



*Image for illustrative purpose only*

## Summary

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Number of contacts Low Voltage	3
Wire Size/AWG	20 - 16
Gender	Reverse Gender
Plug	Plug - Straight
Locking system	Ratchet
Jacket cable outside diameter [mm]	4.85 - 9.70 mm
Size	1M
Series	M - Rugged Ratchet coupling

[https://www.lemo.com/int\\_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html)

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# Technical details

## Electrical Configuration

Number of contacts Low Voltage	3
Contact Termination Low voltage	Crimp
R (max)	3.6 mOhm
Insert configuration value	1M.303 - 3 Low Voltage
Insulator	L: PEEK
Rated current	15.5 A
Contact retention	40 N
Max. Conductor	1 mm <sup>2</sup> (AWG 18)
Min. Conductor	0.5 mm <sup>2</sup> (AWG 20)
Bucket Dia.	1.4 mm (0.055in)
Contact Dia.	1.3 mm (0.051in)
Wire Size/AWG	20 - 16
Gender	Reverse Gender

## Form & Material

Shell style / Model id	FG - Straight plug with arctic grip and MIL spec backend
Plug	Straight
Housing material	Brass (chrome plated [SAE AMS 2460]) shell and collet nut, nickel plated [SAE AMS QQ N 290] brass latch sleeve and mid pieces
Locking system	Ratchet
Keying	S: 3 keys (beta=155, gamma=50, plug: female contacts, receptacle: male contacts)
Colour	Grey
Weight	10.67 g

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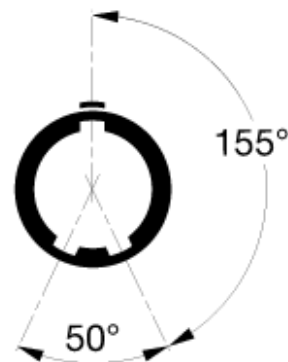
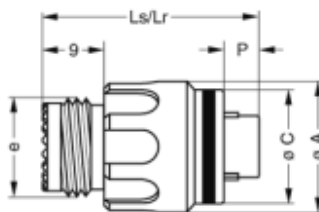
## Environment

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	$\geq 80$ dB (1 GHz), $\geq 70$ dB (3 GHz), $\geq 58$ dB (6 GHz), $\geq 40$ 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	>1000 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



[https://www.lemo.com/int\\_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html)

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## Dimensions

	A	C	e	Ls	Lr	P
mm.	15.9	14.2	M12x1.0	26.4	26.4	3.9
in.	0.63	0.56		1.04	1.04	0.15

## Recommended By Lemo

### Accessories

Replacement contact	<a href="#">EGN.0M.665.ZZM</a>
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Compatible cap	<a href="#">BGF.1M.100.XAV</a>
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### Tools

Positionner	<a href="#">DCE.91.130.5MVM</a>
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Extraction tool	<a href="#">DCC.13.15B.LAG</a>
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## CAD










### Documents

Eplan	<a href="#">Download</a>
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[https://www.lemo.com/int\\_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/fgs-1m-303-clmm.html)

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# Cables

Cable PartNumber	Material	Colour	Cable image
CMN.03.T18.055PGZE		grey	
CMN.03.T18.055PNZE			
CMN.03.T18.055QGZE	TPR (medical)	Grey	
CMN.03.T20.049PGZE		grey	
CMN.03.T20.049PNZE			
230500	PVC	Grey	
230750	PVC	Grey	
3220	PVC	Black	
330150	PVC	Grey	

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