

# FALCON™

## EXPANDED BEAM CONNECTORS



### FEATURES

- Insertion loss <1,2 dB
- Approved for 40G transmission per channel
- Only 12-channel junior connector in the world with collimated light beam according to MIL-DTL-83526/20&21
- Temperature range -57°C – +85°C (+100°C optional)
- Hermaphroditic interconnection
- Rugged connector design
- Keyed boot for blind mating
- No adaptors needed
- Easy clean, no special tools

The FALCON connectors offer the best attenuation values and smallest 12-channel connector foot-print on the market. With an insertion loss of <1,2 dB, it outperforms the NATO specification (<2,5 dB). In addition, the FALCON is the only expanded beam connector on the market that has proven to transfer 40Gbit/s over one channel.

Micropol supplies cable systems with rugged, high-quality cables that can cope with both extreme temperatures ranging from -57°C to +100°C and high physical impact. Our fiber optic cables are tested to last +15.000.000 bends at 30 mm radius and can hang free for 2 km with proportions intact. Lengths range from a few decimeters up to several kilometers. Bulkhead connectors can be provided with conductive surface to discard EMI.

### COMPATIBLE WITH\*

| Brand              | Mini | Junior | Senior |
|--------------------|------|--------|--------|
| FIBRECO JUNIOR     |      | X      |        |
| FIBRECO MINI 2     | X    |        |        |
| QPC Q-MICRO        | X    |        |        |
| QPC Q-MINI         |      | X      |        |
| TE PRO-BEAM        | X    | X      | X      |
| TELECAST MX - MINI | X    |        |        |
| Amphenol TacBeam   |      | X      |        |
| Stratos S900       |      |        | X      |
| Fibreco F900       |      |        | X      |
| Stratos HMA        |      | X      |        |

\*Does not apply to 12 channels

STANDARD CONFIGURATIONS

|                |                  |
|----------------|------------------|
| FALCON™ Mini   | 1 to 4 channels  |
| FALCON™ Junior | 1 to 12 channels |
| FALCON™ Senior | 1 to 16 channels |

OPTICAL

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Type                | Single mode (SM), multimode (MM) or hybrid                                         |
| Transmission        | 10Gbit/s (40Gbit/s optional)                                                       |
| Insertion loss (SM) | Typical Insertion Loss -0,8dB (1310 nm)<br>Maximum Insertion Loss -1,2dB (1310 nm) |
| Insertion loss (MM) | Typical Insertion Loss -0,8dB (1300 nm)<br>Maximum Insertion Loss -1,0dB (1300 nm) |
| Return loss (PDL)   | >35dB at 1310nm or 1550nm<br>Polarization dependent loss less than 0,35dB          |

MECHANICAL

|                            |                                                        |
|----------------------------|--------------------------------------------------------|
| Coupling type              | Hermaphroditic                                         |
| Compliant                  | ROHS & REACH                                           |
| Material                   | Hard anodized aluminum (MIL-A-8625 TYPE III CLASS 2)   |
| Alternative material       | Marine bronze, stainless steel or titanium             |
| Colour                     | Grey                                                   |
| Durability                 | 3000 mating cycles (MIL-DTL-83526)                     |
| Free fall                  | 500 falls from 1,2 meters height (IEC 68-2-32-P II)    |
| Vibration                  | 5-500Hz, 0,75mm amplitude at 10G                       |
| Shaking                    | 390 m/S numbers of shakes 3x4000                       |
| Shock pulse length         | 11ms, half sine at 35g<br>Numbers of axis: 3 (x, y, z) |
| Recommended wall thickness | 2-3 mm - not valid for cable plug JR and Mini          |

ENVIRONMENTAL

|                       |                                 |
|-----------------------|---------------------------------|
| Operating temperature | -57°C to +85°C, +100°C optional |
| Water immersion       | IP67                            |
| Air pressure          | <25kPa -55°C during 4h          |
| Corrosion resistance  | 500h salt spray                 |
| Flammability          | DOD-STD-1678, method 5010       |

V9.3, 2025-10-15



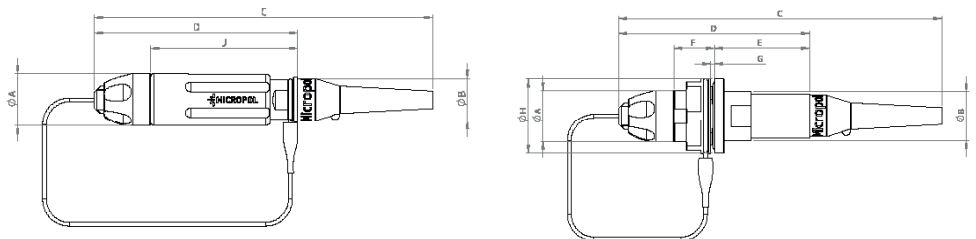
MORE INFORMATION

### DIMENSIONS PLUG & CHASSI CONNECTORS

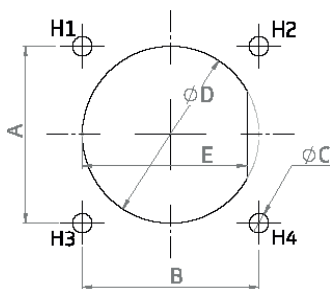
| Connector        | A  | B    | C   | D                        | E                                   | F        | G          | H                | J   |
|------------------|----|------|-----|--------------------------|-------------------------------------|----------|------------|------------------|-----|
| Mini D-hole SLP  | 21 | 17,5 | N/A | 49                       | 15                                  | 11       | 1-3        | Ø22              | N/A |
| Mini D-hole      | 21 | 20   | 132 | 78                       | 39                                  | 17       | 1-3        | Ø30,5            | N/A |
| Mini D-hole LP   | 21 | 20   | N/A | 59                       | 15                                  | 17       | 1-3        | Ø30,5            | N/A |
| Junior D-hole    | 27 | 24   | N/A | 2-4ch: 86<br>6-12ch:101  | 2-4ch: 40<br>6-12ch: 55             | 17,5     | 1-3        | Ø37              | N/A |
| Junior D-hole LP | 27 | 24   | N/A | 62                       | 16,5                                | 17,5     | 1-3        | Ø37              | N/A |
| Mini Square      | 22 | 17,5 | N/A | 50                       | 10,5                                | 16,5     | 1-15       | o25,3            | N/A |
| Junior Square    | 27 | 24   | N/A | 2-4ch: 86<br>6-12ch: 101 | 2-4ch: 36*/42**<br>6-12ch: 51*/57** | 22*/16** | 1- 30*/7** | o37              | N/A |
| Junior Square LP | 27 | 24   | N/A | 62                       | 12,5*/18,5**                        | 22*/16** | 1- 12*/7** | o37              | N/A |
| Mini XLR         | 22 | 17,5 | N/A | 50                       | 10,5                                | 16,5     | 1-15       | 31x26<br>(hxbw)" | N/A |
| Mini Plug        | 21 | 18   | N/A | 82                       | N/A                                 | N/A      | N/A        | N/A              | 59  |
| Mini Plug LP     | 21 | 16   | N/A | 74                       | N/A                                 | N/A      | N/A        | N/A              | 51  |
| Junior Plug      | 27 | 20   | N/A | 107                      | N/A                                 | N/A      | N/A        | N/A              | 79  |
| Junior Plug LP   | 27 | 20   | N/A | 107                      | N/A                                 | N/A      | N/A        | N/A              | 79  |

All dimensions in mm. \* External mounting \*\* Internal mounting

| # | Description                               |
|---|-------------------------------------------|
| A | Front Diameter                            |
| B | Rear Diameter                             |
| C | Total length with protective cap and boot |
| D | Total length with protective cap          |
| E | Rear to wall face.                        |
| F | Wall face to mating face.                 |
| G | Wall thickness.                           |
| H | Flange shape & size                       |
| J | Rear side to mating face.                 |



### RECOMMENDED PANEL CUT-OUT



| Connector       | A          | B          | C                                                 | øD             | E              |
|-----------------|------------|------------|---------------------------------------------------|----------------|----------------|
| Mini D-hole SLP | N/A        | N/A        | N/A                                               | 17,5 +0,2/-0,0 | 16,7 +0,2/-0,0 |
| Mini D-hole     | N/A        | N/A        | N/A                                               | 24,0 +0,2/-0,0 | 22,5 +0,2/-0,0 |
| Junior D-hole   | N/A        | N/A        | N/A                                               | 30,0 +0,2/-0,0 | 28,0 +0,2/-0,0 |
| Mini Square     | 19,0 ±0,2  | 19,0 ±0,2  | -Clearance hole: 2,7 ±0,1<br>-Threaded hole: M2,5 | 19,0 ±0,2/-0,0 | NA             |
| Junior Square   | 30,0 ±0,2  | 30,0 ±0,2  | -Clearance hole: 3,3 ±0,1<br>-Threaded hole: M3   | 28,0 +0,2/-0,0 | NA             |
| Mini XLR        | 24,0* ±0,2 | 19,0* ±0,2 | -Clearance hole: 3,3 ±0,1<br>-Threaded hole: M3   | 19,0 +0,2/-0,0 | NA             |

All dimensions in mm.  
\*Only hole H1 & H4 to be used (diagonal)