HSC HERMETIC SEAL™

AMETEK®
ENGINEERED INTERCONNECT AND PACKAGING

# MICROMINIATURE D CONNECTORS

## Manufactured to the requirements of: MIL-C-83513



## PRODUCT DESCRIPTION

Hermetic Seal Corporation Series 50800 Microminiature Rack and Panel D Connectors are manufactured to the requirement of MIL-C-83513.

The standard connector comes with a durable Kovar® body material and gold plated Kovar® contacts. The insulator is made of a matched or compression sealed glass to comply with thermal properties of various body/contact materials.

A resilient fluoro silicone rubber interfacial seal may also be provided as a moisture barrier.

### USE

Ideal for electronic or electrical equipment, for commercial and defense, airborne, ground support, or shipboard. The connector's size and weight lends to various applications and the D shape ensures a positive polarization.

### GENERAL SPECIFICATIONS

**Air Leakage (Hermeticity):**
Leakage rate less than 0.1 micron cubic foot per hour ($1 \times 10^{-8}$ cc/sec) at 15 psi.

**Dielectric Withstanding Voltage:**
Connectors show no evidence of breakdown or flashover when tested at voltages shown per MIL-STD-1344, Method 3001.

| Contact Size | Test Voltage 60 Hz (RMS) Sea Level | |
|---|---|---|
| | Initial Volts | After Conditioning Volts |
| 24 | 600 | 360 |

**Max. Operating Temperature:**
257°F

**Insulation Resistance:**
Greater than 5,000 megohms per MIL-STD-1344, Method 3003.

**Salt Spray:**
Connectors will meet salt spray test per MIL-STD-1344, Method 1001.

**Permeability:**
Magnetic permeability less than 2.0 Mu when non-magnetic metals are used.

**Shock:**
Mated connectors are not damaged per MIL-STD-1344, Method 2004.

**Thermal Shock:**
No evidence of damage detrimental to operation of connector after test per MIL-STD-1344, Method 1003.

**Contact Resistance**

| Contact Size | Test Current (Amps Max.) | Initial Volts (Max.) | After Conditioning Volts (Max.) |
|---|---|---|---|
| 24 | 2.5 | 70 | 75 |

**Wall Thickness:**
0.025 ± .005 (all around)

## PART NUMBERING SYSTEM

K 50 8 1 2 9 S *

Material:
- X – Inconel
- K – Kovar
- (or as specified)

Configuration

Series No.

- 0 – No holes in flange
- 1 – Lock post

Contact Termination

Insert Arrangement

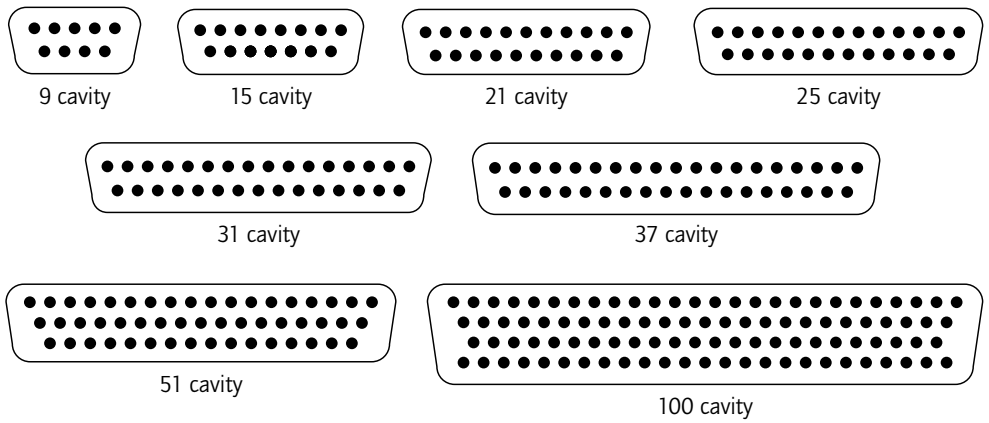
Contact Designator:
- S – Socket

Special Modifications (includes plating)

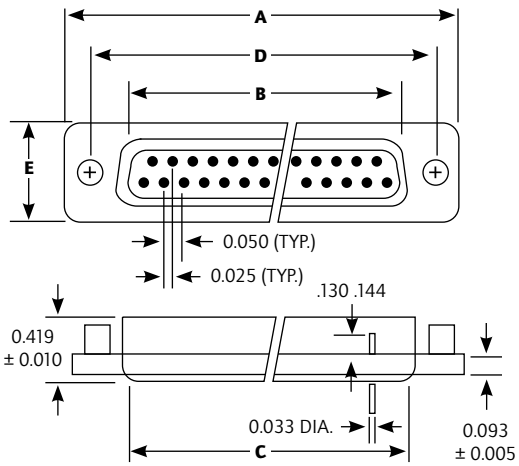
All connector sizes shown are completely designed.
Most standard insert arrangements and interfacial seals are tooled.
Please consult factory for further details.

Wire Accommodated: #26 AWG

## INSERT ARRANGEMENTS



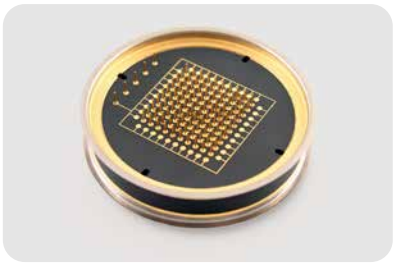

## SERIES 50800




| Part Number | A ± 0.010 | B BSC | C + 0.010 - 0.018 | D BSC | E ± 0.010 |
|---|---|---|---|---|---|
| K50812-9S | 0.775 | 0.3342 | 0.390 | 0.565 | 0.298 |
| K50812-15S | 0.925 | 0.4842 | 0.540 | 0.715 | 0.298 |
| K50812-21S | 1.075 | 0.6342 | 0.690 | 0.865 | 0.298 |
| K50812-25S | 1.175 | 0.7342 | 0.790 | 0.965 | 0.298 |
| K50812-31S | 1.325 | 0.8842 | 0.940 | 1.115 | 0.298 |
| K50812-37S | 1.475 | 1.0342 | 1.090 | 1.265 | 0.298 |
| K50812-51S | 1.425 | 0.9842 | 1.040 | 1.215 | 0.341 |
| K50812-100S | 2.160 | 1.3842 | 1.432 | 1.800 | 0.384 |







## ABOUT ENGINEERED INTERCONNECT AND PACKAGING

AMETEK Engineered Interconnect and Packaging (EIP) is the world leading producer of end-to-end electronic packaging solutions for harsh environments and reliability sensitive applications. Consisting of five leading brands Hermetic Seal, Sealtron, AMETEK SCP, Aegis and Glasseal Products, experts for hermetic electronic connectors and packaging, AMETEK EIP can offer a wide range of material technologies, including metals, glass, ceramics, and plastics and has the unique expertise required to design, custom manufacture, and scale tailored solutions using any material or combination of materials required.

HSC HERMETIC SEAL™ / AMETEK ENGINEERED INTERCONNECT AND PACKAGING

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