



*Image for illustrative purpose only*

## Summary

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|                                    |                                 |
|------------------------------------|---------------------------------|
| Number of contacts Low Voltage     | 7                               |
| Wire Size/AWG                      | 26 - 22                         |
| Gender                             | Standard                        |
| Socket / Receptacle                | Socket / Receptacle - Free      |
| Locking system                     | Ratchet                         |
| Jacket cable outside diameter [mm] | 4.85 - 9.70 mm                  |
| Size                               | 1M                              |
| Suggested matching part            | <a href="#">FMN.1M.307.XLCT</a> |
| Series                             | M - Rugged Ratchet coupling     |

[https://www.lemo.com/int\\_en/solutions/optima/m-ratchet-coupling/phn-1m-307-xlmt.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/phn-1m-307-xlmt.html)

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# Technical details

## Electrical Configuration

|                                       |                               |
|---------------------------------------|-------------------------------|
| Number of contacts Low Voltage        | 7                             |
| Contact Termination Low voltage       | Crimp                         |
| R (max)                               | 6.1 mOhm                      |
| Insert configuration value            | 1M.307 - 7 Low Voltage        |
| Insulator                             | L: PEEK                       |
| Rated current                         | 7 A                           |
| Test voltage (kV rms) Contact-contact | 1.45                          |
| Test voltage (kV rms) Contact-shell   | 1.2                           |
| Contact retention                     | 22 N                          |
| Max. Conductor                        | 0.34 mm <sup>2</sup> (AWG 22) |
| Min. Conductor                        | 0.14 mm <sup>2</sup> (AWG 26) |
| Bucket Dia.                           | 0.8 mm (0.031in)              |
| Contact Dia.                          | 0.7 mm (0.028in)              |
| Wire Size/AWG                         | 26 - 22                       |
| Gender                                | Standard                      |

## Form & Material

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Shell style / Model id | PH - Free receptacle with arctic grip and mold stop                                                     |
| Socket / Receptacle    | Free                                                                                                    |
| 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                 | 8.69 g                                                                                                  |

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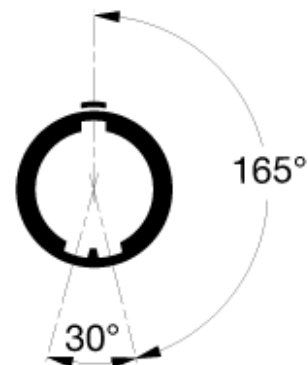
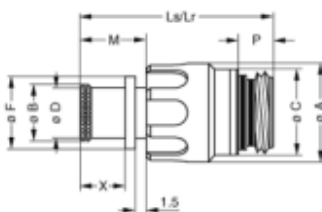
## Environment

|                                   |                                                                                         |
|-----------------------------------|-----------------------------------------------------------------------------------------|
| Technical domain                  | Motorsport, Security and Defence, Transportation, Aerospace and UAV                     |
| Environmental sealing (IP rating) | IP68                                                                                    |
| Endurance                         | 3000 mating cycles                                                                      |
| Temperature range                 | -20°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              | 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/phn-1m-307-xlmt.html](https://www.lemo.com/int_en/solutions/optima/m-ratchet-coupling/phn-1m-307-xlmt.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 | 28.6 | 28.6 | 9.7  | 5.3  | 6.7  |
| in. | 0.63 | 0.41 | 0.56 | 0.38 | 0.49 | 1.13 | 1.13 | 0.38 | 0.21 | 0.26 |

## Recommended By Lemo

| Accessories         |                                 |
|---------------------|---------------------------------|
| Replacement contact | <a href="#">EGN.0M.655.ZZM</a>  |
| Compatible cap      | <a href="#">BGF.1M.200.XAZ</a>  |
| Tools               |                                 |
| Positionner         | <a href="#">DCE.91.070.3MVM</a> |
| Extraction tool     | <a href="#">DCC.07.04B.LAG</a>  |
| Crimp tool          | <a href="#">DPC.91.701.V</a>    |