



# 1/C CU 600V Tray Rated LSZH RW90 VW-1 Cable SOLONONplus® Living Building Challenge™ (LBC) Red List Free

SOLONONplus® 600 Volt Single Conductor Copper Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Insulation Type RW 90

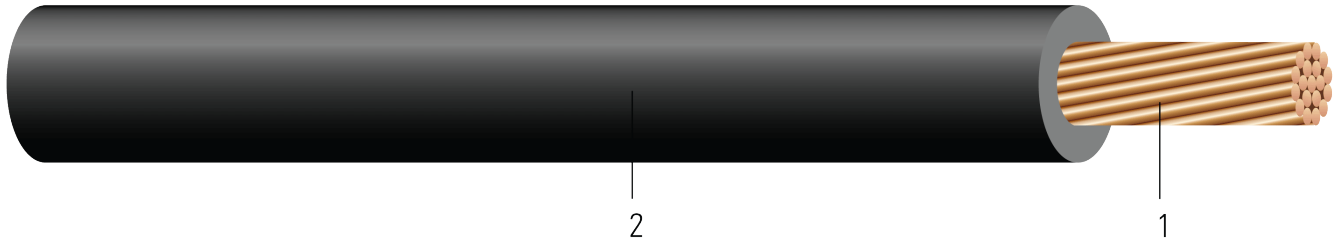


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Insulation:** SOLONONplus® Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Type RW 90 VW-1

## APPLICATIONS AND FEATURES:

Southwire's 600 Volt SOLONONplus® Type RW 90 VW-1 cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial and aerially when supported by a messenger. These cables are ideal for use in establishments where low smoke and low acid emissions are desired for public safety and health and where superior electrical properties are desired. These cables are capable of operating continuously at the 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.

- a. The conductors are available in tinned and flexible copper stranding upon request.
- b. Color Available upon request
- c. Listed and marked CSA VW-1 for all sizes
- d. The halogen content is less than 0.2% and Acid gas less than 2.0%
- e. CSA listed for TC use on 1/0 and Larger. 70,000 BTU/Hr. Vertical Flame Test (CSA C22.2 NO. 2556)
- f. CSA listed FT4/IEEE 1202 and ST-1 (1/0 and larger)
- g. -40°C Cold impact and cold bend
- h. PRI Oil resistance I at 60°C & PRII Oil resistance II at 75°C
- i. GRI gasoline and oil resistance at 60°C
- j. GRII gasoline and oil resistance at 75°C
- k. REACH & RoHS compliant
- l. Listed and marked HAL-FREE (Halogen Free) per CSA 2556-15
- m. Living Building Challenge™ (LBC) Red List Free

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B170 Oxygen Free Electrolytic Copper (available upon request)
- CSA C22.2 No. 38 Thermoset-insulated wires and cables





- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- CSA C22.2 No. 2556 / UL 2556 Cable Test Methods
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- ICEA T-33-655/MIL-C-24643 Low Smoke Halogen Free (LSHF) Polymeric Jackets
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- ISO 9001 Quality management
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & Larger)
- NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways

**SAMPLE PRINT LEGEND:**

- 1/0 AWG and larger cables  
SOUTHWIRE SOLONONplus (TM) LSZH XLPO 156205 {CSA} 1/0 AWG (XXX mm<sup>2</sup>) CU RW90 600V VW-1 HAL-FREE TC PRI  
PRII GRII -40°C SR FT4 ST-1 {SEQUENTIAL METER MARKS} SEQ METERS [date code]





**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	
678792	1/0	1	19	0.361	55	0.471	362	BK
678802	2/0	1	19	0.405	55	0.515	451	BK
678811	3/0	1	19	0.456	55	0.566	564	BK
678824	4/0	1	19	0.512	55	0.622	704	BK
678832	250	1	37	0.558	65	0.688	837	BK
678841	350	1	37	0.661	65	0.791	1158	BK
678850	500	1	37	0.789	65	0.919	1634	BK
678859	600	1	61	0.865	80	1.025	1976	BK
678794	1/0	1	19	0.361	55	0.471	362	BE
678804	2/0	1	19	0.405	55	0.515	451	BE
678814	3/0	1	19	0.456	55	0.566	564	BE
678826	4/0	1	19	0.512	55	0.622	704	BE
678834	250	1	37	0.558	65	0.688	837	BE
678843	350	1	37	0.661	65	0.791	1158	BE
678852	500	1	37	0.789	65	0.919	1634	BE
678861	600	1	61	0.865	80	1.025	1976	BE
678795	1/0	1	19	0.361	55	0.471	362	BN
678806	2/0	1	19	0.405	55	0.515	451	BN
678815	3/0	1	19	0.456	55	0.566	564	BN
678827	4/0	1	19	0.512	55	0.622	704	BN
678835	250	1	37	0.558	65	0.688	837	BN
678844	350	1	37	0.661	65	0.791	1158	BN
678853	500	1	37	0.789	65	0.919	1634	BN
678863	600	1	61	0.865	80	1.025	1976	BN
678790	1/0	1	19	0.361	55	0.471	362	GN
678800	2/0	1	19	0.405	55	0.515	451	GN
678809	3/0	1	19	0.456	55	0.566	564	GN
678822	4/0	1	19	0.512	55	0.622	704	GN
678830	250	1	37	0.558	65	0.688	837	GN
678838	350	1	37	0.661	65	0.791	1158	GN
678848	500	1	37	0.789	65	0.919	1634	GN
678857	600	1	61	0.865	80	1.025	1976	GN
678796	1/0	1	19	0.361	55	0.471	362	OE
678807	2/0	1	19	0.405	55	0.515	451	OE
678816	3/0	1	19	0.456	55	0.566	564	OE
678828	4/0	1	19	0.512	55	0.622	704	OE
678836	250	1	37	0.558	65	0.688	837	OE
678845	350	1	37	0.661	65	0.791	1158	OE
678855	500	1	37	0.789	65	0.919	1634	OE
678864	600	1	61	0.865	80	1.025	1976	OE
678793	1/0	1	19	0.361	55	0.471	362	RD





Stock Number	Cond. Size AWG/Kcmil	Cond. Number No.	Cond. Strands No.	Diameter Over Conductor inch	Insul. Thickness mil	Approx. OD inch	Approx. Weight lb/1000ft	Jacket Color
678803	2/0	1	19	0.405	55	0.515	451	RD
678812	3/0	1	19	0.456	55	0.566	564	RD
678825	4/0	1	19	0.512	55	0.622	704	RD
678833	250	1	37	0.558	65	0.688	837	RD
678842	350	1	37	0.661	65	0.791	1158	RD
678851	500	1	37	0.789	65	0.919	1634	RD
678860	600	1	61	0.865	80	1.025	1976	RD
678791	1/0	1	19	0.361	55	0.471	362	WE
678801	2/0	1	19	0.405	55	0.515	451	WE
678810	3/0	1	19	0.456	55	0.566	564	WE
678823	4/0	1	19	0.512	55	0.622	704	WE
678831	250	1	37	0.558	65	0.688	837	WE
678840	350	1	37	0.661	65	0.791	1158	WE
678849	500	1	37	0.789	65	0.919	1634	WE
678858	600	1	61	0.865	80	1.025	1976	WE
678798	1/0	1	19	0.361	55	0.471	362	YW
678808	2/0	1	19	0.405	55	0.515	451	YW
678817	3/0	1	19	0.456	55	0.566	564	YW
678829	4/0	1	19	0.512	55	0.622	704	YW
678837	250	1	37	0.558	65	0.688	837	YW
678846	350	1	37	0.661	65	0.791	1158	YW
678856	500	1	37	0.789	65	0.919	1634	YW
678865	600	1	61	0.865	80	1.025	1976	YW

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	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance	Max Pull Tension	Max Pull Tension	Min Bending Radius	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	lb	lb	inch	Amp	Amp
1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
3/0	0.064	0.078	0.042	1342	1342	2.2	200	225
4/0	0.051	0.062	0.041	1692	1692	2.4	230	260
250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475
1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
3/0	0.064	0.078	0.042	1342	1342	2.2	200	225
4/0	0.051	0.062	0.041	1692	1692	2.4	230	260
250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475
1/0	0.102	0.122	0.044	844	844	1.8	150	170
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1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
3/0	0.064	0.078	0.042	1342	1342	2.2	200	225
4/0	0.051	0.062	0.041	1692	1692	2.4	230	260
250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475





Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance	Max Pull Tension	Max Pull Tension	Min Bending Radius	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	lb	lb	inch	Amp	Amp
1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
3/0	0.064	0.078	0.042	1342	1342	2.2	200	225
4/0	0.051	0.062	0.041	1692	1692	2.4	230	260
250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475
1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
3/0	0.064	0.078	0.042	1342	1342	2.2	200	225
4/0	0.051	0.062	0.041	1692	1692	2.4	230	260
250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475
1/0	0.102	0.122	0.044	844	844	1.8	150	170
2/0	0.081	0.097	0.043	1064	1064	2.0	175	195
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250	0.043	0.053	0.041	2000	2000	2.7	255	290
350	0.031	0.039	0.040	2800	2800	3.1	310	350
500	0.022	0.029	0.039	4000	4000	3.6	380	430
600	0.018	0.025	0.039	4800	4800	5.1	420	475

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

**Stock Codes and Colors**

Size	BLK	BRN	ORG	YLW	WHT	RED	BLU	GRN
1/0	678792	678795	678796	678798	678791	678793	678794	678790
2/0	678802	678806	678807	678808	678801	678803	678804	678800
3/0	678811	678815	678816	678817	678810	678812	678814	678809
4/0	678824	678827	678828	678829	678823	678825	678826	678822
250	678832	678835	678836	678837	678831	678833	678834	678830
350	678841	678844	678845	678846	678840	678842	678843	678838
500	678850	678853	678855	678856	678849	678851	678852	678848
600	678859	678863	678864	678865	678858	678860	678861	678857

