

Red Alert® Type MC-FPLP Fire Alarm and Control



Sizes 14 & 12 AWG Type THHN/THWN Insulated Copper Singles. Sizes 18 & 16 AWG Type TFN Insulated Copper Singles. Green Insulated or Tinned 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.

APPLICATIONS

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(D)(2).

STANDARDS & REFERENCES

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

- UL 83
- UL 1063
- UL 1569
- UL 1424
- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) (www.ul.com)
- NFPA 262-2002 Standard Method of Test For Flame and Smoke of Wire and Cables for Use in Air-Handling Spaces
- Federal Specification A-A59544 (formerly J-C-30B)
- IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test
- NFPA 70 (National Electric Code)
- Approved for the State of Rhode Island Fire Systems
- Listed for use in UL 1, 2, and 3 Hour Through-Penetration Firestop Systems
- REACH/RoHS-2 (Chemical Limit) Compliant

CONSTRUCTION

Red Alert® Type MC - FPLP Cable is constructed with soft-drawn copper conductors and insulated with flame-retardant and heat-resistant PVC with an outer oil- and gasoline-resistant nylon jacket. Type THHN/THWN conductors are provided for sizes 14 AWG and 12 AWG cables; Type TFN conductors are provided for sizes 18 AWG and 16 AWG cables. The circuit conductors and a green insulated grounding conductor are cabled together and a polypropylene tape is wrapped around the assembly. Upon request, an optional Film/Foil Aluminum Laminate Shielding Tape with a tinned copper drain wire/grounding conductor is wrapped over the conductor assembly. Aluminum interlocking armor Red in color is



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applied over the assembly. Multiple twisted (cabled) conductor pairs/groups with optional shield(s) are available. The cable is dual rated as 90°C dry, 600 Volt Type MC and 105°C dry, 300 Volt Type FPLP cable.

CONDUCTOR SIZE AND COLORS	GROUNDING SIZE AND COLOR	STOCK NUMBER		WEIGHT (LBS/1000')	OVERALL DIAMETER (INCHES)
		COIL (250')	REEL (1000')		
18-2 SOLID (BLACK/WHITE)	18 SOLID (GREEN)	55-46-86-02	55-46-86-03	59	.391
18-4 SOLID (BLACK/WHITE/RED/BLUE)	18 SOLID (GREEN)	55-46-87-02	55-46-87-03	78	.435
18-6 SOLID (BLACK/WHITE/RED/BLUE/BROWN/YELLOW)	18 SOLID (GREEN)	55-31-24-02	55-31-24-03	94	.459
18-8 SOLID (BLACK/WHITE/RED/BLUE/BROWN/ YELLOW/GRAY/ORANGE)	18 SOLID (GREEN)	55-31-25-02	55-31-25-03	94	.459
16-2 SOLID (BLACK/WHITE)	16 SOLID (GREEN)	55-46-88-02	55-46-88-03	71	.41
16-4 SOLID (BLACK/WHITE/RED/BLUE)	16 SOLID (GREEN)	55-46-89-02	55-46-89-03	97	.46
16-6 SOLID (BLACK/WHITE/RED/BLUE/BROWN/YELLOW)	16 SOLID (GREEN)	55-31-28-02	55-31-28-03	124	.495
16-8 SOLID (BLACK/WHITE/RED/BLUE/BROWN/ YELLOW/GRAY/ORANGE)	16 SOLID (GREEN)		64-15-27-02	131	.55
14-2 SOLID (BLACK/WHITE)	14 SOLID (GREEN)	55-46-90-02	55-46-90-03	88	.44
14-4 SOLID (BLACK/WHITE/RED/BLUE)	14 SOLID (GREEN)	55-45-39-02	55-45-39-03	124	.494
14-6 SOLID (BLACK/WHITE/RED/BLUE/BROWN/YELLOW)	14 SOLID (GREEN)	55-31-33-02	55-31-33-03	158	.52
14-8 SOLID (BLACK/BLACK-WHITE/WHITE-BLACK/RED/RED- WHITE/BLUE/BLUE-WHITE)	14 SOLID (GREEN)		55-31-34-03	195	.57
12-2 SOLID (BLACK/WHITE)	12 SOLID (GREEN)	55-45-40-02	55-45-40-03	115	.475
12-4 SOLID (BLACK/WHITE/RED/BLUE)	12 SOLID (GREEN)	55-45-41-02	55-45-41-03	168	.539

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TWISTED SHIELDED PAIR (1 PAIR)					
18-2 SOLID (BLACK/WHITE)	18 SOLID (TINNED COPPER)	55-45-49-02	55-45-49-03	57	.386
16-2 SOLID (BLACK/WHITE)	16 SOLID (TINNED COPPER)	55-45-51-02	55-45-51-03	71	.42
14-2 SOLID (BLACK/WHITE)	14 SOLID (TINNED COPPER)	55-45-52-02	55-45-52-03	84	.42
12-2 SOLID (BLACK/WHITE)	12 SOLID (TINNED COPPER)	55-45-53-02	55-45-53-03	116	.483
TWISTED SHIELDED PAIR (2 PAIR)					
18-2 SOLID (BLACK/WHITE/RED/BLUE)	18 SOLID (TINNED COPPER)	55-50-19-01	55-50-19-03	98	.56
16-2 SOLID (BLACK/WHITE/RED/BLUE)	16 SOLID (TINNED COPPER)	55-50-20-01	55-50-20-03	124	.626
14-2 SOLID (BLACK/WHITE/RED/BLUE)	14 SOLID (TINNED COPPER)	55-49-78-02	55-49-78-03	157	.658
12-2 SOLID (BLACK/WHITE/RED/BLUE)	12 SOLID (TINNED COPPER)	55-31-81-02	55-31-81-03	214	.747
RHODE ISLAND COLORS					
14-2 SOLID (BLACK/RED)	14 SOLID (GREEN)	55-45-37-02	55-45-37-03	88	.439
14-2 SOLID (BLUE/WHITE)	14 SOLID (GREEN)	55-45-38-02	55-45-38-03	88	.439
14-4 SOLID (BLACK/BLACK/RED/RED)	14 SOLID (GREEN)	55-47-57-02	55-45-57-03	115	.483
COMPOSITE CABLE					
14-2 SOLID (BLACK/WHITE- UNSHIELDED) 16-2 SOLID (BLACK/WHITE- SHIELDED)	14 SOLID (GREEN) 16 SOLID (BARE)		55-45-42-03	144	.656
14-2 SOLID (BLACK/WHITE- UNSHIELDED) 16-2 SOLID (RED/BLUE- UNSHIELDED)	14 SOLID (GREEN)		55-45-45-03	130	.626
14-2 SOLID (BROWN/ORANGE- UNSHIELDED) 16-2 SOLID (BLACK/WHITE- UNSHIELDED)	14 SOLID (GREEN)		55-45-46-03	129	.616
14-2 SOLID (BROWN/ORANGE- UNSHIELDED) 16-2 SOLID (RED/BLUE- SHIELDED)	14 SOLID (GREEN) 16 SOLID (BARE)		55-45-47-03	143	.651
14-2 SOLID (BLACK/WHITE- SHIELDED) 18-2 SOLID (RED/BLUE- SHIELDED)	14 SOLID (BARE) 18 SOLID (BARE)		55-45-48-03	126	.595
12-2 SOLID (BLACK/WHITE- UNSHIELDED) 16-2 SOLID (RED/BLUE- UNSHIELDED)	12 SOLID (GREEN) 16 SOLID (GREEN)		55-58-30-03	184	.724
12-2 SOLID (BLACK/RED- SHIELDED) 16-2 SOLID (BLACK/WHITE- SHIELDED)	14 SOLID (GREEN) 16 SOLID (BARE)		55-55-76-02	170	.682
Twisted Shielded Cable construction with an aluminum/polyester foil-film laminate, foil facing in, with a tinned copper drain wire. Dual Twisted Shielded Pair Cable construction each with an aluminum/polyester foil-film laminate, foil facing in, with a tinned copper drain wire. These cables are dual rated as Type MC/FPL cables. 6/C and 8/C constructions are NOT Plenum Rated.					

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FEATURES

- Red Interlocked Armor for easy identification and systems separation.
- For use in Ducts, Plenums, or for environmental air handling spaces per NEC 300.22(C) and 760.135(C).
- Reduces installation costs up to 50% over pipe and wire.
- Lightweight aluminum armor--as much as 45% lighter than steel MC Cable.
- UL Classified 1, 2, and 3 hour Through Penetration Firestop Systems: W-J-3037, W-L-3110, W-L-3113, W-L-3117, W-L-3120, W-L-3121, W-L-3160, C-AJ-3115, C-AJ-3140, C-AJ-3142, C-AJ-3145, C-AJ-3173, C-AJ-3202, C-AJ-4065, C-AJ-4066, F-C-3038.
- Cable reverse wound on reel for ease of pulling and installation. When pulling from coils, pull from inside to ensure ease of installation.
- Optional film/foil shields available with tinned copper drain wire.
- Optional twisted cable pairs or subgroups with optional shields and conductor colors.
- Anti-short bushings are not required for use with MC cable per the NEC and UL

NEC TABLE 310.15(B)(16)- ALLOWABLE AMPACITY FOR 600V CONDUCTORS

SIZE AWG OR KCMIL	TEMPERATURE RATING OF CONDUCTOR		
	60°C (140°F)	75°C (167°F)	90°C (194°F)
	Types: TW, UF	Types: RHW, THHW, THW, THWN, XHHW, USE, ZW	Types: TBS, SA, SIS, RHH, RHW-2, THHN, THHW, THW-2, THWN- 2, USE-2, XHH, XHHW, XHHW-2, ZW-2
	COPPER		
18	-	-	14
16	-	-	18
14	15	20	25
12	20	25	30
10	30	35	40
8	40	50	55
6	55	65	75
4	70	85	95
3	85	100	115
2	95	115	130
1	110	130	145
1/0	125	150	170
2/0	145	175	195
3/0	165	200	225
4/0	195	230	260
250	215	255	290
300	240	285	320
350	260	310	350
400	280	335	380
500	320	380	430
600	350	420	475
700	385	460	520
750	400	475	535
800	410	490	555
900	435	520	585
1000	455	545	615
1250	495	590	665
1500	525	625	705
1750	545	650	735
2000	555	665	750
Per NEC 310.15(B)(5), the ampacity of 4/C cables shall be reduced by a factor of 0.80 when the neutral is considered a current-carrying conductor.			

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