



Red Alert® Type MC-FPLP Fire Alarm and Control

Copper THHN/THWN or TFN or TFFN Insulated Copper Singles. Type TFN Insulated Copper Singles. Green Insulated Copper Grounding Conductor. UL Listed as Type MC and Type FPLP. 600 Volt Type MC and 300 Volt Type FPLP. Rated VW-1. Red Lightweight Aluminum Interlocked Armor.



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid or stranded copper per ASTM B3 and ASTM B8 or B174
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN for 14 and 12 AWG; Type TFN or TFFN for 18 and 16 AWG
3. **Ground:** Green insulated ground. Polyvinyl Chloride with Nylon Sheath Type TFN or TFFN
4. **Binder:** Mylar tape
5. **Armor:** Red Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:



**Southwire Red Alert® Type MC-FPLP Cable is suitable for use as follows:**

- Wiring in Plenums, Ducts or Other Spaces Used for Environmental Air-Handling Purposes per NEC 300.22(C) & 760.135(C).
- Power-Limited and Non-Power Limited fire alarm circuits, including smoke detectors, bells, horns, fire alarm control panel equipment, and initiation and signaling devices.
- Class 1, Class 2, and Class 3 remote control, signaling, and power-limited circuits.
- Power, lighting, control, and signal circuits.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- Installation in cable tray and approved raceways.
- Under raised floors for information technology equipment conductors and cables per NEC 645.5(D) & 645.5(E)
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.
- Binder tape with print legend wrapped around assembly.
- Approved for the State of Rhode Island Fire Systems.
- Rated at 600V, 90°C dry as Type MC or 300V, 105°C dry as Type FPLP.
- Anti-short bushings are not required for use with MC cable per NEC and UL.

Southwire Red Alert® Type MC-FPLP Cable - meets or exceeds the following requirements:

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) (www.ul.com)
- Federal Specification A-A59544 (formerly J-C-30B)
- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

SPECIFICATIONS:

- UL 1424 Cables for Power-Limited Fire-Alarm Circuits
- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 66 Fixture Wire
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1479 Standard for Safety Fire Tests of Penetration Firestops
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- RoHS Compliant Lead-Free, Silicone-Free
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify "Made in the USA Only!" when ordering to ensure your project receives American made products.

SAMPLE PRINT LEGEND:

SOUTHWIRE E96627 XX AWG MC 600V {UL} TYPE (THHN OR TFFN) INSULATED CONDUCTORS OR TYPE FPLP {UL} 105°C DRY-FOR USE IN CABLE TRAYS





Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Conductor Stranding	Insulation Thickness	Ground Size	Diameter Over Armor	Overall Weight
	AWG/ Kcmil				mils	No. x AWG	inch	lbs/1000ft
18 AWG Solid								
640707◇	18	2	RD, RD, WE, GN	Solid	20	1x18	0.402	62
554686◇	18	2	BK, WE, GN	Solid	20	1x18	0.391	59
677747◇	18	2	BK, RD, GN	Solid	20	1x18	0.391	59
554687◇	18	4	BK, RD, BE, WE, GN	Solid	20	1x18	0.434	78
553124◇	18	6	BK, BN, RD, BE, YW, WE, GN	Solid	20	1x18	0.459	95
553125◇	18	8	BK, BN, OE, RD, BE, YW, GY, WE, GN	Solid	20	1x18	0.507	115
16 AWG Solid								
554688◇	16	2	BK, WE, GN	Solid	20	1x16	0.414	72
554689◇	16	4	BK, RD, BE, WE, GN	Solid	20	1x16	0.463	98
553128◇	16	6	BK, RD, BE, WE, BN, YW, GN	Solid	20	1x16	0.490	122
14 AWG Solid								
554690◇	14	2	BK, WE, GN	Solid	20	1x14	0.451	92
554537◇	14	2	BK, RD, GN	Solid	20	1x14	0.451	92
554539◇	14	4	BK, RD, BE, WE, GN	Solid	20	1x14	0.509	131
561684◇	14	6	BK, RD, BE, BN, YW, WE, GN	Solid	20	1x14	0.540	161
12 AWG Solid								
554540◇	12	2	BK, WE, GN	Solid	20	1x12	0.487	121
554541◇	12	4	BK, RD, BE, WE, GN	Solid	20	1x12	0.554	179
16 AWG 19 Strands								
641527◇	16	8	BK, WE, RD, BE, BN, YW, OE, GY	19	20	1x16	0.536	137
573267◇	16	2	BK, WE, GN	19	20	1x16	0.436	76
14 AWG 19 Strands								
559605◇	14	3	BK, BE, YW, GN	19	20	1x14	0.497	117
12 AWG 19 Strands								
557329◇	12	2	BE, WE, GN	19	20	1x12	0.509	126
10 AWG 19 Strands								
583397◇	10	4	BN, OE, YW, GY, GN	19	25	1x10	0.679	275

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

Note: Conductor number = number of phase conductors. Does not include ground





Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	DC Resistance at 25°C	AC Resistance at 75°C	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/ Kcmil		Inches	Ω/1000ft	Ω/1000ft	Amp	Amp
18 AWG Solid						
18	2	2.8	6.670	8.270	-	18
18	2	2.7	6.670	8.270	-	18
18	2	2.7	6.670	8.270	-	18
18	4	3.0	6.670	8.270	-	14
18	6	3.2	6.670	8.270	-	14
18	8	3.5	6.670	8.270	-	12
16 AWG Solid						
16	2	2.8	4.180	5.190	-	18
16	4	3.2	4.180	5.190	-	14
16	6	3.4	4.180	5.190	-	14
14 AWG Solid						
14	2	3.2	2.580	3.170	20	25
14	2	3.2	2.580	3.170	20	25
14	4	3.6	2.580	3.170	16	20
14	6	3.8	2.630	3.170	16	20
12 AWG Solid						
12	2	3.4	1.660	2.000	25	30
12	4	3.9	1.660	2.000	20	24
16 AWG 19 Strands						
16	8	3.7	4.180	5.190	-	18
16	2	3.0	4.180	5.190	-	18
14 AWG 19 Strands						
14	3	3.5	2.630	3.170	20	25
12 AWG 19 Strands						
12	2	3.6	1.660	2.000	25	30
10 AWG 19 Strands						
10	4	4.8	1.020	1.250	28	32

* 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.

