

Standard



Image for illustrative purpose only

Summary

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[M series](#)

[Application leaflet Security Defence](#)

[See video assembly instructions](#)

[Customer Drawing](#)

Number of contacts Low Voltage	2
Wire Size/AWG	20 - 16
Gender	Standard
Plug	Plug - Straight
Locking system	Ratchet
Jacket cable outside diameter [mm]	4.85 - 9.70 mm
Size	1M
Suggested matching part	EGN.1M.302.XLM
Series	M - Rugged Ratchet coupling

https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/fgn-1m-302-xlct.html

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Technical details

Electrical Configuration

Number of contacts Low Voltage	2
Contact Termination Low voltage	Crimp
R (max)	3.6 mOhm
Insert configuration value	1M.302 - 2 Low Voltage
Insulator	L: PEEK
Rated current	19 A
Test voltage contact-contact	2.17 kV DC
Test voltage contact-shell	1.58 kV DC
Contact retention	40 N
Max. Conductor	1.43 mm ² (AWG 16)
Min. Conductor	0.62 mm ² (AWG 20)
Bucket Dia.	1.6 mm (0.055in)
Contact Dia.	1.3 mm (0.051in)
Wire Size/AWG	20 - 16
Gender	Standard

Form & Material

Shell style / Model id	FG - Straight plug with arctic grip and mold stop
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	N: 3 keys (beta=165, gamma=30, plug: male contacts, receptacle: female contacts)
Colour	Grey
Weight	7.56 g

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Environment

Technical domain	Motorsport, Security and Defence, Transportation, Aerospace and UAV
Environmental sealing (IP rating)	IP68
Endurance	3000 mating cycles
Temperature range	-55°C / +200°C (max. temperature valid for short periods of use.)
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 overmolding
Fixation type	Mold stop (overmolding)
Jacket cable outside diameter [mm]	4.85 - 9.70 mm

Recommended By Lemo

Contacts

Replacement contact	FGN.0M.565.ZZC
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Caps

Compatible cap	BGF.1M.100.XAV
Cap 2	BAF.1M.100.XNV

Tools

Positionner	DCE.91.130.5MVC
Extraction tool	DCC.13.15B.LAG
Crimp tool	DPC.91.701.V

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Cables

Cable PartNumber	Material	Colour	Cable image
CMN.02.T18.064UNCU			
102080	PVC	Grey	
120184	PVC	Black	
120500	PVC	Grey	
120501	PVC	Grey	
120751	PVC	Grey	
220151	PVC	Grey	
220750	PVC	Grey	
320150	PVC	Grey	

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