CU 600V XLPE Insulation ARMOR-X® SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket XHHW-2 VFD Cable. CT Rated - Sunlight Resistant - For Direct Burial - Silicone Free

Type MC-HL Control Cable 600Volt Copper Conductors, Cross Linked Polyethylene (XLPE) Insulation XHHW-2 Continuous Corrugated Welded Armor - ARMOR-X®, Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket with 3 Bare CU Ground



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 7 strands class B compressed tinned copper per ASTM B33 and B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) XHHW-2, 30 Mils thick for all cable sizes
3. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and B8
4. **Filler:** Polypropylene filler on cables with 5 or less conductors
5. **Binder:** Polyester flat thread binder tape applied for cables with more than 5 conductors
6. **Armor:** ARMOR-X® Continuous Corrugated Welded Armor
7. **Overall Jacket:** Thermoplastic SOLONON® Low Smoke Zero Halogen (LSZH-TP) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type MC-HL ARMOR-X® control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, 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, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1309 Marine Shipboard Cable
- UL 1569 Metal-Clad Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 2
- ICEA S-73-532 Control, Thermocouple Extension, and Instrumentation Cables (applicable to sizes 20-9 AWG conductors)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test

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- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems (500kcmil & Larger)

SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE® {UL} ARMOR-X® TYPE MC-HL 3/C XX AWG (X.XX{mm2}) CU XHHW-2 GW 3 X 16 AWG 90°C SOLONON® JACKET -40°C ST1 SUN.RES. DIR. BUR. FOR CT USE 600V IEEE1202/FT4 -- VFD

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Ground	Dia. Over Armor	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Jacket Color
	AWG/ Kcmil		No. of Strands	inch	mil	No. x AWG	inch	mil	inch	lb/1000ft	lb/1000ft	
TBA	14	3	7	0.071	30	3 x 18	0.53	50	0.63	51	219	BK
TBA	14	4	7	0.071	30	3 x 18	0.569	50	0.669	64	240	BK
641468	12	3	7	0.089	30	3 x 16	0.57	50	0.67	85	233	BK
TBA	12	4	7	0.089	30	3 x 16	0.61	50	0.71	101	291	BK
641504	10	3	7	0.113	30	3 x 14	0.61	50	0.716	135	299	BK
TBA	10	4	7	0.113	30	3 x 14	0.7	50	0.8	161	379	BK

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* 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.
* Ampacities have been adjusted for more than Three Current-Carrying Conductors.
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.

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
TBA	14	3	4.4	2.631	3.17	0.058	20	25
TBA	14	4	4.7	2.631	3.17	0.058	16	20
641468	12	3	4.7	1.662	2.002	0.054	25	30
TBA	12	4	5	1.662	2.002	0.054	20	24
641504	10	3	5	1.04	1.253	0.05	35	40
TBA	10	4	5.6	1.04	1.253	0.05	28	32

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