CU 600V LSZH XHHW-2 SOLONON*plus*®

SOLONONplus® 600Volt Single Conductor Copper Cross Linked Polyolefin Low Smoke Zero Halogen (XLPO LSZH) Insulation Type XHHW-2

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 XHHW-2

APPLICATIONS AND FEATURES:

Southwire's 600 Volt SOLONONplus® Type XHHW-2 cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, 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. NEC compliant
c. The halogen content is less than 0.2% and Acid gas less than 2.0%
d. Passes UL VW-1 # 8 AWG and larger
e. 70,000 BTU/Hr. Vertical Flame Test
f. UL listed for CT use on 1/0 and Larger
g. UL listed FT4/IEEE 1202 and ST-1 (#8 and larger)
h. -40°C Cold impact and cold bend
i. Oil Resistant I and II
j. UV/Sunlight resistant black color
k. Color Available upon request

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B170 Oxygen Free Electrolytic Copper (available upon request)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- UL 2885 Acid Gas, Acidity and conductivity of combusted materials and assessment of halogens
- 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

- RoHS-2 (European Directive 2011/65/EU)
- ISO 9001 Quality management
- ISO 14001 Environmental management systems standard
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (1/0 Larger)
- NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways

SAMPLE PRINT LEGEND:

SOUTHWIRE SOLONONplus{TM} E30117 MASTER-DESIGN {UL} AWG XX BARE OR TINNED CU LSZH XLPO TYPE XHHW-2 HF -40{D}C SR PRI PRII FT4 ST-1 600V {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Insul. Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/Kcmil	No. of Strands	inch	mil	inch	lb/1000ft	lb/1000ft
649593	14	1	0.064	30	0.124	13	18
647361	14	7	0.07	30	0.13	13	18
599254◊	12	1	0.081	30	0.141	20	27
649601	12	7	0.087	30	0.147	20	27
599263◊	10	1	0.102	30	0.162	32	40
646542	10	7	0.111	30	0.171	32	40
599328◊	8	7	0.139	45	0.229	51	67
679070^	6	7	0.174	45	0.264	81	100
599337◊	6	7	0.174	45	0.264	81	100
599346◊	4	7	0.221	45	0.311	129	153
641691	3	7	0.248	45	0.342	162	182
599355◊	2	7	0.277	45	0.367	205	235
643752	1	19	0.321	55	0.432	258	287
641693	1/0	19	0.360	55	0.472	326	370
599509	2/0	19	0.406	58	0.522	411	462
599519	4/0	19	0.510	55	0.608	653	708
641699	250	37	0.611	65	0.672	772	837
649645	300	37	0.611	65	0.741	772	926
641703	600	61	0.866	80	1.026	1853	1949

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
^ # 6AWG Stock Number 679070 is Tinned Copper Conductor

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Shield Short Circuit Current 6 Cycles	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	Amp
649593	14	0.5	33	2.63	3.288	0.036	935	15	15	15
647361	14	0.5	33	2.63	3.288	0.036	935	15	15	15
599254◊	12	0.6	52	1.66	2.075	0.034	1485	20	20	20
649601	12	0.6	52	1.66	2.075	0.034	1485	20	20	20
599263◊	10	0.7	83	1.04	1.3	0.032	2360	29	30	30
646542	10	0.7	83	1.04	1.3	0.032	2360	29	30	30
599328◊	8	0.9	132	0.652	0.815	0.033	3754	40	48	55
679070^	6	1.1	210	0.411	0.514	0.031	5966	55	66	75
599337◊	6	1.1	210	0.411	0.514	0.031	5966	55	66	75
599346◊	4	1.2	334	0.258	0.323	0.030	9491	70	84	95
641691	3	1.4	420	0.214	0.285	0.029	12097	85	100	110
599355◊	2	1.5	531	0.162	0.203	0.028	15089	96	115	130
643752	1	1.7	670	0.134	0.174	0.028	19029	110	130	145
641693	1/0	1.9	845	0.102	0.128	0.028	24011	125	150	170
599509	2/0	2.1	1065	0.081	0.106	0.028	22266	145	175	195
599519	4/0	2.5	1693	0.051	0.064	0.027	48114	195	230	260
641699	250	2.8	2000	0.043	0.055	0.027	56845	215	255	290
649645	300	3.0	2400	0.036	0.046	0.026	68214	240	285	320
641703	600	5.1	4800	0.018	0.024	0.026	136428	350	420	475

† Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

Size and Color

Stock Code	Size	Color
643917	14	Red
677425	12	Red
679228	2/0	Green
679131	250	Brown