



*Image for illustrative purpose only*

## Summary

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[f series](#)

|                                |                                                |
|--------------------------------|------------------------------------------------|
| Number of contacts Low Voltage | 19                                             |
| Gender                         | Reverse Gender                                 |
| Socket / Receptacle            | Socket / Receptacle - Fixed Panel Rear Mounted |
| Locking system                 | Push-pull                                      |
| Size                           | 2F                                             |
| Series                         | F - Rugged Push-Pull                           |

[https://www.lemo.com/int\\_en/solutions/optima/f-rugged-push-pull/hes-2f-319-xldps.html](https://www.lemo.com/int_en/solutions/optima/f-rugged-push-pull/hes-2f-319-xldps.html)

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# Technical details

## Electrical Configuration

|                                 |                           |
|---------------------------------|---------------------------|
| Number of contacts Low Voltage  | 19                        |
| Contact Termination Low voltage | PCB - Straight            |
| R (max)                         | 6.1 mOhm                  |
| Insert configuration value      | 2F.319 - 19 Low Voltage   |
| Insulator                       | L: PEEK (UL 94 / V-0/1.5) |
| Rated current                   | 5 A                       |
| Vtest (contact-contact)         | 1550 V (AC), 2200 V (DC)  |
| Vtest (contact-shell)           | 1650 V (AC), 2350 V (DC)  |
| Contact Dia.                    | 0.7 mm (0.028in)          |
| Gender                          | Reverse Gender            |

## Form & Material

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Shell style / Model id | HE - Fixed receptacle, nut fixing, for printed circuit (back panel mounting)                            |
| Socket / Receptacle    | Fixed Panel Rear Mounted                                                                                |
| Housing material       | Aluminium (nickel plated [SAE AMS QQ N 290], anthracite color) shell and nut, other pieces bronze/brass |
| Locking system         | Push-pull                                                                                               |
| Keying                 | 3 keys (beta=155, gamma=50, plug: female contacts, receptacle: male contacts)                           |
| Colour                 | Grey                                                                                                    |
| Variant                | Watertight unmated (connector to device)                                                                |
| Weight                 | 7.48 g                                                                                                  |

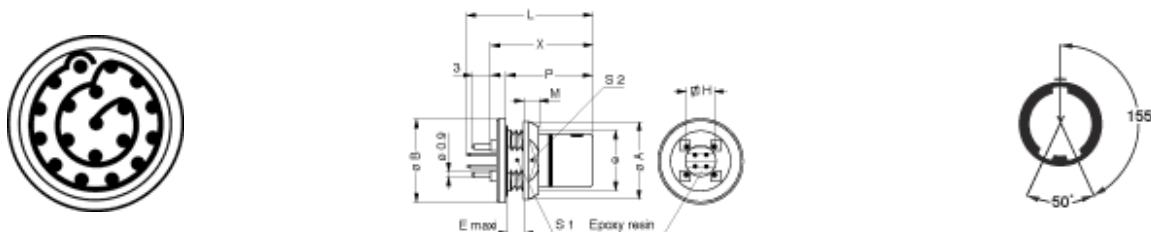
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## Environment

|                                   |                                  |
|-----------------------------------|----------------------------------|
| Technical domain                  | Motorsport, Security and Defence |
| Environmental sealing (IP rating) | IP68                             |
| Endurance                         | 1000 mating cycles               |
| Temperature range                 | -15°C / +100°C                   |
| 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]           |
| Pressure                          | 5 bars                           |
| Salt Spray Corrosion              | max. 48 hr                       |

## Drawings



## Dimensions

|     | A    | B    | e       | E    | H    | L    | M    | P    | S1   | S2   | X    |
|-----|------|------|---------|------|------|------|------|------|------|------|------|
| mm. | 20   | 20   | M16x1.0 | 3    | 8.89 | 21.5 | 4    | 14.5 | 14.5 | 17   | 17.5 |
| in. | 0.79 | 0.79 |         | 0.12 | 0.35 | 0.85 | 0.16 | 0.57 | 0.57 | 0.67 | 0.69 |

## Recommended By Lemo

### Accessories

|                |                                |
|----------------|--------------------------------|
| Compatible cap | <a href="#">BRE.2F.200.XAV</a> |
|----------------|--------------------------------|

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## Documents

|            |                          |
|------------|--------------------------|
| PCB        | <a href="#">Download</a> |
| PCB Eagle  | <a href="#">Download</a> |
| Kicad      | <a href="#">Download</a> |
| PCB Altium | <a href="#">Download</a> |

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