

# CU 600V PE PE Cable Color Method 1 Table 1 Traffic Signal IMSA 20-1

Multi-conductor nonshielded 600V Polyethylene Insulation, Polyethylene (PE) Jacket



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Solid or stranded annealed bare copper class B per ASTM B 3 and B8
2. **Insulation:** Polyethylene PE
3. **Rip Chord:** High strength rip chord for ease of jacket removal
4. **Separator:** Polyester tape
5. **Jacket:** Black polyethylene PE jacket

## APPLICATIONS AND FEATURES:

Southwire's IMSA 20-1 cable meets the requirements of International Municipal Signal Association IMSA 20-1 specification. Rated for use in traffic signal, traffic control systems, underground conduit and aerial use where supported by a messenger. IMSA 20-1 600 Volt series cables run from the traffic light to the controller station. The conductors are bare annealed copper solid or stranded class B and covered with an abrasion, sunlight and moisture resistant polyethylene jacket. The insulated conductors are twisted and wrapped with a polyester tape. A ripcord is added under the black polyethylene jacket for ease of removal. 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 B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- EPA 40 CFR, Part 26, Subpart C heavy metals per Table 1, TCLP method
- IMSA 20-1

## SAMPLE PRINT LEGEND:

SOUTHWIRE® YEAR SIZE 600V IMSA 20-1 CABLE SEQUENTIAL FOOT MARK.

**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	Min Bending Radius
	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	Ω /1000ft	inch
16 AWG										
TBA	16	2	1	0.051	25	45	0.283	54	4.14	1.13
TBA	16	3	1	0.051	25	45	0.314	73	4.14	1.26



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Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance	Min Bending Radius
	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	Ω /1000ft	inch
TBA	16	4	1	0.051	25	45	0.344	91	4.14	1.38
TBA	16	5	1	0.051	25	45	0.376	110	4.14	1.50
TBA	16	7	1	0.051	25	45	0.406	146	4.14	1.62
TBA	16	9	1	0.051	25	45	0.470	185	4.14	1.88
TBA	16	12	1	0.051	25	45	0.548	253	4.14	2.19
TBA	16	2	7	0.056	25	45	0.295	57	4.18	1.18
TBA	16	3	7	0.056	25	45	0.330	76	4.18	1.32
TBA	16	4	7	0.056	25	45	0.364	95	4.18	1.46
TBA	16	5	7	0.056	25	45	0.395	115	4.18	1.58
TBA	16	7	7	0.056	25	45	0.428	152	4.18	1.71
TBA	16	9	7	0.056	25	45	0.496	192	4.18	1.98
TBA	16	12	7	0.056	25	45	0.578	263	4.18	2.31
14 AWG										
581402	14	2	1	0.064	25	45	0.318	54	2.57	1.27
578923	14	3	1	0.064	25	45	0.335	66	2.57	1.34
581404	14	4	1	0.064	25	45	0.365	83	2.57	1.46
TBA	14	5	1	0.064	25	45	0.398	104	2.57	1.59
581329	14	7	1	0.064	25	45	0.432	135	2.57	1.73
TBA	14	9	1	0.064	25	60	0.503	174	2.57	2.01
581400	14	10	1	0.064	25	60	0.576	201	2.57	2.30
578926	14	12	1	0.064	25	60	0.593	234	2.57	2.37
578925	14	16	1	0.064	25	60	0.656	305	2.57	2.62
579044	14	20	1	0.064	25	60	0.725	372	2.57	2.90
TBA	14	21	1	0.064	25	60	0.725	390	2.57	2.90
TBA	14	2	7	0.070	25	45	0.336	58	2.63	1.34
581403	14	3	7	0.070	25	45	0.354	70	2.63	1.42
581406	14	4	7	0.070	25	45	0.386	89	2.63	1.54
581407	14	5	7	0.070	25	45	0.422	111	2.63	1.69
578921	14	7	7	0.070	25	45	0.459	144	2.63	1.84
TBA	14	9	7	0.070	25	60	0.565	196	2.63	2.26
581401	14	10	7	0.070	25	60	0.612	214	2.63	2.45
TBA	14	12	7	0.070	25	60	0.630	243	2.63	2.52
TBA	14	16	7	0.070	25	60	0.698	325	2.63	2.79
TBA	14	20	7	0.070	25	60	0.773	396	2.63	3.09
TBA	14	21	7	0.070	25	60	0.773	418	2.63	3.09
12 AWG										
TBA	12	2	1	0.080	25	45	0.372	79	1.62	1.49
TBA	12	3	1	0.080	25	45	0.393	96	1.62	1.57
TBA	12	4	1	0.080	25	45	0.430	123	1.62	1.72
TBA	12	5	1	0.080	25	45	0.471	155	1.62	1.88
TBA	12	7	1	0.080	25	60	0.513	214	1.62	2.05
TBA	12	9	1	0.080	25	60	0.630	275	1.62	2.52



Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Cond.	Insul. Thickness	Jacket Thickness	Approx. OD	Approx. Weight	DC Resistance	Min Bending Radius
	AWG	No.	strands	inch	mil	mil	inch	lb /1000ft	$\Omega$ /1000ft	inch
TBA	12	12	1	0.080	25	60	0.705	351	1.62	2.82
TBA	12	16	1	0.080	25	80	0.783	462	1.62	3.13
TBA	12	2	7	0.087	25	45	0.394	79	1.66	1.58
TBA	12	3	7	0.087	25	45	0.417	102	1.66	1.67
TBA	12	4	7	0.087	25	45	0.456	131	1.66	1.82
TBA	12	5	7	0.087	25	45	0.500	165	1.66	2.00
TBA	12	7	7	0.087	25	60	0.576	226	1.66	2.30
TBA	12	9	7	0.087	25	60	0.670	291	1.66	2.68
TBA	12	12	7	0.087	25	60	0.751	372	1.66	3.00
TBA	12	16	7	0.087	25	80	0.874	511	1.66	3.50

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

