



# DEUTSCH DTS SERIES CONNECTORS FOR MIL-DTL-38999 SERIES III

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

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

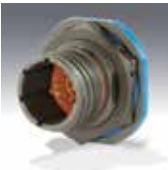
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Get your product to market faster with a smarter, better solution.

DEUTSCH 38999 Series III Connectors

Aluminum • Stainless Steel • Composite

|                                                                       |                            |          |                                                             | Commercial Composite                                                                                                                                                                     | ACT        | 26     | M   | D            | 35  | P   | N          | -6149 |
|-----------------------------------------------------------------------|----------------------------|----------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|-----|--------------|-----|-----|------------|-------|
|                                                                       |                            |          |                                                             | Commercial Al/SS Military                                                                                                                                                                | DTS D38999 | 26 /26 | F F | 15 D - 35 35 | P P | N N | -6149 -L/C |       |
| 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                                               |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | 13                         | —        | Box Mount Receptacle                                        |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | 20                         | /21      | Hermetic Square Flange Receptacle                           |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | 24                         | /23      | Hermetic Jam Nut Receptacle                                 |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | 21                         | /25      | Hermetic Solder Flange                                      |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | 23                         | /27      | Hermetic Weld Flange                                        |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| CLASS                                                                 |                            |          |                                                             |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| 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        | Passivated S.S., Firewall (500-hr. Salt Spray)              |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | S                          | S        | Electrodeposited Nickel S.S., Firewall (500-hr. Salt Spray) |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | L                          | L        | Electrodeposited Nickel (48-hr. Salt Spray)                 |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| HERMETIC                                                              |                            |          |                                                             |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | Y                          | Y        | Stainless Steel, Passivated                                 |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| —                                                                     | N                          | N        | Stainless Steel, Electrodeposited 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, H = 1500-Cycle Pin<br>S = Socket, J = 1500-Cycle Socket<br>A = Less Pin (with intent to use nonstandard contacts),<br>B = Less Socket (with intent to use nonstandard contacts) |            |        |     |              |     |     |            |       |
| CONTACTS FOR HERMETIC CONNECTORS                                      |                            |          |                                                             |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| P, S, C, D, X, Z                                                      |                            |          |                                                             | P = Pin, Solder Cup, S = Socket, Solder Cup<br>C = PC Tail Pin, D = PC Tail Socket<br>X = Eyelet Pin, Z = Eyelet Socket                                                                  |            |        |     |              |     |     |            |       |
| KEYING                                                                |                            |          |                                                             |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| N, A, B, C, D, E, U                                                   |                            |          |                                                             | N = Normal, U = Universal                                                                                                                                                                |            |        |     |              |     |     |            |       |
| MODIFICATION CODE                                                     |                            |          |                                                             |                                                                                                                                                                                          |            |        |     |              |     |     |            |       |
| 6149 6149 L/C                                                         |                            |          |                                                             | Less Contacts                                                                                                                                                                            |            |        |     |              |     |     |            |       |



Jam Nut



Plug



MIL-SPEC



Square Flange Receptacle



PCB Type



Lanyard

## Insert Arrangements



| Insert         |                           | Contact Size/Quantity |        |         |           |         |    |    |    |    |     |    | Includes K Class | Uses 38999/62-8* Boots | Inactive: Superseded by |
|----------------|---------------------------|-----------------------|--------|---------|-----------|---------|----|----|----|----|-----|----|------------------|------------------------|-------------------------|
| DTS Commercial | Military (Commercial ACT) | 8 Twinax              | 8 Coax | 8 Power | 12 Twinax | 12 Coax | 10 | 12 | 16 | 20 | 22D | 23 |                  |                        |                         |
| 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          | D26                       |                       |        |         |           |         |    |    | 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 |        |         |           |         |    |    |    |    |     |     |                  |                        | Inactive: Superseded by |
|----------------|---------------------------|-----------------------|--------|---------|-----------|---------|----|----|----|----|-----|-----|------------------|------------------------|-------------------------|
| DTS Commercial | Military (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 |                         |
| 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.

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