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

Fire Resistive Cable for Survivability in a Fire

APPLICATIONS

Lifeline® MC LSZH 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:

- Emergency Feeder Cables
- Ventilating Fans
- Exit Lighting
- Emergency lighting and ventilation for roadway and transit tunnels

Lifeline® MC LSZH Cables are preferred over Mineral Insulated (MI) cables, concrete encasement or the construction of fire rated assemblies based on the facts that Lifeline® MC LSZH Cables are less costly and easier to install for many life safety fire resistive applications in roadway and tunnel environments with a LSZH jacket to protect against corrosion.

Fire resistive cables are required per NFPA 70, Articles 517, 695, 700, 708, 728 and 760 as well as NFPA 72, NFPA 101, NFPA 130 and NFPA 502.

CLASSIFIED UL

UL LISTED

RoHS COMPLIANT

SPECIFICATIONS & RATINGS

- Listed to UL 1569, *Metal Clad Cables*, as the following type:
  - Type MC 600 Volt, Rated 90°C
- For Wet Locations
- For Cable Tray Use IEEE 1202/ FT4 Rated, ST1 Limited Smoke
- Sunlight resistance
- Direct Burial
- 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 in the table below and optional ceramic stand-off splice for conductor sizes 14AWG to 350MCM.
- NFPA 70, NFPA 72, NFPA 101, NFPA 130, NFPA 502 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

JACKET: Thermoplastic Flame Resistant LSZH Jacket

IDENTIFICATION:

ORIGIN USA PRYSMIAN MA P/N [#########] [X]/C [Y]AWG [Z]mm² LIFELINE® (UL) MC 600V 90C WET LOCS FOR CT USE IEEE 1202/FT4 ST1 SUN RES DIR BUR (UL) 2196 FRR 2HR FHIT 50[1] or FRR 1HR FHIT 50A[2] 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

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TIS 400-Jun 2024

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LIFELINE® Part Number	Conductor Size AWG /MCM	Number of Conductors	Nominal Core Diameter (in)	Nominal Armor Diameter (in)	Nominal Jacket Diameter (in)	Ampacity* 75°C Amps	Ampacity* 90°C Amps
LMCJ03014	14AWG	3	0.55	0.85	0.95	20**	25**
LMCJ05014	14AWG	5	0.66	0.96	1.06	20**	25**
LMCJ02012	12AWG	2	0.56	0.85	0.95	25**	30**
LMCJ03012	12AWG	3	0.59	0.90	1.00	25**	30**
LMCJ04012	12AWG	4	0.64	0.96	1.06	25**	30**
LMCJ05012	12AWG	5	0.70	0.96	1.06	25**	30**
LMCJ02010	10AWG	2	0.61	0.85	0.95	35**	40**
LMCJ03010	10AWG	3	0.64	0.96	1.06	35**	40**
LMCJ04010	10AWG	4	0.70	0.96	1.06	35**	40**
LMCJ05010	10AWG	5	0.77	1.08	1.18	35**	40**
LMCJ07010	10AWG	7	0.85	1.27	1.37	35**	40**
LMCJ02008	8AWG	2	0.70	0.96	1.06	50	55
LMCJ03008	8AWG	3	0.75	1.08	1.18	50	55
LMCJ04008	8AWG	4	0.82	1.20	1.30	50	55
LMCJ05008	8AWG	5	0.90	1.27	1.37	50	55
LMCJ02006	6AWG	2	0.78	1.08	1.18	65	75
LMCJ03006	6AWG	3	0.83	1.20	1.30	65	75
LMCJ04006	6AWG	4	0.91	1.27	1.37	65	75
LMCJ05006	6AWG	5	1.00	1.35	1.45	65	75
LMCJ03004	4AWG	3	0.95	1.35	1.45	85	95
LMCJ04004	4AWG	4	1.04	1.35	1.45	85	95
LMCJ05004	4AWG	5	1.15	1.57	1.69	85	95
LMCJ03003	3AWG	3	1.00	1.35	1.45	100	115
LMCJ04003	3AWG	4	1.11	1.40	1.50	100	115
LMCJ03002	2AWG	3	1.07	1.40	1.50	115	130
LMCJ04002	2AWG	4	1.18	1.57	1.69	115	130
LMCJ03001	1AWG	3	1.24	1.77	1.89	130	145
LMCJ04001	1AWG	4	1.37	1.77	1.89	130	145
LMCJ031/0	1/0AWG	3	1.33	1.77	1.89	150	170
LMCJ041/0	1/0AWG	4	1.47	1.83	1.95	150	170
LMCJ032/0	2/0AWG	3	1.41	1.83	1.95	175	195
LMCJ042/0	2/0AWG	4	1.56	1.98	2.10	175	195
LMCJ033/0	3/0AWG	3	1.52	1.98	2.10	200	225
LMCJ043/0	3/0AWG	4	1.69	2.15	2.27	200	225
LMCJ034/0	4/0AWG	3	1.64	2.15	2.27	230	260
LMCJ044/0	4/0AWG	4	1.82	2.27	2.42	230	260
LMCJ03250	250MCM	3	1.81	2.27	2.42	255	290
LMCJ04250	250MCM	4	2.00	2.48	2.63	255	290
LMCJ03350	350MCM	3	2.04	2.48	2.63	310	350
LMCJ04350	350MCM	4	2.26	2.73	2.88	310	350
LMCJ03400	400MCM	3	2.13	2.73	2.88	335	380
LMCJ04400	400MCM	4	2.37	2.79	2.94	335	380
LMCJ03500	500MCM	3	2.31	2.79	2.94	380	430
LMCJ04500	500MCM	4	2.57	3.08	3.25	380	430
LMCJ03600	600MCM	3	2.54	3.08	3.25	420	475
LMCJ04600	600MCM	4	2.83	3.35	3.52	420	475

* Ampacities are based on Table 310.16 of the National Electrical Code (NEC) (NFPA 70-2023) for 3 current carrying conductors at 30°C ambient.

** Small overcurrent protection limitations per NEC Article 240.4(D): (4) 14AWG – 15amps, (6) 12AWG – 20amps, (8) 10AWG – 30amps.

*** Refer to Table 310.15(C)(1) of the National Electrical Code (NEC) (NFPA 70-2023) for more than three current-carrying conductors.

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

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