



## Summary

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[See video assembly instructions](#)

Low Voltage	5
Wire Size/AWG	24 - 20
Gender	Standard
Plug	Plug - Straight
Locking system	Ratchet
Jacket cable outside diameter [mm]	4.85 - 9.70 mm
Size	1M
Matching parts	<a href="#">EGN.1M.305.XLM</a>
Series	M - Rugged Ratchet coupling

## Technical details

[https://www.lemo.com/int\\_en/solutions/optima/m-ratchet-coupling/fmn-1m-305-xlcm.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/fmn-1m-305-xlcm.html)

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## Electrical Configuration

Contact Termination Low voltage	Crimp
R (max)	4.8 mOhm
Insert configuration value	1M.305 - 5 Low Voltage
Insulator	L: PEEK
Rated current	9 Amps
Test voltage (kV rms) Contact-contact	1.3
Test voltage (kV rms) Contact-shell	1.3
Contact retention	30 N
Contact Type	Crimp
Max. Conductor	0.5 mm <sup>2</sup> (AWG 20)
Min. Conductor	0.25 mm <sup>2</sup> (AWG 24)
Bucket Dia.	1.1 mm (0.043in)
Contact Dia.	0.9 mm (0.035in)
Low Voltage	5
Wire Size/AWG	24 - 20
Gender	Standard

## Form & Material

Shell style / Model id	FM - Straight plug, key (N) or keys (P, R, S, T, U, V, W and X) with knurled grip and MIL-DTL-38999L shell thread
Plug	Straight
Housing material	Aluminium (nickel plated [SAE AMS QQ N 290], anthracite color) shell and nut, other pieces bronze/brass
Locking system	Ratchet
Keying	3 keys (beta=165, gamma=30, plug: male contacts, receptacle: female contacts)
Weight	7.12 g

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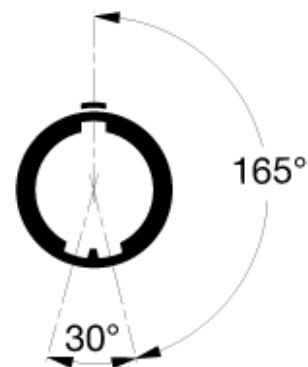
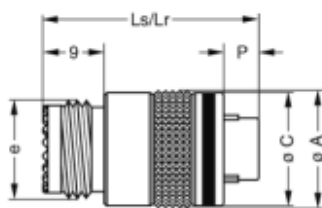
## Environment

Technical domain	Motorsport, Security and Defence, Transportation, Aerospace and UAV
Environmental protection (IP rating)	IP68
Minimal temperature	-20°C / +200°C
EMI Shielding EIA 364-66A	>= 80 dB (1 GHz), >=70 dB (3 GHz), >= 58 dB (6 GHz), >= 40 dB (10 GHz)
Gunfire vibration	25 Hz - 2000 Hz, 3 axis (Apache helicopter)
Humidity (max)	21 days at 95%
Lighting strike EIA 364-76	10K amps - 6 times
Shock Resistance	300 g [ 3 ms]
Thermal shock	5 cycles: -65°C to +150°C
Vibration-Random	37.8 g rms - 3 axes, 4 hr amb [50 Hz - 2000 Hz]
Vibration-Sine	30 g, 3 axes, 12 hr [10 Hz - 2000 Hz]
Salt Spray Corrosion	max. 48 hr

## Cable fixation

Cable termination protection	For backshell MIL-DTL-38999M
Fixation type	MIL-DTL-38999M
Jacket cable outside diameter [mm]	4.85 - 9.70 mm

## Drawings



## Dimensions

	A	C	e	Ls	Lr	P
mm.	14.6	14.2	M12x1.0	26.4	26.4	3.9
in.	0.57	0.56		1.04	1.04	0.15

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