

Lifeline® MC: One-Hour and Two-Hour Fire Resistive Multiconductor Cables – UL 2196

Fire Resistive Cable for Survivability in a Fire



APPLICATIONS

Lifeline® MC fire resistive cables were designed to meet and have successfully passed one-hour and two-hour fire rating certification tests per UL 2196, *Standard for Tests for Fire Resistive Cables* and are classified in Electrical Circuit Integrity Systems (FHIT) No. 50 and No. 50A.

Lifeline® MC Cables can be used in the following applications to provide survivability during a fire:

- Tall Buildings
- Fire Pumps
- Emergency Feeder Cables
- Ventilating Fans
- Stairwell Pressurization
- Exit Lighting
- Elevators / OEO
- Emergency lighting for roadway and transit tunnels when cables include optional LSZH jacket over armor

Lifeline® MC Cables are preferred over Mineral Insulated (MI) cables, concrete encasement or the construction of fire rated assemblies based on the facts that Lifeline® MC Cables are less costly and easier to install for many applications.

Fire resistive cables are required per NFPA 70/NEC, Articles 517, 695, 700, 708, 728 and 760 as well as NFPA 72 and NFPA 101.



RoHS
COMPLIANT

SPECIFICATIONS & RATINGS

- Listed to UL 1569, *Metal Clad Cables*, as the following type:
 - Type MC 600 Volt, Rated 90°C
- For Cable Tray Use IEEE 1202/ FT4 Rated, ST1 Limited Smoke
- Classified to UL 2196, *Standard for Tests for Fire Resistive Cables*, with one-hour and two-hour Fire Resistive Rating (FRR)
- Electrical Circuit Integrity System (FHIT) No. 50 of the UL Fire Resistance Directory with 2-hour FRR at 480 volts utilization covers cable constructions in table below and optional taped splice for conductor sizes 2AWG and larger.
- Electrical Circuit Integrity System (FHIT) No. 50A of the UL Fire Resistance Directory with 1-hour FRR at 480 volts utilization, covers multi-conductor cable constructions 4 conductor 2AWG with segmented ground conductors and 3 conductor 14 AWG, and optional ceramic stand-off splice for conductor sizes 14AWG to 350MCM.
- Optional taped splice in Electrical Circuit Integrity System (FHIT) No. 50 of the UL Fire Resistance Directory with 2-hour FRR at 480 volts utilization.
- Optional ceramic stand-off splice for conductor sizes up to 350MCM in Electrical Circuit Integrity System (FHIT) No. 50A of the UL Fire Resistance Directory with 1-hour FRR at 480 volts utilization.
- NFPA 70, NFPA 72, NFPA 101 compliant
- Corrugated Copper Armor meets Equipment Grounding Conductor requirements of NEC Table 250.122

DESIGN PARAMETERS

CONDUCTORS: Bare stranded copper, 14 AWG through 600 kcmil

INSULATION: Ceramifiable Silicone Zero Halogen (LSZH)

INNER BINDER JACKET: Ceramifiable Silicone Zero Halogen (LSZH)

ARMOR: Continuously Welded and Corrugated Copper

IDENTIFICATION:

ORIGIN USA PRYSMIAN GROUP MA P/N [#####] [X]/C [Y]AWG [Z]mm² LIFELINE ® (UL) MC-ST1 600V 90C FOR CT USE IEEE 1202/FT4 ST1 (UL) 2196 FRR 2HR FHIT 50¹ or FRR 1HR FHIT 50A² 480V UTILIZATION ([mm]/[yr]) (SEQUENTIAL FOOTAGE)

Notes: [#] is cable part number

[X] is the number of conductors

[Y] is cable size in AWG or kcmil

[Z] is cable size in mm²

¹ FRR 2HR FHIT#50 includes taped splice for cables with conductor sizes 2AWG to 600MCM

² FRR 1HR FHIT#50A applies ceramic stand-off splice for cables with 14AWG to 350MCM conductors

Lifeline® MC: One-Hour and Two-Hour Fire Resistive Multiconductor Cables – UL 2196

Fire Resistive Cable for Survivability in a Fire



LIFELINE® Part Number	Conductor Size AWG /MCM	Number of Conductors	Nominal Core Diameter (in)	Nominal Armor Diameter (in)	Ampacity* 75°C Amps	Ampacity* 90°C Amps
LMC05014	14	5	0.66	0.97	20**	25**
LMC02012	12	2	0.56	0.85	25**	30**
LMC03012	12	3	0.59	0.91	25**	30**
LMC04012	12	4	0.64	0.97	25**	30**
LMC05012	12	5	0.70	0.97	25**	30**
LMC02010	10	2	0.61	0.85	35**	40**
LMC03010	10	3	0.64	0.97	35**	40**
LMC04010	10	4	0.70	0.97	35**	40**
LMC05010	10	5	0.77	1.08	35**	40**
LMC02008	8	2	0.70	0.97	50	55
LMC03008	8	3	0.75	1.08	50	55
LMC04008	8	4	0.82	1.18	50	55
LMC05008	8	5	0.90	1.26	50	55
LMC02006	6	2	0.78	1.08	65	75
LMC03006	6	3	0.83	1.18	65	75
LMC04006	6	4	0.91	1.26	65	75
LMC05006	6	5	1.00	1.35	65	75
LMC03004	4	3	0.95	1.35	85	95
LMC04004	4	4	1.04	1.35	85	95
LMC05004	4	5	1.15	1.58	85	95
LMC03003	3	3	1.00	1.35	100	115
LMC04003	3	4	1.11	1.40	100	115
LMC03002	2	3	1.07	1.40	115	130
LMC04002	2	4	1.18	1.58	115	130
LMC03001	1	3	1.24	1.73	130	145
LMC04001	1	4	1.37	1.73	130	145
LMC031/0	1/0	3	1.33	1.73	150	170
LMC041/0	1/0	4	1.47	1.85	150	170
LMC032/0	2/0	3	1.41	1.85	175	195
LMC042/0	2/0	4	1.56	1.97	175	195
LMC033/0	3/0	3	1.52	1.97	200	225
LMC043/0	3/0	4	1.69	2.15	200	225
LMC034/0	4/0	3	1.64	2.15	230	260
LMC044/0	4/0	4	1.82	2.28	230	260
LMC03250	250	3	1.81	2.28	255	290
LMC04250	250	4	2.00	2.52	255	290
LMC03350	350	3	2.04	2.52	310	350
LMC04350	350	4	2.26	2.72	310	350
LMC03400	400	3	2.13	2.72	335	380
LMC04400	400	4	2.37	2.83	335	380
LMC03500	500	3	2.31	2.83	380	430
LMC04500	500	4	2.57	3.11	380	430
LMC03600	600	3	2.54	3.11	420	475
LMC04600	600	4	2.83	3.41	420	475

* Ampacities are based on Table 310(16) of the National Electrical Code (NEC) (NFPA 70-2020) for 3 current carrying conductors at 30°C ambient.

** Small overcurrent protection limitations per NEC Article 240.4(D): (3) 14AWG – 15amps, (5) 12AWG – 20amps, (7) 10AWG – 30amps

The above dimensions are approximate and subject to normal manufacturing tolerances. Information subject to change