



*Image for illustrative purpose only*

## Summary

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[See video assembly instructions](#)

|                                    |                      |
|------------------------------------|----------------------|
| Number of contacts Low Voltage     | 3                    |
| Wire Size/AWG                      | 20 - 18              |
| Gender                             | Standard             |
| Plug                               | Plug - Straight      |
| Locking system                     | Push-pull            |
| Jacket cable outside diameter [mm] | 3.80 - 10.70 mm      |
| Size                               | 1F                   |
| Series                             | F - Rugged Push-Pull |

[https://www.lemo.com/int\\_en/solutions/optima/f-rugged-push-pull/fgn-1f-303-ylc.html](https://www.lemo.com/int_en/solutions/optima/f-rugged-push-pull/fgn-1f-303-ylc.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      | 1F.303 - 3 Low Voltage       |
| Insulator                       | L: PEEK (UL 94 / V-0/1.5)    |
| Rated current                   | 12 A                         |
| Vtest (contact-contact)         | 1600 V (AC), 2250 V (DC)     |
| Vtest (contact-shell)           | 1850 V (AC), 2600 V (DC)     |
| 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 - 18                      |
| Gender                          | Standard                     |

## Form & Material

|                        |                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------|
| Shell style / Model id | FG - Straight plug                                                                                          |
| Plug                   | Straight                                                                                                    |
| Housing material       | Aluminium (nickel plated [SAE AMS QQ N 290], anthracite color) shell and nut, other pieces beryllium copper |
| Locking system         | Push-pull                                                                                                   |
| Keying                 | 3 keys (beta=165, gamma=30, plug: male contacts, receptacle: female contacts)                               |
| Weight                 | 8.42 g                                                                                                      |

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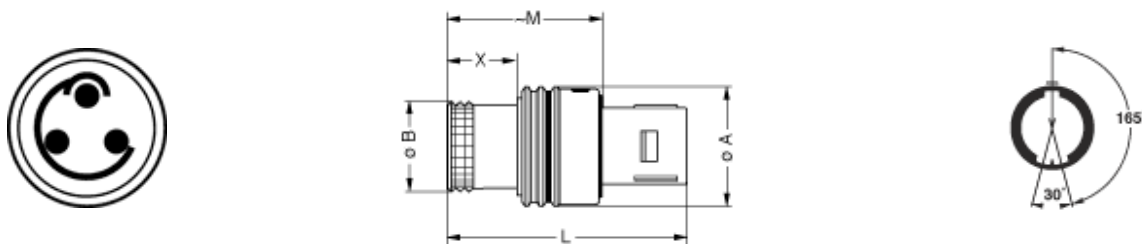
## Environment

|                                   |                                                                   |
|-----------------------------------|-------------------------------------------------------------------|
| Technical domain                  | Motorsport, Security and Defence                                  |
| Environmental sealing (IP rating) | IP67                                                              |
| Endurance                         | 500 mating cycles                                                 |
| Temperature range                 | -15°C / +200°C (max. temperature valid for short periods of use.) |
| Climatic Category                 | 15/200/21 (Aluminium shell)                                       |
| Humidity (max)                    | <=95% [at 60 deg C /140 F]                                        |
| Shock Resistance                  | 100 g [ 6 ms]                                                     |
| Vibration                         | 15 g [10 Hz - 2000 Hz]                                            |

## Cable fixation

|                                    |                 |
|------------------------------------|-----------------|
| Cable termination protection       | Heatshrink      |
| Fixation type                      | Heatshrink      |
| Jacket cable outside diameter [mm] | 3.80 - 10.70 mm |

## Drawings



## Dimensions

|     | M    | A    | B    | L    | X    |
|-----|------|------|------|------|------|
| mm. | 17.9 | 14   | 10.7 | 27.8 | 8    |
| in. | 0.7  | 0.55 | 0.42 | 1.09 | 0.31 |

## Recommended By Lemo

### Accessories

|                     |                                |
|---------------------|--------------------------------|
| Replacement contact | <a href="#">FGN.1F.565.ZZC</a> |
| Compatible cap      | <a href="#">BFG.1F.100.XAZ</a> |

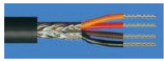
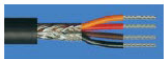
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## Tools

|                 |                                |
|-----------------|--------------------------------|
| Positionner     | <a href="#">DCE.91.131.FVC</a> |
| Extraction tool | <a href="#">DCF.93.131.4LT</a> |
| Crimp tool      | <a href="#">DPC.91.701.V</a>   |

## 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 |               |        |    |
| 130240             | PVC           | Black  |   |
| 130250             | PVC           | Grey   |  |
| 230500             | PVC           | Grey   |  |
| 230750             | PVC           | Grey   |  |
| 30110              | PVC           | Grey   |  |
| 30260              | PVC           | Black  |  |
| 3220               | PVC           | Black  |  |
| 3280               | PVC           | Black  |  |
| 60080              | PVC           | Grey   |                                                                                       |

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