



**RUGGED**

- Self-locking bayonet coupling system
- 100% scoop proof
- 500-mating-cycle durability
- Excellent shock and vibration resistance
- Environmentally sealed and hermetic versions available

**VERSATILE**

- Available in 9 shell sizes
- Intermateable and interchangeable with all other MIL-DTL-38999 Series I connectors
- Available in a variety of shell materials and finishes
- Wide range of backshells and accessories

**EMI PROTECTED**

- Grounding fingers for excellent EMI protection
- Connector is grounded when the shells meet, even before the contacts are engaged
- Metal-to-metal bottoming to help maximize EMI grounding protection
- EMI shielding effective up to 10 GHz

MIL-DTL-38999 Series I Connectors

**DEUTSCH DJT Series Connectors**



The DEUTSCH DJT Series connectors from TE Connectivity (TE) are high-performance MIL-DTL-38999 Series I subminiature circular connectors offering a scoop-proof design for easy, reliable mating.

Available in 9 shell sizes and environmentally sealed and hermetic versions, DEUTSCH DJT Series connectors feature a self-locking bayonet coupling system. They are completely intermateable and interchangeable with MIL-DTL-38999 Series I connectors, and are available in a variety of shell materials and finishes.

Designed for rugged reliability, DEUTSCH DJT Series connectors are highly durable, capable of 500 mating cycles. They provide excellent vibration, corrosion and shock resistance, and offer excellent EMI protection and shielding effectiveness from 100 MHz to 10 GHz.



## MIL-DTL-38999 Series I Connectors

### DEUTSCH DJT Series Connectors

## Specifications

### MATERIALS

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- **Shell Material and Plating:**
  - Aluminum, olive drab cadmium
  - Aluminum, electroless nickel
  - Carbon steel, electrodeposited nickel (hermetic only)
  - Stainless steel, passivated (hermetic only but can be available commercially for standard environment configurations)
- **Insert:** Thermoplastic and fluorinated silicone elastomer
- **EMI Spring Fingers:** Nickel or cadmium-plated beryllium copper
- **O-Ring:** Fluorinated silicone elastomer

### ENVIRONMENTAL

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- **Temperature Range:**
  - 65°C to +150°C Electrodeposited tin-plated carbon steel (Class D)
  - 65°C to +175°C - Cadmium finish (Class B)
  - 65°C to +200°C - Nickel finish (Class F) and stainless steel (Class E)
- **Fluid Resistance:** Fluid immersion per EIA 364.10, including resistance to
  - MIL-PRF-5606: Hydraulic fluid
  - MIL-DTL-83133: JP-8 aviation fuel
  - MIL-PRF-7808: Lubricating oil
  - MIL-PRF-23699: Lubricating oil
  - MIL-A-8243: Deicing/defrosting fluid
  - MIL-C-25769: Aircraft cleaning compound
  - MIL-PRF-87937: Aircraft cleaning compound
  - MIL-G-3056: Gasoline
- **Salt Spray:** 48 hours (Nickel finishes)  
500 hours (Cadmium, black zinc nickel, nickel PTFE, and passivated finishes)
- **Thermal Cycling:** -65° to 150/175/200°C (max. temperature is class dependent)

### MECHANICAL

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- **Sine Vibration:** Up to 60 g for 36 hr.
- **Random Vibration:** Up to 41.7 g for 16 hr. at 175° C  
Up to 50 g for 16 hr. at ambient temperature
- **Shock:** 300 g, 3 ms in the 3 axes
- **Durability:** 500 mating cycles
- **Contact Retention:**
  - Size 22D: 44 N (10 lb.)
  - Size 20: 67 N (15 lb.)
  - Size 16: 111 N (25 lb.)
  - Size 12: 111 N (25 lb.)
  - Size 10: 111 N (25 lb.)
  - Size 8: 111 N (25 lb.)

### ELECTRICAL

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- **Shell-to-Shell Conductivity:** 1.0 mV (nickel finish)  
2.5 mV (cadmium finish)  
10.0 mV (passivated finish)
- **Shielding Effectiveness:** >90 dB at 100 MHz, >65 dB through 10 GHz



## MIL-DTL-38999 Series I Connectors

### DEUTSCH DJT Series Connectors

#### Voltage Rating

Service Rating	Suggested Operating Voltage		Test Voltage at Altitude (VAC <sub>rms</sub> )			
	VAC <sub>rms</sub>	VDC	Sea Level	50,000 Ft.	70,000 Ft.	100,000 Ft.
M	400	550	1300	550	350	200
N	300	450	1000	400	260	200
I	600	850	1800	600	400	200
II	750	1050	2300	800	500	200

#### Hermetic Connectors

- **Hermetic Seal:** Sintered glass
- **Leakage:** ≤16 cm<sup>3</sup>/hr. (0.97 in<sup>3</sup>/hr.) on mated pairs connected under 2.1 bar (4.38 psi)
- **Thermal Shock:** 10 cycles, 4°C max. to 90°C min.

#### Current Rating

Contact Size	Test Current (A)	Voltage Drop (mV)
22D	5	73
20	7.5	55
16	13	50
12	23	42
10	33	34
8*	46	26

\*When commercial power contact replaces twin-ax contact

#### Thread Sizes

Shell Size	Accessory Thread (Class 2A)	Jam Nut Thread (Class 2A)
9	.4375-28 UNEF	.6875-24 UNEF
11	.5625-24 UNEF	.8125-20 UNEF
13	.6875-24 UNEF	1.0000-20 UNEF
15	.8125-20 UNEF	1.1250-18 UNEF
17	.9375-20 UNEF	1.2500-18 UNEF
19	1.0625-18 UNEF	1.3750-18 UNEF
21	1.1875-18 UNEF	1.5000-18 UNEF
23	1.3125-18 UNEF	1.6250-18 UNEF
25	1.4375-18 UNEF	1.7500-18 UNS

# MIL-DTL-38999 Series I Connectors

## Military Part Numbering System

MS27466 T 25 F 35 S D XXXX

### MIL SPEC NUMBER/SHELL STYLE

- MS27466** Front, Wall Mount Receptacle (DJT10)
- MS27467** Straight Plug with EMI Fingers (DJT16)
- MS27468** Jam Nut Receptacle (DJT14)
- MS27470** Jam Nut Hermetic Receptacle (DJT14)
- MS27471** Solder Mount Hermetic Receptacle (DJT11)
- MS27496** Front, Box Mount Receptacle (DJT13)
- MS27505** Rear, Box Mount Receptacle (DJT12)
- MS27656** Rear, Wall Mount Receptacle (DJT19)

### CLASS

- T** With Accessory Thread (MS27466, MS27467, M27468, M27656)
- E** Same As **T**, But Not Approved For New Designs (E-Nut Not Included)
- E** No Accessory Thread, Box Mount (M27496, M27505)
- G** Space-Grade Environment Resisting
- Y** Hermetically Sealed

### SHELL SIZE

9, 11, 13, 15, 17, 19, 21, 23, 25

### MODIFICATIONS

L/C Less Contacts

### POLARIZING POSITIONS

**N** Normal (omit from part number)  
**A, B, C, D** (B and C not available in shell size 9)

### CONTACTS

- P** 500-Cycle Pin      **S** 500-Cycle Socket
- H** 1500-Cycle Pin    **J** 1500-Cycle Socket
- A** Less Pin (with intent to use nonstandard contacts)
- B** Less Socket (with intent to use nonstandard contacts)

### Hermetic Contacts

- P** Pin, Solder Cup      **S** Socket, Solder Cup
- X** Pin, Eyelet          **Z** Socket, Eyelet
- C** Pin, PC Tail          **D** Socket, PC Tail

### INSERT ARRANGEMENT

See Insert Arrangement Tables, pages 10-17 and 22-23

### FINISH

- B** Olive Drab Cadmium
- F** Nickel
- G** Space Grade
- D** Carbon Steel, Electrodeposited Tin Plating
- E** Stainless Steel, Passivated

## DEUTSCH Part Numbering System

DJT 1 0 F 25 - 35 S D XXXX

### GENERAL IDENTIFIER

DJT DEUTSCH MIL-DTL-38999 Series I

### COUPLING SYSTEM

1 Bayonet

### SHELL STYLE

- 0** Front, Wall Mount Receptacle (M27466)
- 6** Straight Plug with EMI Fingers (M27467)
- 4** Jam Nut Receptacle (M27468)
- 4** Jam Nut Hermetic Receptacle (MS27470)
- 1** Solder Mount Hermetic Receptacle (MS27471)
- 3** Front, Box Mount Receptacle (M27496)
- 2** Rear, Box Mount Receptacle (M27505)
- 9** Rear, Wall Mount Receptacle (M27656)

### CLASS

- E** Olive Drab Cadmium
- F** Nickel
- G** Space Grade
- H** Hermetic
- Z** Black Zinc Nickel

### MODIFICATIONS

6149 Less Contacts

### POLARIZING POSITIONS

**N** Normal  
**A, B, C, D** (B and C not available in shell size 9)

### CONTACTS

- P** 500-Cycle Pin      **S** 500-Cycle Socket
- H** 1500-Cycle Pin    **J** 1500-Cycle Socket
- A** Less Pin (with intent to use nonstandard contacts)
- B** Less Socket (with intent to use nonstandard contacts)

### Hermetic Contacts

- P** Pin, Solder Cup      **S** Socket, Solder Cup
- X** Pin, Eyelet          **Z** Socket, Eyelet
- C** Pin, PC Tail          **D** Socket, PC Tail

### INSERT ARRANGEMENT

See Insert Arrangement Tables, pages 10-17 and 22-23

### SHELL SIZE

09, 11, 13, 15, 17, 19, 21, 23, 25



## MIL-DTL-38999 Series I Connectors

### DEUTSCH DJT Series Connectors

Insert		Contact Size/Quantity											QPPL	QPPL Hermetic	Uses 38999/62-8" Boots	Inactive: Superseded by
DJT and Military	8 Twinax	8 Coax	8 Power	12 Twinax	12 Coax	10	12	16	20	22D	20	22D				
09-07										7						
09-35										6	✓	✓				
09-98									3		✓	✓				
11-02								2			✓	✓				
11-04									4			✓				
11-05									5			✓				
11-35										13		✓	✓			
11-98									6			✓	✓			
11-99									7			✓	✓			
13-04								4				✓	✓			
13-08									8			✓	✓			
13-35										22		✓	✓			
13-98									10			✓	✓			
15-05								5				✓	✓			
15-15								1	14				✓	✓		
15-18									18				✓	✓		
15-19									19			✓	✓			
15-26								2		24						
15-35										37		✓	✓			
15-97								4	8			✓	✓			
17-02	1									38						17-03
17-03	1									38				✓		
17-06								6				✓	✓			
17-08								8				✓	✓			
17-11				2	1				8							
17-19								4	11	4						
17-20								4		16						
17-22	2							2								
17-24			2							22						
17-26									26			✓	✓			
17-35										55		✓	✓			
17-99								2	21			✓	✓			
19-11								11				✓	✓			
19-18	4									14						19-19
19-19	4									14				✓		
19-28								2	26							
19-32									32			✓	✓			

Blue shaded entries are not Mil Spec.

# MIL-DTL-38999 Series I Connectors

## DEUTSCH DJT Series Connectors

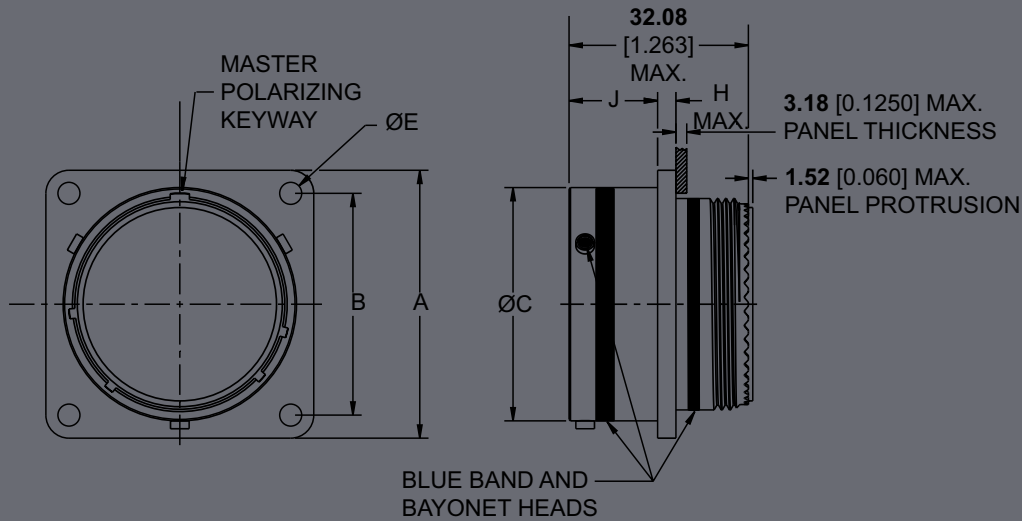
Insert	Contact Size/Quantity											QPL	QPL Hermetic	Uses 38999/62-8" Boots	Inactive: Superseded by
	DJT and Military	8 Twinax	8 Coax	8 Power	12 Twinax	12 Coax	10	12	16	20	22D				
19-35											66	✓			
21-11							11					✓			
21-16								16				✓			
21-20	2									18					
21-35											79	✓			
21-39								2	37			✓			
21-41									41			✓			
21-48			4												
21-75	4														21-76
21-76	4													✓	
23-06	6														
23-21								21				✓			
23-35											100	✓			
23-53									53			✓			
23-54							4	9		40					
23-55									55			✓			
23-63							4	4		49					
25-04								8	48			✓	✓		
25-07	2									97					25-09
25-08	8														25-10
25-09	2									97				✓	
25-10	8													✓	
25-17	6										36				
25-19							19					✓	✓		
25-20	3				4			13	10						25-21
25-21	3				4			13	10					✓	
25-24							12	12				✓	✓		
25-29								29				✓	✓		
25-35											128	✓	✓		
25-37								37				✓	✓		
25-43								20	23			✓	✓		
25-46		2						4	40						25-47
25-47		2						4	40					✓	
25-61									61			✓	✓		
25-90	2							4	40						25-91
25-91	2							4	40					✓	

Blue shaded entries are not Mil Spec.

# MIL-DTL-38999 Series I Connectors

## DEUTSCH DJT Series Connectors

### Front Panel Mount Square Flange Receptacle



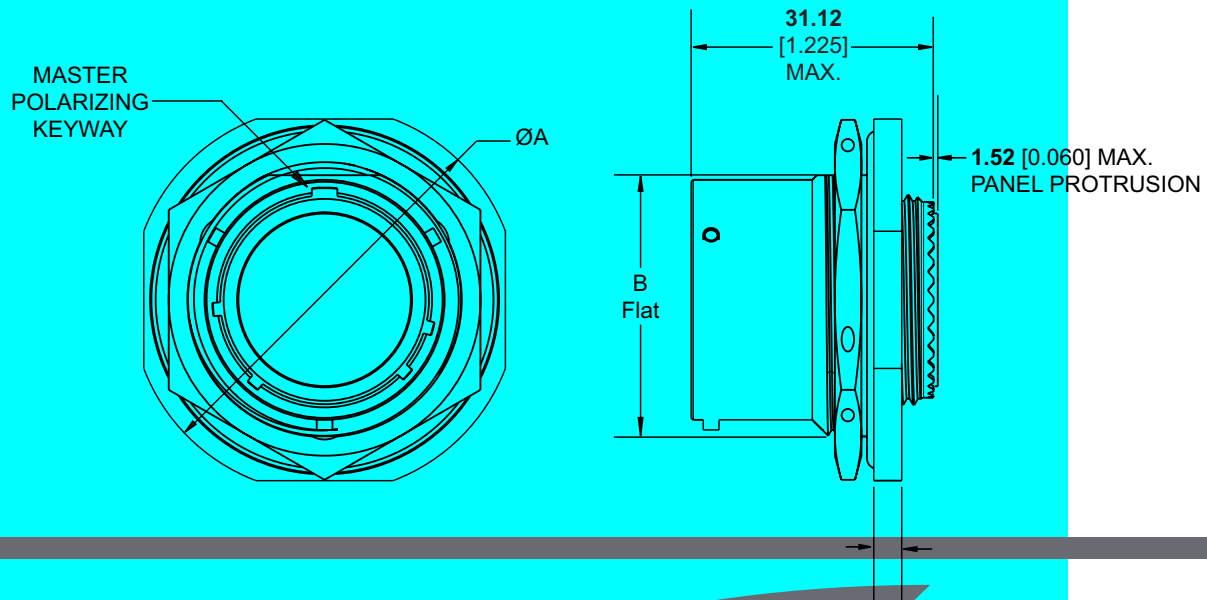
Shell Size	A ±0.51 (0.020)	B ±0.13 (0.005)	C ±0.08 (0.003)	E +0.25 ± 0.25/-0.13 (+0.010/-0.005)	F	G ±0.13 (0.005)	H	J +0.00 / -0.13 (0.005)
09	23.83 0.938	18.26 0.719	14.48 0.570	3.25 0.128	13.11 0.516	3.25 0.128	2.54 0.100	16.05 0.623
11	26.19 1.031	20.62 0.812	17.73 0.698	3.25 0.128	16.87 0.664	3.25 0.128	2.54 0.100	16.05 0.623
13	28.58 1.125	23.01 0.906	21.54 0.848	3.25 0.128	19.05 0.750	3.25 0.128	2.54 0.100	16.05 0.623
15	30.96 1.219	24.61 0.969	24.71 0.973	3.25 0.128	23.01 0.906	3.25 0.128	2.54 0.100	16.05 0.623
17	33.32 1.312	26.97 1.062	27.89 1.098	3.25 0.128	25.81 1.016	3.25 0.128	2.54 0.100	16.05 0.623
19	36.53 1.438	29.36 1.156	30.61 1.205	3.25 0.128	28.98 1.141	3.25 0.128	2.54 0.100	16.05 0.623
21	39.67 1.562	31.75 1.250	33.78 1.330	3.25 0.128	32.16 1.266	3.25 0.128	3.30 0.130	15.29 0.602
23	42.88 1.688	34.93 1.375	36.96 1.455	3.73 0.147	34.98 1.377	3.91 0.154	3.30 0.130	15.29 0.602
25	46.02 1.812	38.10 1.500	40.13 1.580	3.73 0.147	37.69 1.484	3.91 0.154	3.30 0.130	15.29 0.602

Millimeters Inches

# MIL-DTL-38999 Series I Connectors

## DEUTSCH DJT Series Connectors

### Jam Nut Receptacle



Shell Size	$\varnothing A$ $\pm 0.41 (0.016)$	B Flat $+0.000 / -0.25 (0.010)$	F $+0.000 / -0.25 (0.010)$	$\varnothing G$ $+0.000 / -0.25 (0.010)$
09	<b>30.18</b> 1.188	<b>16.64</b> 0.655	<b>17.02</b> 0.670	<b>17.78</b> 0.700
11	<b>34.93</b> 1.375	<b>19.18</b> 0.755	<b>19.58</b> 0.771	<b>20.96</b> 0.825
13	<b>38.10</b> 1.500	<b>23.93</b> 0.942	<b>24.26</b> 0.955	<b>25.65</b> 1.010
15	<b>41.28</b> 1.625	<b>27.08</b> 1.066	<b>27.56</b> 1.085	<b>28.83</b> 1.135
17	<b>44.45</b> 1.750	<b>30.25</b> 1.191	<b>30.73</b> 1.210	<b>32.00</b> 1.260
19	<b>49.23</b> 1.938	<b>33.43</b> 1.316	<b>33.91</b> 1.335	<b>35.18</b> 1.385
21	<b>52.37</b> 2.062	<b>36.60</b> 1.441	<b>37.08</b> 1.460	<b>38.35</b> 1.510
23	<b>55.58</b> 2.188	<b>39.78</b> 1.566	<b>40.26</b> 1.585	<b>41.53</b> 1.635
25	<b>58.72</b> 2.312	<b>42.95</b> 1.691	<b>43.43</b> 1.710	<b>44.70</b> 1.760

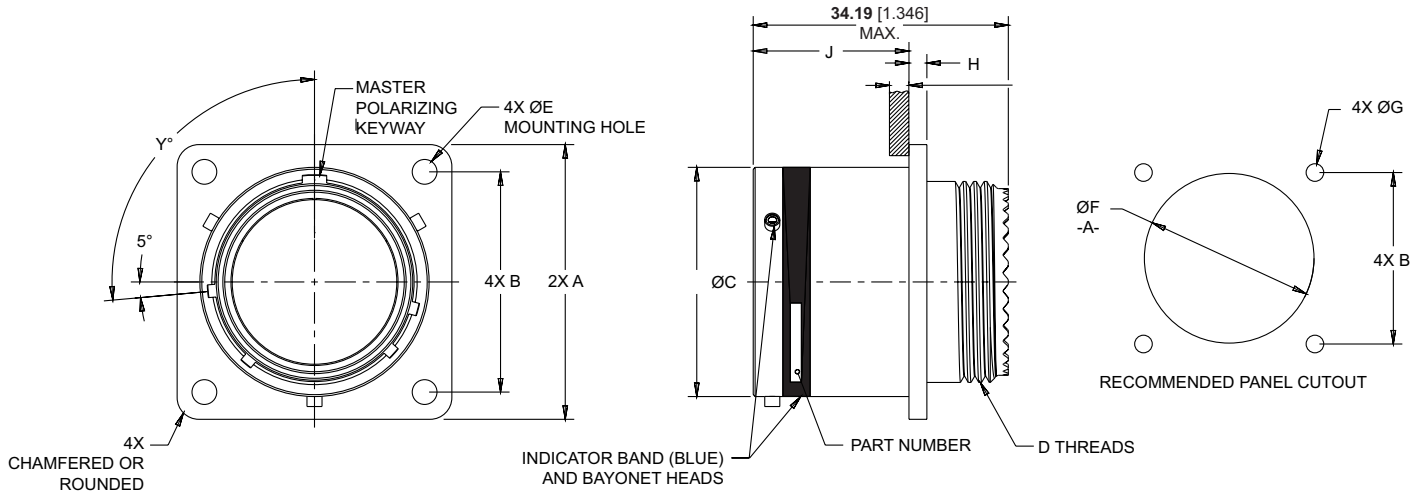
Millimeters Inches



## MIL-DTL-38999 Series I Connectors

### DEUTSCH DJT Series Connectors

#### Rear Panel Wall Mount Square Flange Receptacle



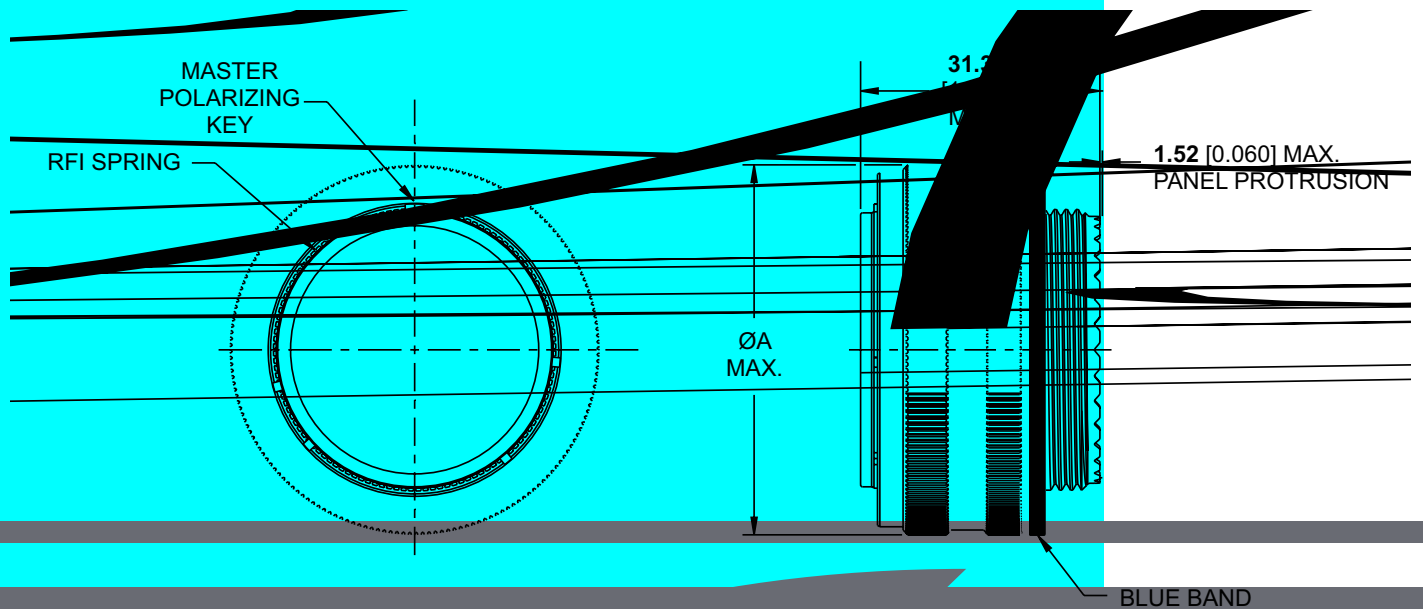
Shell Size	A ±0.51 (0.020)	B ±0.13 (0.005)	C ±0.08 (0.003)	D THREAD UNE-F-2A	ØE +0.25 -0.13 (+0.010 -0.005)	ØF Min.	ØG ±0.13 (0.005)	H +0.38 -0.00 (+0.015 -0.000)	J +0.00 -0.13 (+0.000 -0.005)
<b>09</b>	<b>23.83</b> 0.938	<b>18.26</b> 0.719	<b>14.48</b> 0.570	<b>11.11-28</b> 0.4375-28	<b>3.25</b> 0.128	<b>13.11</b> 0.516	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>11</b>	<b>26.19</b> 1.031	<b>20.62</b> 0.812	<b>17.73</b> 0.698	<b>14.29-24</b> 0.5625-24	<b>3.25</b> 0.128	<b>16.87</b> 0.664	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>13</b>	<b>28.58</b> 1.125	<b>23.01</b> 0.906	<b>21.54</b> 0.848	<b>17.46-24</b> 0.6875-24	<b>3.25</b> 0.128	<b>19.05</b> 0.750	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>15</b>	<b>30.96</b> 1.219	<b>24.61</b> 0.969	<b>24.71</b> 0.973	<b>20.64-20</b> 0.8125-20	<b>3.25</b> 0.128	<b>23.01</b> 0.906	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>17</b>	<b>33.32</b> 1.312	<b>26.97</b> 1.062	<b>27.89</b> 1.098	<b>23.81-20</b> 0.9375-20	<b>3.25</b> 0.128	<b>25.81</b> 1.016	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>19</b>	<b>36.53</b> 1.438	<b>29.36</b> 1.156	<b>30.61</b> 1.205	<b>26.99-18</b> 1.0625-18	<b>3.25</b> 0.128	<b>28.98</b> 1.141	<b>3.25</b> 0.128	<b>2.16</b> 0.085	<b>20.83</b> 0.820
<b>21</b>	<b>39.67</b> 1.562	<b>31.75</b> 1.250	<b>33.78</b> 1.330	<b>30.16-18</b> 1.1875-18	<b>3.25</b> 0.128	<b>32.16</b> 1.266	<b>3.25</b> 0.128	<b>2.92</b> 0.115	<b>20.07</b> 0.790
<b>23</b>	<b>42.88</b> 1.688	<b>34.93</b> 1.375	<b>36.96</b> 1.455	<b>33.34-18</b> 1.3125-18	<b>3.73</b> 0.147	<b>34.98</b> 1.377	<b>3.91</b> 0.154	<b>2.92</b> 0.115	<b>20.07</b> 0.790
<b>25</b>	<b>46.02</b> 1.812	<b>38.10</b> 1.500	<b>40.13</b> 1.580	<b>36.51-18</b> 1.4375-18	<b>3.73</b> 0.147	<b>37.69</b> 1.484	<b>3.81</b> 0.150	<b>2.92</b> 0.115	<b>20.07</b> 0.790

Millimeters Inches

# MIL-DTL-38999 Series I Connectors

## DEUTSCH DJT Series Connectors

**Plug**  
Type MS27467 / DEUTSCH DJT16



Shell Size	A
09	<b>21.82</b> .859
11	<b>24.99</b> .984
13	<b>29.36</b> 1.156
15	<b>32.54</b> 1.281
17	<b>35.71</b> 1.406
19	<b>38.51</b> 1.516
21	<b>41.68</b> 1.641
23	<b>44.86</b> 1.766
25	<b>48.03</b> 1.891

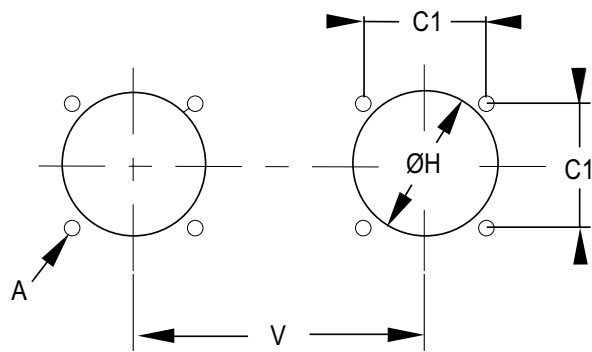
Millimeters Inches



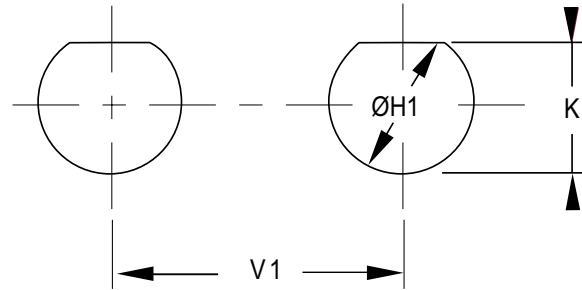
MIL-DTL-38999 Series I Connectors

DEUTSCH DJT Series Connectors

Recommended Panel Cutouts



Square Flange Receptacle



Jam Nut Receptacle

Shell Size	C1 ±0.13 (0.005)	H Min.	A ±0.13 (0.005)	V Min.
09	18.26 0.719	13.11 0.516	3.25 0.128	25.58 1.007
11	20.62 0.812	16.87 0.664	3.25 0.128	27.00 1.063
13	23.01 0.906	19.05 0.750	3.25 0.128	30.20 1.189
15	24.61 0.969	23.01 0.906	3.25 0.128	33.30 1.331
17	26.97 1.062	25.81 1.016	3.25 0.128	36.50 1.437
19	29.36 1.156	28.98 1.141	3.25 0.128	39.30 1.547
21	31.75 1.250	32.16 1.266	3.25 0.128	42.50 1.673
23	34.93 1.375	34.98 1.377	3.91 0.154	45.70 1.799
25	38.10 1.500	37.69 1.484	3.91 0.154	48.80 1.921

Millimeters Inches

Shell Size	K +0.00 / -0.25 (0.010)	ØH1 +0.00 / -0.25 (0.010)	V1 Min.
09	17.02 0.670	17.78 0.700	20.20 1.189
11	19.58 0.771	20.96 0.825	32.60 1.283
13	24.26 0.955	25.65 1.010	36.00 1.417
15	27.56 1.085	28.83 1.135	39.60 1.559
17	30.73 1.210	32.00 1.260	43.30 1.705
19	33.91 1.335	35.18 1.385	47.00 1.850
21	37.08 1.460	38.35 1.510	50.60 1.992
23	40.26 1.585	41.53 1.635	54.20 2.134
25	43.43 1.710	44.70 1.760	59.70 2.350

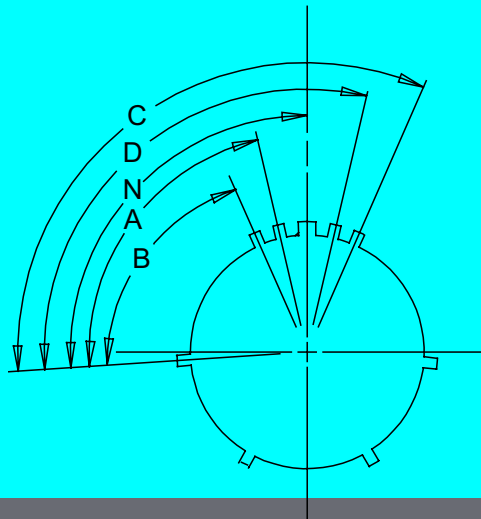
Millimeters Inches

## MIL-DTL-38999 Series I Connectors

### DEUTSCH DJT Series Connectors

#### Keying Options

(Viewed from Mating Face of the Receptacle Connector)



Shell Size	Key Position (Degrees)				
	N	A	B	C	D
09	95	77	—	—	113
11	95	81	67	123	109
13	95	75	63	127	115
15	95	74	61	129	116
17	95	77	65	125	113
19	95	77	65	125	113
21	95	77	65	125	113
23	95	80	69	121	110
25	95	80	69	121	110

Degrees in table above are the distance between Datum E (that bisects first minor keyway) and the center line of the master keyway