

FALCON

EXPANDED BEAM CONNECTOR

WE ARE MICROPOL

At Micropol we combine unique design and production technology to offer more complex and compact solutions for passive fiber optics than any other supplier on the market. Our work is of extreme high precision and we are known for providing short lead times, high quality and customized applications.

Regardless of the application, we have the knowledge and the capacity to manufacture the product needed – either according to the customer's specification or as a specially tailored solution. All our products are manufactured in our own facility in Sweden.

Our customers are found in a large variety of markets where advanced fiber optic solutions are crucial. Our products are used in a whole range of technologies, from complex fiber optic networks for telecom and data communication, to advanced sensor systems for industrial (e.g. mining, forest and offshore), medical and military applications.

Made to last a lifetime

We are proud to be a vital link between the information community of today and that of the future. We have always built our success on long term relations, knowledge and solid craftsmanship to provide the highest quality and the best service. Solutions made to last a lifetime.

OUR FOUR MAIN SEGMENTS



DEFENCE &
SECURITY



TELECOM &
BROADCAST



INDUSTRY



MEDTECH

THE EVOLUTION OF FALCON™

In the early 1980s the Swedish Defense Materiel Administration specified the next generation of field tactical communication system. The purpose was to offer the Swedish Armed Forces a system which was designed for usage in all environments around the world.

The expanded beam technology was chosen as the technology of the future, because of its unique and reliable functionality in harsh environments.

The FALCON connector is based on the Swedish specification matured since the 1980s and is today the toughest specification of harsh environment fiber optic systems in the world. Part of this specification is today forming the American spec. M83526/20&21.

Key features

- Approved and qualified for use by the Swedish Defense Materiel Administration, FMV (www.fmv.se).
- Built according to MIL-M83526 / 20 & 21

Micropol is the supplier of choice to the Swedish Armed Forces in all environments where reliable field tactical communication is a must. Our systems are present above, on and under the surface. Falcon Expanded Beam Connectors are the results of decades of development and hard testing to meet the world's toughest specifications.

The patent pending technology developed by Micropol has by far the best optical performance in the world, and are outperforming the NATO standard (<2,5dB) by offering an insertion loss of <1,2dB.

FEATURES

OPTICAL

- Single mode (SM), multimode (MM) or hybrid.
- Typical Insertion Loss SM & MM <0,8dB
- Maximum SM Insertion Loss 1,2dB
- Maximum MM Insertion Loss 1,0dB
- Return Loss >35dB at 1310nm or 1550nm
- PDL less than 0,35dB (Polarization Dependent Loss)

MECHANICAL

- Hermaphroditic coupling
- ROHS Compliant
- Hard anodized aluminum
- Marine bronze & stainless steel available
- Durability 3000 mating cycles
- Free fall 500 at 1,2m
- Vibration 5-500Hz, 0,75mm amplitude at 10g
- Shaking 390m/s numbers of shakes 3x4000
- Shock pulse length 11ms, half sine at 35g, numbers of axis:3 (x,y and z)
- Recommended wall thickness 2-3 mm

ENVIRONMENTAL

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

FALCON™ MINI

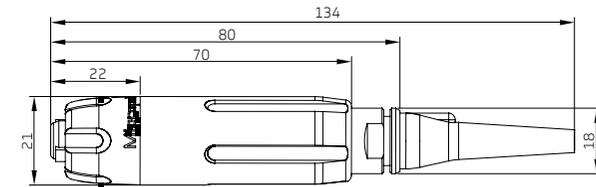
- Used by the Swedish Armed Forces since 2007
- 1 to 4 fiber channels singlemode or multimode

COMPATIBLE WITH: TE Pro-Beam
QPC Qmini
Telecast MX - MINI
Fibreco Mini 2

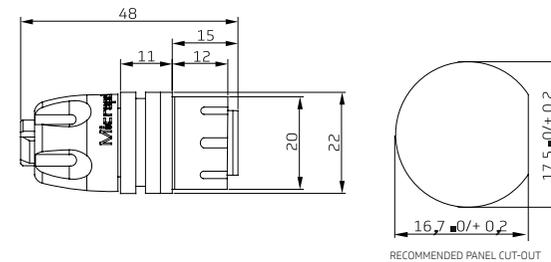


DRAWINGS

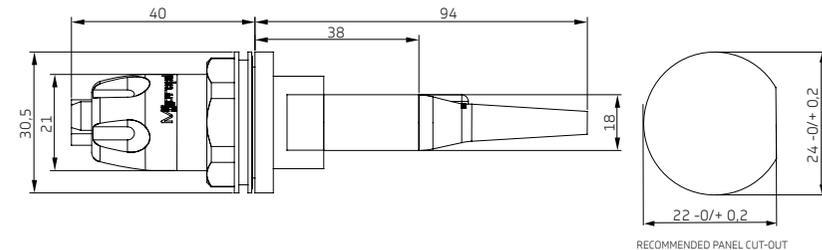
FALCON™ MINI PLUG



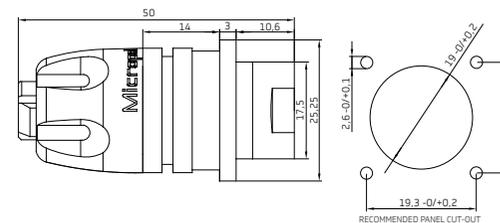
FALCON™ MINI SLP



FALCON™ MINI D-HOLE



FALCON™ MINI-SQ



FALCON™ JUNIOR

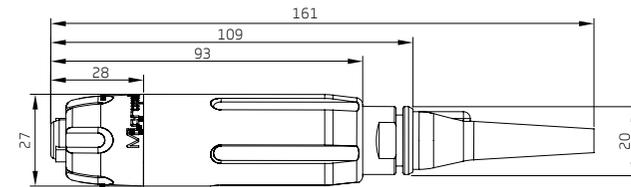
- Used by the Swedish Armed Forces since 2005
- 1 to 12 fiber channels singlemode or multimode

COMPATIBLE WITH: TE Pro-Beam
QPC Qmini
Fibreco Junior
Amphenol TacBeam
Stratos HMA

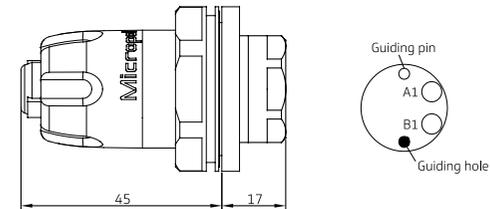


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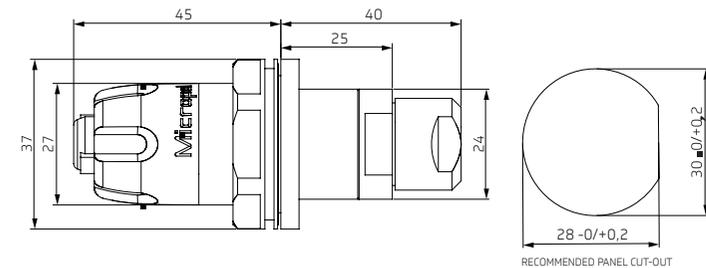
FALCON™ JR PLUG



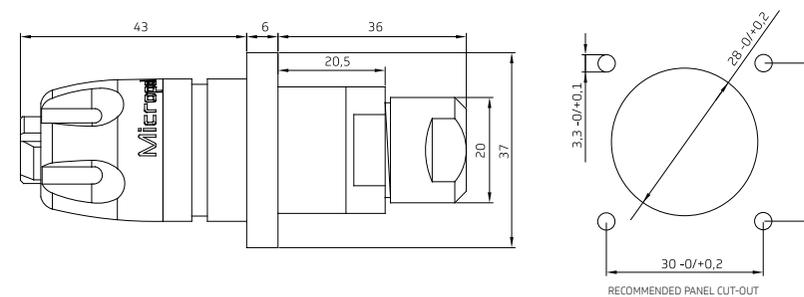
FALCON™ JR LOW PROFILE



FALCON™ JR-D-HOLE



FALCON™ JR-SQ



FALCON™ SENIOR

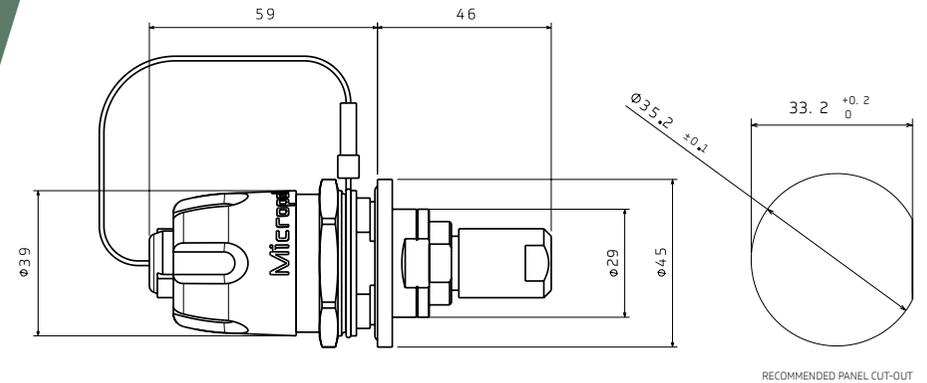
- Used by the Swedish Armed Forces since 1990
- 1 to 16 fiber channels singlemode or multimode

COMPATIBLE WITH: TE Pro-Bem Senior
Stratos S900
Fibreco F900

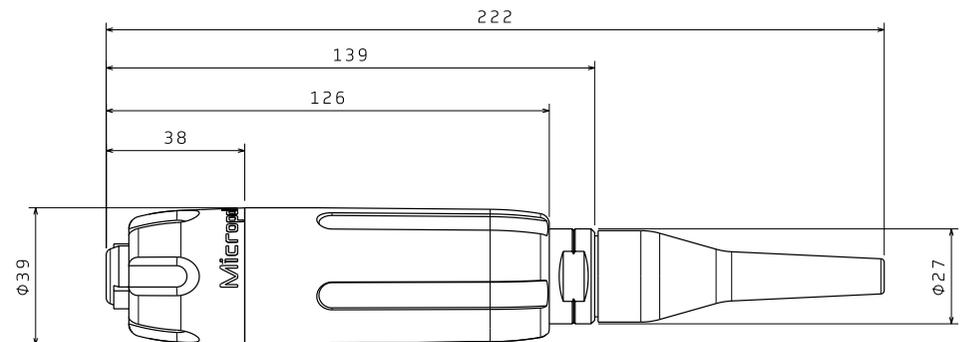


DRAWINGS

FALCON™ SR D



FALCON™ SR PLUG



OUR HISTORY

Micropol has delivered high quality fiber optic products and solutions for more than 30 years. However, the event that lay the foundation to the company dates even further back in time.

In the morning of October 28, 1981, the Soviet submarine U137 was reported to have ran aground in the Karlskrona archipelago, an event that became world news. Anders Andersson, the founder of Micropol, was working at the time in the Royal Air Force. During the 1970's, Anders read about a new technique called fiber optics. He realized its future potential and requested with his superiors to invest time and funding to learn more. Much to his regret the request did not generate much interest.

The grounded Soviet submarine however, brought a light to the use of fiber optics as Sweden during the years to come, had to relate on US Navy sonar equipment, based on fiber optics. As the Swedish Armed Forces engaged in its own development of fiber optics, Anders was commissioned to build knowledge in the area and as a result, the Swedish Armed Forces' Technical School FMTS (Försvarsmaktens Tekniska Skola) in Halmstad was founded. It is still operational and employs more than 400 military and civil professionals.

During the 1980's, companies such as SSAB and Statoil became interested in utilizing fiber optics. They contacted Anders who was given the opportunity to employ his knowledge to the civil market. This resulted in the founding of Micropol in 1988. The company grew and in 1996, it moved to its existing location in Åled. The development in fiber optics continued with the introduction of Micropol's own product range and with new, large customers, such as Ericsson and Alcatel. In 2011, one of Micropol's major products within the defence and security customer segment was launched, the Falcon expanded beam connector. Since then, the Falcon-technology, offering extreme optic performance and the smallest foot-print on the market, is the product of choice for the Swedish Armed Forces. As a result, Micropol has expanded its customer range to several defence and security globals.

During the 2000's, the fiber optic market has continued to grow. In parallel to the defence and security segment, Micropol's offering is adding value to customers within telecom, broadcast, medical technology, off-shore, mining and industry.



TECHNOLOGY LEADER IN PASSIVE FIBER OPTICS