















# DEUTSCH

# MIL-DTL-38999 SERIES III CONNECTORS

RUGGED, HARSH ENVIRONMENT SUBMINIATURE CONNECTORS

## QUICK REFERENCE GUIDE

### Wide Range

- Mil spec, commercial, and composite
- Full line of finishes, including black zinc nickel and PTFE nickel

### High Performance

- Environmentally sealed



## MIL-DTL-38999 Series III Connectors

| | |
|---|---|
| **Coupling Mechanism** | Threaded, 360° turn |
| **Shell Materials** | Stainless steel<br>Aluminum<br>Composite |
| **Features** | Scoop proof<br>Environmentally sealed<br>Hermetic versions<br>Filter versions<br>Spring fingers for EMI control |
| **Shell Platings** | Olive drab cadmium<br>Passivated<br>Electroless nickel<br>Electrodeposited nickel<br>Nickel PTFE<br>Black zinc-nickel |
| **No. of Contact Sizes, Std.** | 23, 22, 20, 16, 12, 10, 8 |
| **Shell Sizes** | 9, 11, 13, 15, 17, 19, 21, 23, 25 |
| **No. of Signal Contacts, Max.** | 187 |
| **Contact Type** | AS39029 |
| **Contact Styles** | Crimp<br>Solder cup or eyelet<br>PCB tail |
| **Operating Temperatures** | -65°C to +200°C<br>-65°C to +175°C<br>-65°C to +150°C<br>(Depends on shell finish) |
| **Durability (Mating Cycles)** | 500<br>(Higher durability versions available) |
| **Standard Configurations** | |
| **Plugs** | Straight, with EMI spring fingers<br>Lanyard release |
| **Receptacles** | Box mounting, both front and rear panel mounting<br>Wall mounting, both front and rear panel mounting<br>Jam nut, rear panel mounting<br>Solder mount<br>Weld mount<br>Through-hole bulkhead |

**TE Components . . . TE Technology . . . TE Know-how . . .**
AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Polamco | Raychem | Rochester | DEUTSCH
SEACON Phoenix | L.L. Rowe | Phoenix Optix | SEACON

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

# DEUTSCH 38999 Series III Connectors

Aluminum • Stainless Steel • Composite

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Commercial Composite** | **ACT** | **26** | **M** | **D** | **35** | **P** | **N** |
| **Commercial Al/SS** | **DTS** | **26** | **F** | **15** | **35** | **P** | **N** |
| **Military** | **D38999** | **/26** | **F** | **D** | **35** | **P** | **N** |

| Commercial Composite | Commercial Alum./Stainless | Military | Description |
|---|---|---|---|
| **RANGE** | | | |
| ACT | DTS | D38999 | |
| **STYLE** | | | |
| 20 | 20 | /20 | Square Flange Receptacle |
| 24 | 24 | /24 | Jam Nut Receptacle |
| 26 | 26 | /26 | Straight Plug |
| — | 20 | /21 | Hermetic Square Flange Receptacle |
| — | 24 | /23 | Hermetic Jam Nut Receptacle |
| — | 21 | /25 | Hermetic Solder Flange |
| — | 23 | /27 | Hermetic Weld Flange |
| **FINISH** | | | |
| ALUMINUM SHELL | | | |
| — | F | F | Electroless Nickel Plated (48-hr. Salt Spray) |
| — | G | G | Space-Grade Electroless Nickel (48-hr. Salt Spray) |
| — | T | T | Nickel PTFE (500-hr. Salt Spray) |
| — | W | W | Olive Drab Cadmium (500-hr. Salt Spray) |
| — | Z | Z | Black Zinc Nickel (500-hr. Salt Spray) |
| COMPOSITE SHELL | | | |
| M | — | M | Electroless Nickel Plated (2000-hr. Salt Spray) |
| J | — | J | Olive Drab Cadmium (2000-hr. Salt Spray) |
| STAINLESS STEEL SHELL | | | |
| — | K | K | Corrosion-Resistant S.S. - Firewall (500-hr. Salt Spray) |
| — | S | S | Nickel Plated (500-hr. Salt Spray) |
| — | L | L | Electrodeposited Nickel (48-hr. Salt Spray) |
| HERMETIC | | | |
| — | Y | Y | Stainless Steel, Passivated |
| — | N | N | Stainless Steel, Nickel Plated |
| — | H | H | Space Grade |
| **SHELL SIZES** | | | |
| 9 (A), 11 (B), 13 (C), 15 (D), 17 (E), 19 (F), 21 (G), 23 (H), 25 (J) | | | Numbers = DTS Commercial; (Letters) = Military/ACT Commercial |
| **INSERT ARRANGEMENTS** | | | See Insert Arrangements Table |
| **CONTACTS** | | | |
| P, A, H, S, B, J | | | P = Pin, A = Less Pin, H = 1500-Cycle Pin, S = Socket, B = Less Socket, J = 1500-Cycle Socket |
| **CONTACTS FOR HERMETIC CONNECTORS** | | | |
| C, D, X, Z | | | C = PC Tail Pin, D = PC Tail Socket X = Eyelet Pin, Z = Eyelet Socket |
| **KEYING** | | | |
| N, A, B, C, D, E | | | N = Normal |



**Jam Nut**



**Plug**



**MIL-SPEC**



**Square Flange Receptacle**



**PCB Type**



**Lanyard**

# Insert Arrangements



| Insert | | Contact Size/Quantity | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DTS Commercial | Military and Commercial ACT | 8 Twinax | 8 Coax | 8 Power | 12 Twinax | 12 Coax | 10 | 12 | 16 | 20 | 22D | 23 | Includes K Class | Uses 38999/62-8* Boots | Inactive: Superseded by |
| 09-07 | A7 (A07) | | | | | | | | | | 7 | | | | |
| 09-23 | A23 | | | | | | | | | | | 9 | | | |
| 09-35 | A35 | | | | | | | | | | 6 | | ✔ | | |
| 09-98 | A98 | | | | | | | | | 3 | | | ✔ | | |
| 11-02 | B2 (B02) | | | | | | | | 2 | | | | | | |
| 11-04 | B4 (B04) | | | | | | | | | 4 | | | | | |
| 11-05 | B5 (B05) | | | | | | | | | 5 | | | | | |
| 11-23 | B23 | | | | | | | | | | | 19 | | | |
| 11-35 | B35 | | | | | | | | | | 13 | | ✔ | | |
| 11-98 | B98 | | | | | | | | | 6 | | | ✔ | | |
| 11-99 | B99 | | | | | | | | | 7 | | | ✔ | | |
| 13-04 | C4 (C04) | | | | | | | | 4 | | | | | | |
| 13-08 | C8 (C08) | | | | | | | | | 8 | | | ✔ | | |
| 13-23 | C23 | | | | | | | | | | | 32 | | | |
| 13-35 | C35 | | | | | | | | | | 22 | | ✔ | | |
| 13-98 | C98 | | | | | | | | | 10 | | | ✔ | | |
| 15-05 | D5 (D05) | | | | | | | | 5 | | | | ✔ | | |
| 15-15 | D15 | | | | | | | | 1 | 14 | | | | | |
| 15-18 | D18 | | | | | | | | | 18 | | | ✔ | | |
| 15-19 | D19 | | | | | | | | | 19 | | | ✔ | | |
| 15-23 | D23 | | | | | | | | | | | 55 | | | |
| 15-26 | D-26 | | | | | | | | 2 | | 24 | | | | |
| 15-35 | D35 | | | | | | | | | | 37 | | ✔ | | |
| 15-97 | D97 | | | | | | | | 4 | 8 | | | ✔ | | |
| 17-02 | E2 (E02) | 1 | | | | | | | | | 38 | | | | 17-03 |
| 17-03 | E3 (E03) | 1 | | | | | | | | | 38 | | | ✔ | |
| 17-06 | E6 (E06) | | | | | | | 6 | | | | | ✔ | | |
| 17-08 | E8 (E08) | | | | | | | | 8 | | | | ✔ | | |
| 17-11 | E11 | | | | 2 | 1 | | | | 8 | | | | | |
| 17-19 | E19 | | | | | | | | 4 | 11 | 4 | | | | |
| 17-20 | E20 | | | | | | | 4 | | | 16 | | | | |
| 17-22 | E22 | 2 | | | | | | 2 | | | | | | | |
| 17-23 | E23 | | | | | | | | | | | 73 | | | |
| 17-24 | E24 | | | 2 | | | | | | | 22 | | | | |
| 17-26 | E26 | | | | | | | | | 26 | | | ✔ | | |
| 17-35 | E35 | | | | | | | | | | 55 | | ✔ | | |
| 17-99 | E99 | | | | | | | | 2 | 21 | | | ✔ | | |
| 19-11 | F11 | | | | | | | | 11 | | | | ✔ | | |
| 19-18 | F18 | 4 | | | | | | | | | 14 | | | | 19-19 |
| 19-19 | F19 | 4 | | | | | | | | | 14 | | | ✔ | |
| 19-23 | E23 | | | | | | | | | | | 88 | | | |
| 19-28 | F28 | | | | | | | | 2 | 26 | | | | | |



| Insert | | Contact Size/Quantity | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DTS Commercial | Military and Commercial ACT | 8 Twinax | 8 Coax | 8 Power | 12 Twinax | 12 Coax | 10 | 12 | 16 | 20 | 22D | 23 | Includes K Class | Uses 38999/62-8* Boots | Inactive: Superseded by |
| 19-32 | F32 | | | | | | | | | 32 | | | ✔ | | |
| 19-35 | F35 | | | | | | | | | | 66 | | ✔ | | |
| 21-11 | G11 | | | | | | | 11 | | | | | | | |
| 21-16 | G16 | | | | | | | | 16 | | | | | | |
| 21-20 | G20 | 2 | | | | | | | | 18 | | | | | |
| 21-23 | G23 | | | | | | | | | | | 121 | | | |
| 21-35 | G35 | | | | | | | | | | 79 | | ✔ | | |
| 21-39 | G39 | | | | | | | | 2 | 37 | | | ✔ | | |
| 21-41 | G41 | | | | | | | | | 41 | | | ✔ | | |
| 21-48 | G48 | | | 4 | | | | | | | | | | | |
| 21-75 | G75 | 4 | | | | | | | | | | | | | 21-76 |
| 21-76 | G76 | 4 | | | | | | | | | | | | ✔ | |
| 23-06 | H6 (H06) | 6 | | | | | | | | | | | | | |
| 23-21 | H21 | | | | | | | | 21 | | | | | | |
| 23-23 | H23 | | | | | | | | | | | 151 | | | |
| 23-35 | H35 | | | | | | | | | | 100 | | | | |
| 23-53 | H53 | | | | | | | | | 53 | | | ✔ | | |
| 23-54 | H54 | | | | | | | 4 | 9 | | 40 | | | | |
| 23-55 | H55 | | | | | | | | | 55 | | | | | |
| 23-63 | H63 | | | | | | | 4 | 4 | | 49 | | | | |
| 25-04 | J4 (J04) | | | | | | | | 8 | 48 | | | ✔ | | |
| 25-07 | J7 (J07) | 2 | | | | | | | | | 97 | | | | 25-09 |
| 25-08 | J8 (J08) | 8 | | | | | | | | | | | | | 25-10 |
| 25-09 | J9 (J09) | 2 | | | | | | | | | 97 | | | ✔ | |
| 25-10 | J10 | 8 | | | | | | | | | | | | ✔ | |
| 25-11 | J11 | | | | | | 9 | | | 2 | | | | | |
| 25-17 | J17 | 6 | | | | | | | | | 36 | | | | |
| 25-19 | J19 | | | | | | | 19 | | | | | | | |
| 25-20 | J20 | 3 | | | | 4 | | | 13 | 10 | | | | | 25-21 |
| 25-21 | J21 | 3 | | | | 4 | | | 13 | 10 | | | | ✔ | |
| 25-23 | J23 | | | | | | | | | | | 187 | | | |
| 25-24 | J24 | | | | | | | 12 | 12 | | | | | | |
| 25-29 | J29 | | | | | | | | 29 | | | | | | |
| 25-35 | J35 | | | | | | | | | | 128 | | ✔ | | |
| 25-37 | J37 | | | | | | | | 37 | | | | | | |
| 25-43 | J43 | | | | | | | | 20 | 23 | | | | | |
| 25-46 | J46 | | 2 | | | | | | 4 | 40 | | | | | 25-47 |
| 25-47 | J47 | | 2 | | | | | | 4 | 40 | | | | ✔ | |
| 25-61 | J61 | | | | | | | | | 61 | | | ✔ | | |
| 25-90 | J90 | 2 | | | | | | | 4 | 40 | | | | | 25-91 |
| 25-91 | J91 | 2 | | | | | | | 4 | 40 | | | | ✔ | |

Blue shaded entries are not Mil Spec.
Green shading indicates high-density inserts.

## For More Information

### TE Technical Support Center

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