

UNDERWATER MINIATURE ELECTRICAL DRY-MATE CONNECTORS

I N T R O D U C T I O N

To meet the ever increasing demand for smaller high density connectors, SEA CON® developed the Micro MINI-CON series. This miniature connector series incorporates all of the engineering concepts and design features of our highly successful MINI-CON range, but in a smaller configuration ranging in size from 1/2" to just over 2" in diameter.

In order to maintain the miniaturization and provide minimal wall thickness, special o-rings were developed to seal the interfaces on all plugs and receptacles. The inserts and bulkhead connectors are retained using Shape Memory Alloy (SMA) retaining rings manufactured from a non-corrosive material and designed to be as thin as possible but without compromising reliability. The memory characteristic is extremely beneficial when there is a need to remove the insert from the shell.

The Micro MINI-CON inserts are aligned so that the key engages first before the o-ring and electrical contacts become seated (scoop proof). The key is also designed to engage and secure the insert in the axial and rotational planes.

In many applications a flange mounted receptacle is preferred instead of a screw-in type, however SEA CON® has designed a modular flange that fits over the screw-in type eliminating the need to purchase a separate shell, again without compromising performance.

A V A I L A B I L I T Y

The Micro MIN-CON dry-mateable connector range is available in 6 different shell sizes ranging from 4 to 202 contacts with a pressure rating of 13,500 psi mated and is also available in a fiber optic configuration (please see our Optical Dry-Mate Hybrid section). In addition, this series also offers the option of right angles, over-molding of the cable plug, field installing the cable using boots or terminating with a Pressure Balanced Oil-Filled (PBOF) system.

A P P L I C A T I O N S

The Micro MINI-CON is suitable for a variety of applications including cameras and lights or any application where size is an issue.

T E S T I N G

The Micro MINI-CON range of connectors have been subjected to the following testing:-

ENVIRONMENTAL

Humidity (steady state)

- Tested in accordance with MIL-STD-202, Method 103

Thermal Shock

- Tested in accordance with MIL-STD-202, Method 107

Mechanical Shock

- Tested in accordance with MIL-S-901, Grade A, Class 1

Hydrostatic Pressure

- Tested in accordance with MIL-STD-202, Method 1006

PHYSICAL

Vibration

- Tested in accordance with MIL-STD-202, Method 301

ELECTRICAL

Dielectric Withstand Voltage

- Tested in accordance with MIL-STD-202, Method 301

Insulation Resistance

- Tested in accordance with MIL-STD-202, Method 302