {NOM}-ANCE LS - PAT WWW.PATENTSW.COM

Table 1 – Weights and Measurements

Cond. Size AWG/Kcmil	Strand Count No. of Strands	Diameter Over Conductor inch	Insul. Thickness mil	Approx. OD inch	Copper Weight lb/1000ft	Approx. Weight lb/1000ft
12	Solid	0.081	30	0.141	19	25
10	Solid	0.102	30	0.162	30	37
14	7	0.071	30	0.131	12	17
12	7	0.089	30	0.147	20	24
10	7	0.113	30	0.173	32	36
8	7	0.142	45	0.238	50	64
6	7	0.178	45	0.274	81	97
4	7	0.225	45	0.321	128	148
3	7	0.252	45	0.348	162	184
2	7	0.283	45	0.379	204	228
1	19	0.322	55	0.435	258	291
1/0	19	0.362	55	0.480	326	363
2/0	19	0.405	55	0.524	410	452
3/0	19	0.456	55	0.574	518	564
4/0	19	0.512	55	0.630	655	707
250	37	0.558	65	0.700	771	838
300	37	0.611	65	0.753	926	998
350	37	0.661	65	0.803	1080	1158
400	37	0.706	65	0.848	1235	1317
500	37	0.789	65	0.908	1543	1632
600	61	0.866	80	1.038	1852	1973
750	61	0.968	80	1.140	2315	2449
1000	61	1.117	80	1.289	3087	3240

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item



Table 2 – Electrical and Engineering Data










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
12	0.5	52	1.630	2.000	0.054	20	25	30
10	0.6	83	1.020	1.250	0.050	30	35	40
14	0.5	32	2.580	3.170	0.058	15	20	25
12	0.5	52	1.630	2.000	0.054	20	25	30
10	0.6	83	1.020	1.250	0.050	30	35	40
8	0.9	132	0.640	0.786	0.052	40	50	55
6	1.0	209	0.403	0.495	0.051	55	65	75
4	1.2	333	0.253	0.310	0.048	70	85	95
3	1.3	420	0.201	0.246	0.047	85	100	115
2	1.5	530	0.159	0.195	0.045	95	115	130
1	1.7	669	0.126	0.154	0.046	110	130	145
1/0	1.9	844	0.100	0.122	0.044	125	150	170
2/0	2.0	1064	0.079	0.097	0.043	145	175	195
3/0	2.2	1342	0.063	0.078	0.042	165	200	225
4/0	2.5	1692	0.050	0.062	0.041	195	230	260
250	2.8	2000	0.042	0.053	0.041	215	255	290
300	3.0	2400	0.035	0.045	0.041	240	285	320
350	3.2	2800	0.030	0.0390	0.040	260	310	350
400	3.3	3200	0.026	0.035	0.040	280	335	380
500	3.6	4000	0.021	0.029	0.039	320	380	430
600	5.1	4800	0.018	0.025	0.039	350	420	475
750	5.7	6000	0.014	0.022	0.038	400	475	535
1000	6.4	8000	0.010	0.018	0.037	455	545	615

* Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

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



Stock Code Colors and Standard Package

Size	Package	Black	Red	Blue	White	Brown	Orange	Yellow	Gray	Green
										
14 (7)	Reel: 2500' Spool: 500'	112920	370932	370940	370924	370981	370973	370957	371005	370965
12 (Solid)	Reel: 2500' Spool: 500'	550220	550222	550224	550221	550227	550226	550225		550223
12 (7)	Reel: 2500' Spool: 500'	112938	371039	371047	371021	371088	371070	371054	371104	371062
10 (Solid)	Reel: 2500' Spool: 500'	137240	550213	550215	550212	550218	550217	550216		550214
10 (7)	Reel: 2500' Spool: 500'	112946	371138	371146	371120	371187	371179	371153	371203	371161
8	Reel: 1000'/2500'/5000' Spool: 500'	112953	952713	588683	952721	553060	550361	553062	553063	952739
6	Reel: 1000'/2500'/5000' Spool: 500'	112961	952705	959916	678607	683383	683391	553067	553068	553230
4	Reel: 1000'/2500'/5000' Spool: 500'	112979	952697	553846	678599	553847	553848	553849	553850	558627
3	Reel: 1000' Spool: 500'	267278								890469
2	Reel: 1000'/2500'/5000' Spool: 500'	112987	218115	553087	218107	553088	553089	553090	553091	474122
1	Reel: 1000'/2500'/5000' Spool: 500'	112995	550761	550762	550808	553854	553855	553856	553857	550766
1/0	Reel: 1000'/2500'/5000' Spool: 500'	113001	553860	553861	553858	553863	553864	553865	553866	553862
2/0	Reel: 1000'/2500'/5000' Spool: 500'	113019	553871	553872	553870	553873	553874	553876	553877	552070
3/0	Reel: 1000'/2500'/5000' Spool: 500'	113027	553881	553882	553880	553885	553886	553887	553888	553884
4/0	Reel: 1000'/2500'/5000' Spool: 500'	113035	553078	553079	553077	553080	553082	553083	553084	552071
250	Reel: 1000'/2500'/5000' Spool: 500'	113043	553893	553894	553892	553896	553897	553898	553899	553895
300	Spool: 500'	113050				561129	561130	561131	584039	
350	Reel: 1000'/2500'	113068	553903	553904	553902	553906	553907	553908	553910	553905
400	Reel: 1000'/2500' Spool: 500'	113076	561701	561702	561132	561111	561112	561113	561703	558666
500	Reel: 1000'/2500' Spool: 500'	113084	550369	550261	553071	550260	550262	550259	553074	553072
600	Reel: 1000'/2500' Spool: 500'	113092	553914	553915	553913	553918	553919	553920	553921	553916
700	N/A	586272								
750	Reel: 2500'	113100	553927	553930	553926	553930	553931	553932	553934	553929
1000	N/A	113134								

