

Lifeline® Power Cables: RHW-2 Fire Resistive Cables in EMT Conduit and BreathSaver® XW Phenolic Conduit

UL 2196 Certified Fire Resistive Cable for Survivability in a Fire



APPLICATIONS

Lifeline® fire resistive cables were designed to meet and have successfully passed the two hour fire rating certification test per UL 2196, *Standard for Tests for Fire Resistive Cables* as part of FHIT System no. 25C.

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

- Tall Buildings
- Emergency Feeder Cables
- Ventilating Fans
- Exit Lighting
- Fire Pumps
- Hospitals
- Transit
- Elevators

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

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

SPECIFICATIONS & RATINGS

- Listed to UL 44, *Thermoset Insulated Wires and Cables*, as the following type:
 - RHW-2, 600 Volt, Rated 90°C Dry/90°C Wet
- Classified to UL 2196, *Standard for Tests for Fire Resistive Cables*, for two-hours.
- Electrical Circuit Integrity System (FHIT) No. 25C of the UL Fire Resistance Directory for horizontal installations in EMT conduit or BreathSaver® XW Phenolic conduit and vertical installations in BreathSaver® XW Phenolic conduit
- Sunlight Resistant
- FT4 Rated
- ST1
- IEEE 1202
- NFPA 70, NFPA 72, NFPA 101, NFPA 130, NFPA 502

DESIGN PARAMETERS

CONDUCTORS: Bare stranded copper, 8 AWG through 750kcmil

FIRE BARRIER: High Temperature Mica Tapes

INNER INSULATION: Ceramifiable silicone, Low Smoke Zero Halogen (LSZH)

OUTER INSULATION: Cross-linked polyolefin (XLPO), Low Smoke Zero Halogen

IDENTIFICATION:

ORIGIN USA PRYSMIAN GROUP MA P/N [#####] [X]AWG ([Y]mm²)
LIFELINE® (UL) RHW-2 600V FT4 ST1 VW1 (UL) 2196 FHIT25C FRR 2 HR
480V UTILIZATION ([mm]/[yr]) [2ft]

Notes: [#] is cable part number
[X] is cable size in AWG or kcmil
[Y] is cable size in mm²



RoHS
COMPLIANT

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LIFELINE® Part Number	Conductor Size AWG /MCM	Number of Strands	Insulation Thickness in (mm)	Overall Diameter in (mm)	Approximate Weight lbs./Mft (kg/km)	Ampacity ¹ 75°C Amps	Ampacity ¹ 90°C Amps
G30064	8	7	0.060 (1.5)	0.31 (7.8)	84 (125)	50	55
G30065	6	7	0.075 (1.9)	0.37 (9.5)	129 (192)	65	75
G30066	4	7	0.075 (1.9)	0.42 (10.7)	185 (275)	85	95
G30067	3	7	0.075 (1.9)	0.45 (11.4)	224 (333)	100	115
G30068	2	7	0.075 (1.9)	0.48 (12.2)	269 (400)	115	130
G30069	1	19	0.100 (2.5)	0.57 (14.5)	364 (542)	130	145
G30070	1/0	19	0.100 (2.5)	0.61 (15.5)	441 (656)	150	170
G30071	2/0	19	0.100 (2.5)	0.65 (16.6)	535 (796)	175	195
G30072	3/0	19	0.100 (2.5)	0.70 (17.9)	656 (976)	200	225
G30073	4/0	19	0.100 (2.5)	0.76 (19.2)	803 (1195)	230	260
G30074	250	37	0.130 (3.3)	0.86 (21.9)	987 (1469)	255	290
G31501	300	37	0.130 (3.3)	0.92 (23.4)	1160 (1726)	285	320
G30075	350	37	0.130 (3.3)	0.97 (24.7)	1306 (1943)	310	350
G31496	400	37	0.130 (3.3)	1.02 (25.9)	1500 (2232)	335	380
G30076	500	37	0.130 (3.3)	1.10 (27.9)	1820 (2708)	380	430
G30077	600	61	0.145 (3.7)	1.21 (30.6)	2199 (3272)	420	475
G30078	750	61	0.145 (3.7)	1.31 (33.3)	2699 (4016)	475	535

¹ Ampacities are based on Table 310.16 of the National Electrical Code (NFPA 70) for 3 current carrying conductors at 30°C ambient.

The above dimensions are approximate and subject to normal manufacturing tolerances. Information subject to change without notice.

Minimum Allowable Conduit Size

Conductor Size	Horizontal Installation in EMT Conduit - Number of Conductors				Horizontal Installation in XW BreathSaver Conduit - Number of Conductors				Vertical Installation in XW BreathSaver Conduit - Number of Conductors			
	1	2	3	4	1	2	3	4	1	2	3	4
	8	1/2	1	1-1/4	1-1/4	3/4	3/4	1	1	3/4	1	1-1/4
6	3/4	1-1/4	1-1/4	1-1/2	3/4	1	1-1/4	1-1/4	1	1-1/2	2-1/2	2-1/2
4	1	1-1/4	1-1/2	2	3/4	1	1-1/4	1-1/2	1-1/4	2	2-1/2	3
3	1	1-1/4	1-1/2	2	3/4	1-1/4	1-1/4	1-1/2	1-1/4	2	2-1/2	3
2	1	1-1/4	1-1/2	2	3/4	1-1/4	1-1/2	1-1/2	1-1/4	2-1/2	3	3
1	1-1/4	2	2	2-1/2	1	1-1/2	2	2-1/2	1-1/2	2-1/2	3-1/2	3-1/2
1/0	1-1/4	2	2-1/2	2-1/2	1-1/4	1-1/2	2-1/2	2-1/2	2	3	3-1/2	3-1/2
2/0	1-1/2	2	2-1/2	3	1-1/4	2	2-1/2	3	2	3	3-1/2	4
3/0	1-1/2	2-1/2	2-1/2	3	1-1/4	1-1/2	2-1/2	2-1/2	2-1/2	3-1/2	4	4
4/0	2	2-1/2	3	3	1-1/4	2	2-1/2	3	2-1/2	3-1/2	4	5
250	2	2-1/2	3	3	1-1/4	2-1/2	3	3	2-1/2	3-1/2	4	5
300	2	2-1/2	3	3-1/2	1-1/2	2-1/2	3	3-1/2	2-1/2	3-1/2	5	5
350	2	2-1/2	3	3-1/2	1-1/2	2-1/2	3	3-1/2	3	3-1/2	5	5
400	2	3	4	4	1-1/2	2-1/2	3-1/2	4	3	4	5	6
500	2-1/2	3	3-1/2	4	2	3	3-1/2	4	2-1/2	3-1/2	5	6
600	2-1/2	3	4	--	2-1/2	3	4	5	3	4	5	5
750	2-1/2	3-1/2	--	--	2-1/2	3-1/2	4	5	3	4	5	6

For questions regarding installation and conduit size, including the use of ECG, contact the Lifeline team at Prysmian Cables & Systems USA, LLC (800) 333-4248 x2600.