



DEUTSCH
AFD SERIES
CONNECTORS

QUALIFIED TO MIL-DTL-26482 SERIES II

Miniature Circular Connectors with Quick-Connect Bayonet Coupling and Environmental Sealing to Help Withstand Harsh Environments

DEUTSCH AFD SERIES CONNECTORS

Miniature Connectors Sealed To Help Withstand Harsh Environments



WITHSTAND HARSH ENVIRONMENTS

- Triple wire sealed for sealing over a wide range of wire diameters
- Raised moisture barriers around each pin for individual contact sealing

EASY INSTALLATION

- Bayonet coupled
- Closed entry socket insert for positive pin alignment
- Rear-release crimp contact system for superior contact stability

VERSATILE AND ROBUST DESIGN OPTIONS

- Variety of shell styles including square flange, single hole mount, cable connecting, solder mount (hermetic only).
- Aluminum alloy material, nickel, black anodic, and olive drab chromate (cadmium) over nickel platings available
- Power and shielded contacts
- Intermateable with MIL-DTL-26482 Series I connectors

APPLICATIONS

- Commercial Aerospace
- Military Aerospace
- Military Ground Vehicles

TE Connectivity's DEUTSCH AFD series connectors are MIL-DTL-26482 Series II-qualified connectors. They feature bayonet coupling and rear release contacts in a miniature circular connector system with environmental sealing.

This series features four receptacle mounting styles: square flange, wide square flange, cable connecting, and single-hole mount. Plugs are available with and without EMI fingers.

MATERIALS

- **Shell:** Aluminum alloy
- **Shell Plating:** Nickel, black anodized, or olive drab cadmium over nickel base
- **Contacts:** Copper alloy, selectively plated 50 μ m gold
- **Insulator:** Rigid plastic dielectric
- **Seals:** Silicone-based elastomer

ENVIRONMENTAL

- **Temperature:** -55° to 200°C (class W rated to 175°C)
- **Durability:** 500 mating cycles
250 cycles for parts with EMI fingers
- **Vibration:** Meets performance requirements of MIL-DTL-26482
- **Shock:** Meets performance requirements of MIL-DTL-26482

ELECTRICAL

- **Shielding:** EMI spring fingers as per MIL-DTL-26482 Series II
- **Conductivity:** 5 mV max. drop (with EMI Shielding)
200 mV max. drop (except class A) (without EMI Shielding)
- **Contact Retention:** Minimum axial force:
Size 20: 20 lb • Size 16: 25 lb • Size 12: 30 lb

| Voltage Rating: | Service Rating 1 | Service Rating II |
|--|---------------------------------|-----------------------------------|
| Recommended Operating Voltage | | |
| @ Sea Level | 600 VAC _{RMS} /850 VDC | 1000 VAC _{RMS} /1275 VDC |
| Test Voltages (V_{RMS}) | | |
| @ Sea Level | 1500 | 2300 |
| @ 50,000 ft. | 500 | 750 |
| @ 70,000 ft. | 375 | 500 |
| @ 110,000 ft. | 200 | 200 |

Contacts

| Size | Pin Contact | Socket Contact | Seal Plug | Insertion/Removal Tool |
|-------------|--------------------|-----------------------|------------------|-------------------------------|
| 20 | M39029/4-110 | M39029/5-115 | MS27488-20-2 | M81969/14-11 |
| 16 | M39029/4-111 | M39029/5-116 | MS27488-16-2 | M81969/14-03 |
| 12 | M39029/4-113 | M39029/5-118 | MS27488-12-2 | M81969/14-04 |

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Raychem | Rochester | DEUTSCH

Get your product to market faster with a smarter, better solution.

DEUTSCH AFD Series Part Numbering System



MIL-DTL-26482 Part Numbering System



Insert Arrangements

| Insert | Contact Size | | | Insert Positions |
|--------|--------------|----|----|------------------|
| | 20 | 16 | 12 | |
| 8-33 | 3 | — | — | N, W |
| 8-98 | 3 | — | — | N |
| 10-6 | 6 | — | — | N, W |
| 12-3 | — | 3 | — | N, Y |
| 12-8 | 8 | — | — | N, W, X, Y, Z |
| 12-10 | 10 | — | — | N, W, X, Y, Z |
| 14-4 | — | — | 4 | N, W |
| 14-5 | — | 5 | — | N, W, X, Y, Z |
| 14-12 | 8 | 4 | — | N, W, X |
| 14-15 | 14 | 1 | — | N, W, X, Y, Z |

| Insert | Contact Size | | | Insert Positions |
|--------|--------------|----|----|------------------|
| | 20 | 16 | 12 | |
| 14-18 | 18 | — | — | N, W, X, Y, Z |
| 14-19 | 19 | — | — | N, W, X |
| 16-8 | — | 8 | — | N, W, X, Y, Z |
| 16-23 | 22 | 1 | — | N, W |
| 16-26 | 26 | — | — | N, W, Y, Z |
| 18-8 | — | — | 8 | N, W |
| 18-11 | — | 11 | — | N, W, X, Y, Z |
| 18-30 | 29 | 1 | — | N, W, X, Y, Z |
| 18-32 | 32 | — | — | N, W, X, Y, Z |
| 20-16 | — | 16 | — | N, W, X, Y, Z |

| Insert | Contact Size | | | Insert Positions |
|--------|--------------|----|----|------------------|
| | 20 | 16 | 12 | |
| 20-39 | 37 | 2 | — | N, W, X, Y, Z |
| 20-41 | 41 | — | — | N, W, X, Y, |
| 22-12 | — | — | 12 | N |
| 22-21 | — | 21 | — | N, W, X, Y, |
| 22-32 | 32 | — | — | N, W, X, Y, Z |
| 22-41 | 27 | 14 | — | N, W, X, Y, |
| 22-55 | 55 | — | — | N, W, X, Y, Z |
| 24-19 | — | — | 19 | N, W, X, Y, |
| 24-31 | — | 31 | — | N, W, X, Y, |
| 24-61 | 61 | — | — | N, W, X, Y, Z |

For More Information

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Consult TE for the latest dimensions and design specifications.

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