



# 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  $\mu$ 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                 |
|--|---------------------------------|-----------------------------------|
| <b>Recommended Operating Voltage</b>   |                                 |                                   |
| @ Sea Level                            | 600 VAC <sub>RMS</sub> /850 VDC | 1000 VAC <sub>RMS</sub> /1275 VDC |
| <b>Test Voltages (V<sub>RMS</sub>)</b> |                                 |                                   |
| @ 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

### TE Technical Support Center

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Consult TE for the latest dimensions and design specifications.