

Lifeline® RC90: One-Hour and Two-Hour Fire Resistive Single Conductor Cables – ULC-S139



Fire Resistive Cable for Survivability in a Fire



APPLICATIONS

Lifeline® RC90 fire-resistive single conductor cables were designed to meet and have successfully passed one-hour and two-hour fire rating certification tests per ULC-S139, *Standard for Fire Test for Circuit Integrity of Fire- Resistive Cables* and are classified in Electrical Circuit Integrity Systems Certified for Canada (FHIT7) No. 51 and No. 51A.

Lifeline® RC90 Single Conductor 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® RC90 Single Conductor Cables are preferred over Mineral Insulated (MI) cables, concrete encasement or the construction of fire rated assemblies based on the facts that Lifeline® RC90 Cables are less costly and easier to install for many applications.

Fire resistive cables are required per National Building Code of Canada Articles 3.2.6 and 3.2.7.10, 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 CSA C22.2 No. 123 *Metal Sheathed Cables*, as the following type:
 - Type RC90 600 Volt, Rated 90°C
- For Wet Locations per CEC Rule 12-702
- For Cable Tray Use IEEE 1202/ FT4 Rated, STI Limited Smoke
- Classified to ULC-S139, *Standard for Fire Test for Circuit Integrity of Fire- Resistive Cables*, with one-hour and two-hour Circuit Integrity Rating (CIR).
- Electrical Circuit Integrity System (FHIT7) No. 51 of the UL Fire Resistance Directory with 2-hour CIR at 600 volts utilization covers cable constructions in table below and optional taped splice.
- Electrical Circuit Integrity System (FHIT7) No. 51A of the UL Fire Resistance Directory with 1-hour FRR at 600 volts utilization, covers cable constructions in the table below and optional ceramic stand-off splice for conductor sizes up to 350MCM.²
- NFPA 70, NFPA 72, NFPA 101 compliant
- Corrugated Copper Armor meets Equipment Bonding Conductor requirements of CEC Rule 10-610

DESIGN PARAMETERS

CONDUCTORS: Bare stranded copper, 1/0 AWG through 750 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 MA P/N [#####] 1/C [X]AWG [Y] mm²
LIFELINE® (cUL) RC90 600V SILICONE -40C (ULC) S139 CIR 2HR FHIT7 51¹ 600V UTILIZATION or CIR 1HR FHIT7 51A² 600V UTILIZATION ([mm]/[yr]) (SEQUENTIAL FOOTAGE)

Notes: [#] is cable part number

[X] is cable size in AWG or kcmil

[Y] is cable size in mm²

¹ CIR 2HR FHIT7#51 includes taped splice for cables with conductor sizes 1/0AWG to 750MCM

² CIR 1HR FHIT7#51A applies ceramic stand-off splice for cables with 1/0AWG to 350MCM conductors

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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
LMC011/0C	1/0AWG	1	0.65	0.90	230	260
LMC012/0C	2/0AWG	1	0.69	0.96	265	300
LMC013/0C	3/0AWG	1	0.74	1.08	310	350
LMC014/0C	4/0AWG	1	0.80	1.20	360	405
LMC01250C	250MCM	1	0.87	1.27	405	455
LMC01300C	300MCM	1	0.93	1.27	445	500
LMC01350C	350MCM	1	0.98	1.35	505	570
LMC01400C	400MCM	1	1.03	1.40	545	615
LMC01500C	500MCM	1	1.11	1.57	620	700
LMC01600C	600MCM	1	1.22	1.77	690	780
LMC01750C	750MCM	1	1.32	1.77	785	885

* Ampacities are based on Table 1 of the Canadian Electrical Code (CEC) for single current carrying conductors at 30°C ambient. The above dimensions are approximate and subject to normal manufacturing tolerances. Information subject to change