# 600V CU PVC PAIRS ARMOR-X® SOLONON® LSZH SPOS Instrumentation

Type MC-HL Instrumentation Cable 600 Volt PVC/Nylon Insulated Singles Shielded Pairs with Overall Shield Continuous Corrugated Armor - ARMOR-X® -40°C to 90°C

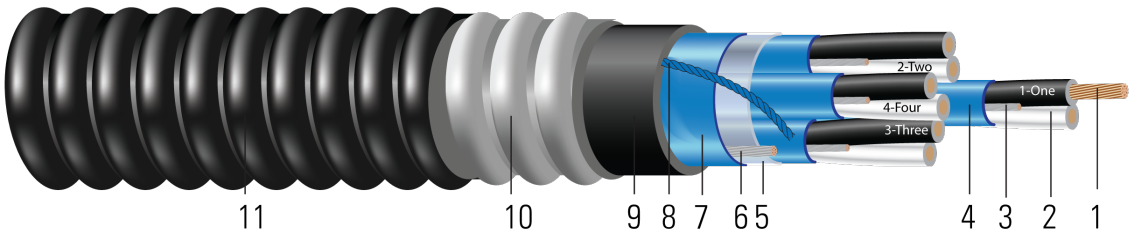


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B stranded bare copper per ASTM B3 and B8
2. **Insulation:** Premium Grade Polyvinyl Chloride (PVC) plus nylon. Color code: Black/White with alpha-numeric print on each pair. 1-ONE, 2-TWO.
3. **Drain Wire:** Tinned copper
4. **Twisted Shielded Triads:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
5. **Binder:** Mylar binder
6. **Overall Drain Wire:** Tinned Copper
7. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with a drain wire as shown in step 6
8. **Rip Cord:** Rip cord under jacket for ease of removal
9. **Inner Jacket:** Black Polyvinyl Chloride (PVC)
10. **Armor:** ARMOR-X® continuous impervious weld corrugated aluminum armor
11. **Jacket:** Black sunlight and moisture resistant Solonon® Low Smoke Zero Halogen (LSZH)

## APPLICATIONS AND FEATURES:

Southwire's Instrumentation Cables Type MC-HL ARMOR-X® per UL 1569 are suitable for installations as outlined in NEC Article 330 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with nylon covered PVC. The paired conductors are colored black, white and alpha-numeric printed. Each pair has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger) and direct burial. The cable is rated for -40°C to 90°C and rated for Class I Div I hazardous locations. The inner jacket is black polyvinyl chloride (PVC) with a nylon rip cord for easy removal. The outer jacket is black Solonon® Low Smoke Zero Halogen (LSZH).

## SPECIFICATIONS:

- ASTM B8 Concentric-Lay-Stranded Copper Conductors


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- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 66 Fixture Wire
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- UL 2225 Cables and Cable-Fittings For Use In Hazardous (Classified) Locations
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method

## SAMPLE PRINT LEGEND:

SOUTHWIRE® #P# ARMOR-X® TYPE MC-HL (UL) SHLD PR XXAWG OVERALL SHIELDED SOLONON-N CDRS 90°C JKT SUN RES. DIR BUR FOR CT USE IEEE 1202/FT4 -40°C 600V (YR) USA SEQUENTIAL MARKING

## Table 1 – Weights and Measurements

| Cond. Size | Number of Pairs | Diameter Over Conductor | Insul. Thickness | Diameter Over Armor | Jacket Thickness | Approx. OD | Approx. Weight | Min Bending Radius | DC Resistance @ 25°C |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | pair | inch | mil | inch | mil | inch | lb/1000ft | inch | Ω/1000ft |
| 16 | 16 | 0.056 | 20 | 1.22 | 50 | 1.320 | 778 | 9.2 | 4.181 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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 – Weights and Measurements (Metric)

| Cond. Size | Number of Pairs | Diameter Over Conductor | Insul. Thickness | Diameter Over Armor | Jacket Thickness | Approx. OD | Approx. Weight | Min Bending Radius | DC Resistance @ 25°C |
|---|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | pair | inch | mm | mm | mm | mm | lb/km | mm | Ω/km |
| 16 | 16 | 0.056 | 0.51 | 30.99 | 1.27 | 33.53 | 1158 | 233.68 | 13.72 |

## Typical Electrical Specifications for Each Pair

| Size AWG | Capacitance pF/ft | Inductance µH/ft |
|---|---|---|
| 18 | 40.66 | 0.0957 |
| 16 | 48.51 | 0.0895 |


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