CU 600V PE PE Cable Loop Detector Lead-in IMSA 50-2

Single Pair Tinned Copper Shielded 600V Polyethylene Insulation, Overall Shield Low Density Polyethylene (PE) Jacket



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 19 stranded annealed tinned copper per ASTM B 33 and B8
2. **Insulation:** High Molecular Weight Polyethylene HMWPE
3. **Rip Chord:** High strength rip chord for ease of jacket removal
4. **Drain Wire:** Tinned copper
5. **Overall Shield:** 100% coverage aluminum/polyester foil shield
6. **Jacket:** Black low density polyethylene PE jacket

APPLICATIONS AND FEATURES:

Southwire's IMSA 50-2 cable meets the requirements of International Municipal Signal Association IMSA 50-2 specification. Rated for use in traffic signal, traffic control systems, underground conduit and loop detector lead-in. IMSA 50-2 600 Volt series cables run from the junction box to the controller station The conductors are tinned annealed copper 19 strand and covered with an abrasion, sunlight and moisture resistant high molecular polyethylene insulation. The insulated conductors are twisted and wrapped with an overall aluminum mylar foil shield plus a drain wire. A ripcord is added under the black low density polyethylene jacket for ease of removal. A legend marker strip is under the jacket for clear identification. These cables are capable of operating continuously at a conductor temperature between -20°C and 75°C.

- Cable is manufactured by Southwire Company in their Waukegan, IL plant USA.

SPECIFICATIONS:

- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method
- IMSA 50-2

SAMPLE PRINT LEGEND:

SOUTHWIRE® YEAR SIZE 600V IMSA 50-2 CABLE SEQUENTAIL FOOT MARK

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Table 1 – Physical and Electrical Data

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance @ 25°C	Min Bending Radius
	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	Ω /1000ft	inch
18 AWG										
581409	18	2	19	0.046	30	30	0.280	31	7.070	3.4
578899	18	6	19	0.046	30	30	0.460	75	7.070	5.5
16 AWG										
582490	16	2	19	0.058	30	30	0.295	39	4.430	3.5
14 AWG										
578993	14	2	19	0.074	30	30	0.340	54	2.730	4.1
12 AWG										
TBA	12	2	19	0.093	30	30	0.365	75	1.720	4.4

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.

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