

Standard



*Image for illustrative purpose only*

## Summary

[Request a quote](#)

[M series](#)

[Application leaflet Security Defence](#)

[See video assembly instructions](#)

|                                    |                                |
|------------------------------------|--------------------------------|
| Number of contacts 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                             |
| Suggested matching part            | <a href="#">EGN.1M.305.XLM</a> |
| Series                             | M - Rugged Ratchet coupling    |

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

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# Technical details

## Electrical Configuration

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Number of contacts Low Voltage          | 5                             |
| Contact Termination Low voltage         | Crimp                         |
| R (max) - electrical contact resistance | 4.8 mOhm                      |
| Insert configuration value              | 1M.305 - 5 Low Voltage        |
| Insulator                               | L: PEEK                       |
| Rated current                           | 9 A                           |
| Test voltage contact-contact            | 1.7 kV DC                     |
| Test voltage contact-shell              | 1.7 kV DC                     |
| Contact retention                       | 30 N                          |
| 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 (0.043 in)             |
| Contact Dia.                            | 0.9 mm (0.035 in)             |
| Wire Size/AWG                           | 24 - 20                       |
| 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                 | 7.46 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                                                             |

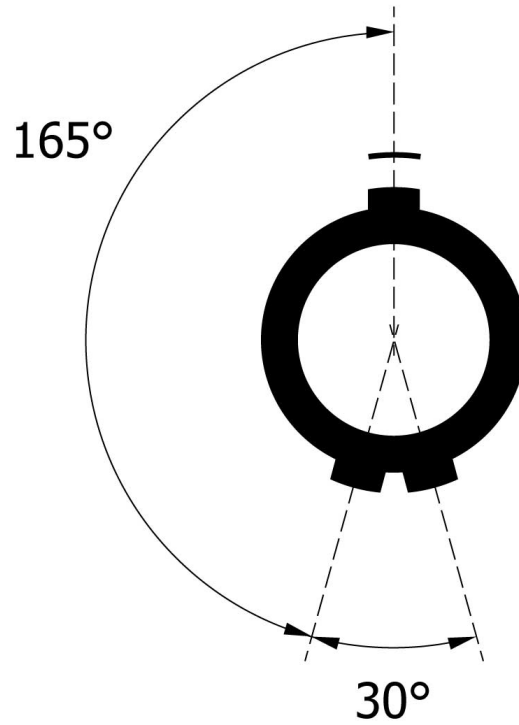
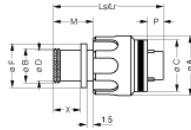
## Cable fixation

|                                    |                         |
|------------------------------------|-------------------------|
| Cable termination protection       | For overmolding         |
| Fixation type                      | Mold stop (overmolding) |
| Jacket cable outside diameter [mm] | 4.85 - 9.70 mm          |

## Drawings

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

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## Dimensions

|     | A    | B    | C    | D    | F    | Ls   | Lr   | M    | P    | X    |
|-----|------|------|------|------|------|------|------|------|------|------|
| mm. | 15.9 | 10.5 | 14.2 | 9.7  | 12.4 | 27.1 | 27.1 | 9.7  | 3.9  | 6.7  |
| in. | 0.63 | 0.41 | 0.56 | 0.38 | 0.49 | 1.07 | 1.07 | 0.38 | 0.15 | 0.26 |

## Recommended By Lemo

### Contacts

Replacement contact [FGN.0M.560.ZZC](#)

### Caps

Compatible cap [BGF.1M.100.XAV](#)

Cap 2 [BAF.1M.100.XNV](#)

### Tools

Positionner [DCE.91.090.5MVC](#)

Extraction tool [DCC.09.05B.LAG](#)

Crimp tool [DPC.91.701.V](#)

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