**VERSATILE**

- Medium and high-density arrangements
- 12 shell sizes and up to 128 contacts
- 100% scoop proof design

**RELIABLE**

- Elastomer interface and wire seals
- RFI fingers at mating interface and 360º backshell
- Hard face socket insert
- Contact retention mechanism integral to insert

**CONVENIENT**

- Simple assembly techniques with standard tooling
- Standard MIL-C-39029 contacts
- Positive bayonet locking serrations

# 38999-Style HDJ Series Connectors



## DEUTSCH HDJ/JN1003 Medium and High Density Connectors

The HDJ Series connectors are bayonet coupling connectors specifically designed for Eurofighter use. The range comprises plugs, receptacles, and cable accessories.

The series is intermateable and intermountable with connectors conforming to LN29729, EN3372, VG 96912 and the DEUTSCH AS range. The connectors are qualified in accordance with J 62.017.

The connectors are based on MIL-DTL-38999 Series I coupling interface lengths and Series II diameters.

## Specifications

### MATERIALS

- **Shell:** Aluminum alloy, plated olive drab cadmium
- **RFI Ring:** Beryllium copper, plated nickel/cadmium
- **Inserts:** Thermoplastic and fluorinated silicone elastomer
- **Contacts:** Copper alloy, plated gold

### MECHANICAL

- **Vibration:** Per J62.017 para. 2.11
- **Durability:** 500 mating cycles

### ENVIRONMENTAL

- **Service Temperature:** -55° C to +175° C
- **Thermal Shock:** As per J62.017 para. 2.4
- **Sealing:** Up to 30,000 m (100,000 ft.) altitude
- **Salt Spray Resistance:** per MIL-DTL-38999

### ELECTRICAL



# 38999-Style HDJ Series Connectors

- **Insulation Resistance:** ≥100,000 MΩ @ 20°C
- **Contact Current Rating:**
  Size 22: 5 A
  Size 20: 7.5 A
  Size 16: 13 A
  Size 12: 23 A
  Size 8

### Dielectric Withstand Voltage

| Rating Class | Dielectric Withstand Voltage ($VAC_{rms}$) | |
|---|---|---|
| | Sea Level | 22,000 m (70,000 ft.) |
| M | 1300 | 800 |
| N | 1000 | 600 |
| I | 1800 | 1000 |
| II | 2300 | 1000 |

## Part Numbering
**DEUTSCH Series**

HDJ 07 14 - 35 P N - *

**CONNECTOR SERIES**

**SHELL STYLE**
**00** Square Flange Receptacle
**01H** Hermetic
**02** Box Mount
**03** Bulkhead Receptacle
**06** Free Plug with Grounding Fingers
**07** Jam Nut Receptacle

**SHELL SIZE**

**INSERT ARRANGEMENT**

**MODIFICATION**
**Without Suffix** With Contacts
**090** Without Contacts

**ORIENTATION**
**N, A, B, C, D**
(N and A only for Style 03)
(N, A and D only for Size 8)

**CONTACT TYPE**
**P** Pin
**S** Socket
(for Style 03 use 'PS' designator)

## Part Numbering
**Eurofighter Series**

JN 1003 A 14-35 P N - *

**CONNECTOR SERIES**

**SHELL STYLE**
**A** Jam Nut
**B** Square Flange Receptacle
**FG** Free Plug with Grounding Fingers
**H** Box Mount

**SHELL SIZE**

**INSERT ARRANGEMENT**

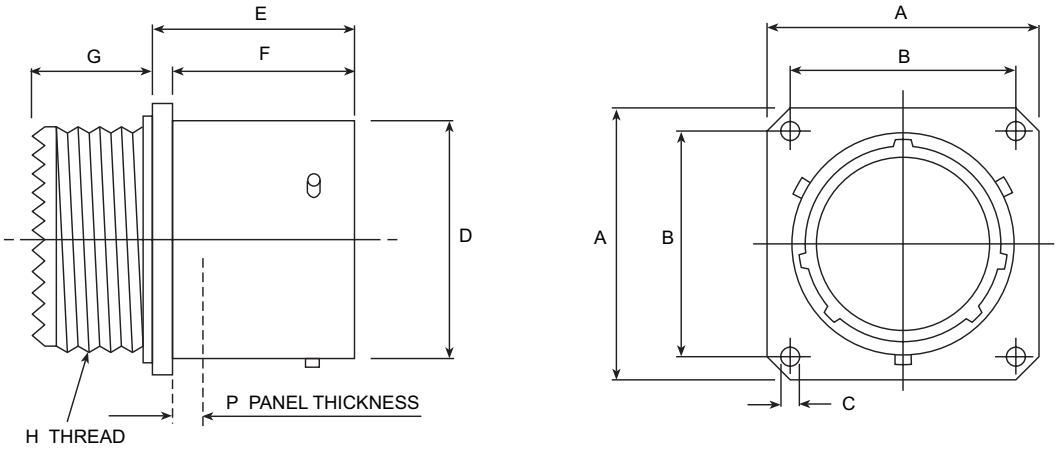
**MODIFICATION**
**Without Suffix** Without Contacts
**1** With Contacts

**ORIENTATION**
**N, A, B, C, D**
(N and A only for Style 03)
(N, A and D only for Size 8)

**CONTACT TYPE**
**P** Pin
**S** Socket

# 38999-Style HDJ Series Connectors

## Square Flange Receptacle – Shell Style OO (JN 1003 Style B)



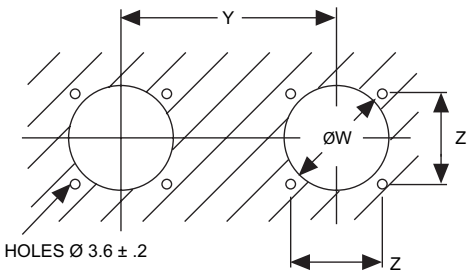

| Shell Size | A ±0.40 (±0.016) | B ±0.13 (±0.005) | C ±0.10 (±0.004) | D +0/-0.13 (+0/-0.005) | E +0.15 (+0.016) Max. | F +0/-0.13 (+0/-0.005) | G Max. | H Thread UNEF Class 2a | P Max. |
|---|---|---|---|---|---|---|---|---|---|
| 08 | **20.62**<br>0.812 | **15.10**<br>0.594 | | **12.00**<br>0.472 | | | | 0.4375 – 28 | |
| 10 | **23.83**<br>0.938 | **18.30**<br>0.720 | | **15.00**<br>0.591 | | | | 0.5625 – 24 | |
| 12 | **26.19**<br>1.031 | **20.60**<br>0.811 | | **19.05**<br>0.750 | | | | 0.6875 – 24 | |
| 14 | **28.57**<br>1.125 | **23.00**<br>0.906 | | **22.22**<br>0.875 | | **16.05**<br>0.632 | | 0.8125 – 20 | |
| 16 | **30.96**<br>1.219 | **24.60**<br>0.969 | **3.20**<br>0.126 | **25.40**<br>1.000 | | | | 0.9375 – 20 | **3.00**<br>0.118 |
| 18 | **33.32**<br>1.312 | **27.00**<br>1.063 | | **28.57**<br>1.125 | **18.21**<br>0.717 | | **14.00**<br>0.551 | 1.0625 – 18 | |
| 20 | **36.53**<br>1.438 | **29.40**<br>1.157 | | **31.75**<br>1.250 | | | | 1.1875 – 18 | |
| 22 | **39.67**<br>1.562 | **31.80**<br>1.252 | | **34.92**<br>1.375 | | **15.29**<br>0.602 | | 1.3125 – 18 | |
| 24 | **42.90**<br>1.689 | **34.90**<br>1.374 | **3.70**<br>0.146 | **38.10**<br>1.500 | | | | 1.4375 – 18 | **2.26**<br>0.089 |

**Millimeters** Inches

**Panel Cutout**

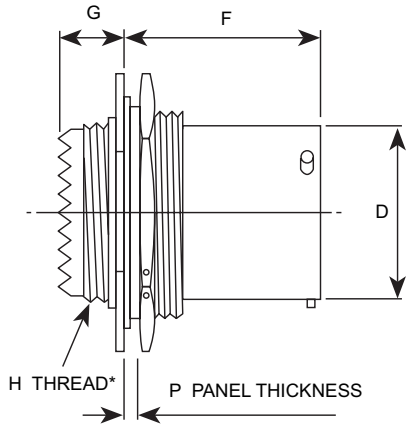
| Shell Size | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|---|---|---|---|---|---|---|---|---|---|
| W ± 0.2 | **13.7**<br>0.539 | **16.9**<br>0.665 | **21.0**<br>0.827 | **24.2**<br>0.953 | **27.3**<br>1.075 | **30.5**<br>1.201 | **33.7**<br>1.327 | **36.9**<br>1.453 | **40.0**<br>1.575 |
| Z ± 0.2 | **15.1**<br>0.594 | **18.3**<br>0.720 | **20.6**<br>0.811 | **23.0**<br>0.906 | **24.6**<br>0.969 | **27.0**<br>1.063 | **29.4**<br>1.157 | **31.8**<br>1.252 | **34.9**<br>1.374 |
| Y | **28.0**<br>1.102 | **31.0**<br>1.220 | **36.0**<br>1.417 | **41.0**<br>1.614 | **43.0**<br>1.693 | **46.0**<br>1.811 | **53.0**<br>2.087 | **58.0**<br>2.283 | **61.0**<br>2.402 |

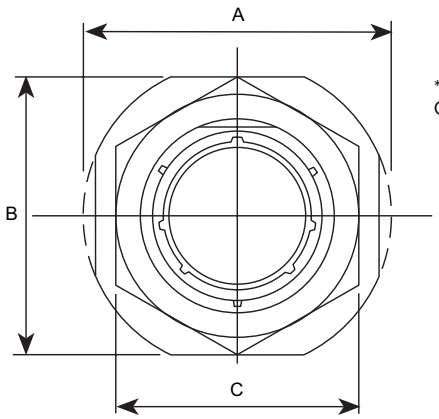
**Millimeters** Inches



# 38999-Style HDJ Series Connectors

## Jam Nut Receptacle - Shell Style 07 (JN 1003 Style A)




*H Thread VG 96912 Style - Consult TE for availability.

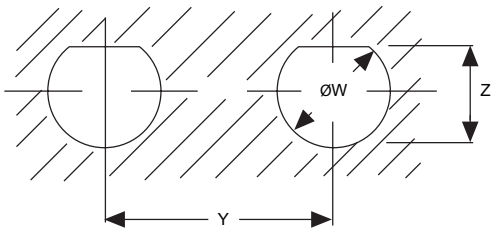
| Shell Size | A Max. | B ±0.41 (±0.016) | C ±0.43/-0.41 (±0.017/-0.016) | D +0/-0.13 (+0/-0.005) | F +0.13 (+0.005) | G Max. | P | H Thread UNEF Class 2a |
|---|---|---|---|---|---|---|---|---|
| 08 | **27.38** 1.078 | **23.83** 0.938 | **19.05** 0.750 | **12.00** 0.472 | | | | 0.4375 – 28 |
| 10 | **30.56** 1.203 | **26.97** 1.062 | **22.22** 0.875 | **15.00** 0.591 | | | | 0.5625 – 24 |
| 12 | **35.33** 1.391 | **31.75** 1.250 | **26.97** 1.062 | **19.05** 0.750 | | | | 0.6875 – 24 |
| 14 | **38.51** 1.516 | **34.92** 1.375 | **30.18** 1.188 | **22.22** 0.875 | | | **3.20** 0.126 Max | 0.8125 – 20 |
| 16 | **41.68** 1.641 | **38.10** 1.500 | **33.32** 1.312 | **25.40** 1.000 | **23.24** 0.915 | **14.10** 0.555 | | 0.9375 – 20 |
| 18 | **44.86** 1.766 | **41.27** 1.625 | **36.53** 1.438 | **28.57** 1.125 | | | **1.60** 0.063 Max | 1.0625 – 18 |
| 20 | **49.61** 1.953 | **46.02** 1.812 | **39.67** 1.562 | **31.75** 1.250 | | | | 1.1875 – 18 |
| 22 | **52.78** 2.078 | **49.23** 1.938 | **42.88** 1.688 | **34.92** 1.375 | | | | 1.3125 – 18 |
| 24 | **55.96** 2.203 | **52.37** 2.062 | **46.02** 1.812 | **38.10** 1.500 | | | | 1.4375 – 18 |

**Millimeters** Inches

**Panel Cutout**

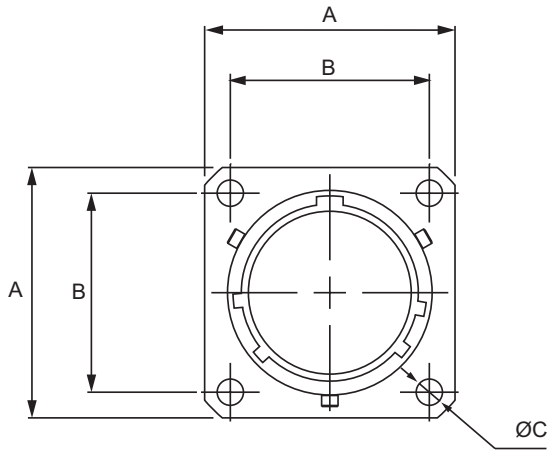
| Shell Size | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|---|---|---|---|---|---|---|---|---|---|
| W ± 0.10 | **14.53** 0.572 | **17.7** 0.697 | **22.5** 0.886 | **25.7** 1.012 | **28.83** 1.135 | **32.01** 1.260 | **35.18** 1.385 | **38.36** 1.510 | **41.53** 1.635 |
| Z ± 0.2 | **13.62** 0.536 | **16.79** 0.661 | **21.0** 0.827 | **24.08** 0.948 | **27.23** 1.072 | **30.41** 1.197 | **33.58** 1.322 | **36.95** 1.455 | **39.93** 1.572 |
| Y | **28.0** 1.102 | **31.0** 1.220 | **36.0** 1.417 | **41.0** 1.614 | **43.0** 1.693 | **46.0** 1.811 | **53.0** 2.087 | **58.0** 2.283 | **61.0** 2.402 |

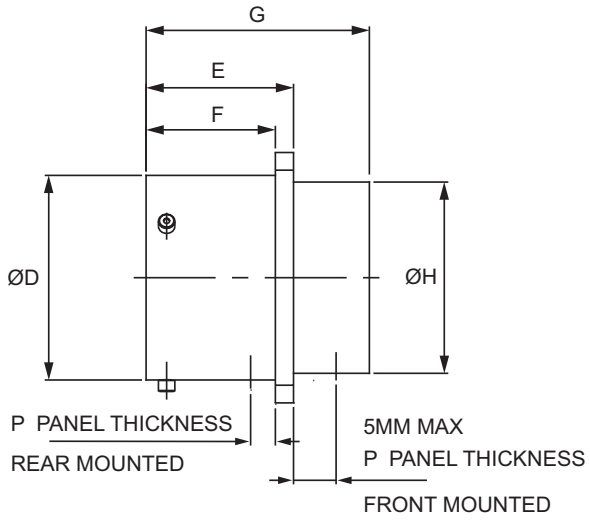
**Millimeters** Inches



# 38999-Style HDJ Series Connectors

## Box Mount-Shell Style 02 (JN 1003 Style H)



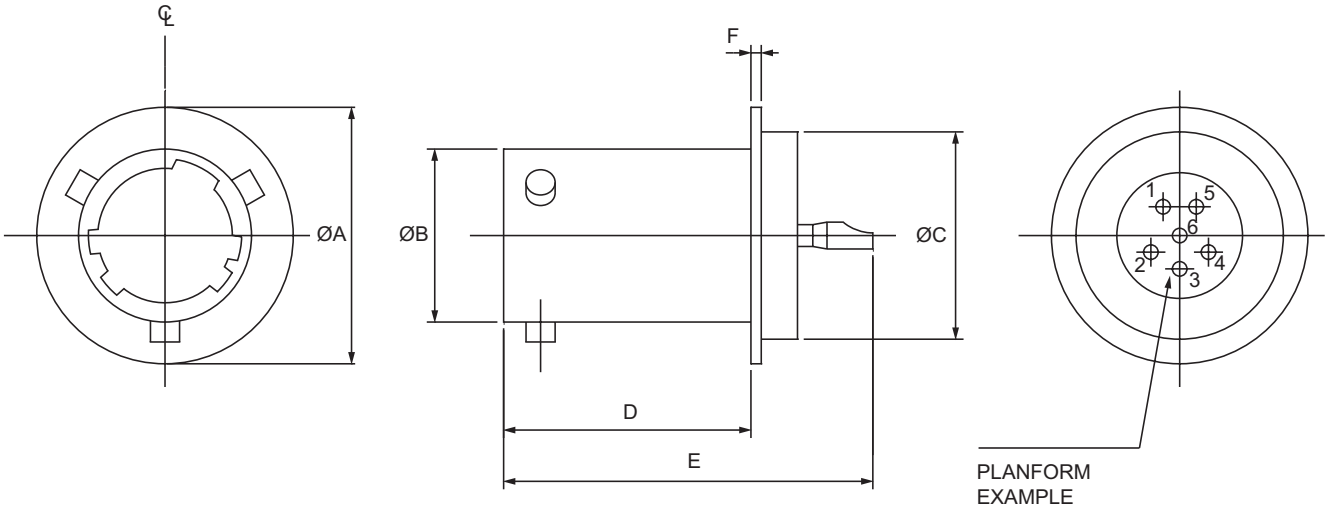




| Shell Size | A ±0.40 (±0.016) | B ±0.13 (±0.005) | ØC Min. | ØD +0.00/-0.13 (+0.00/-0.005) | E +0.15 (+0.016) Max. | F +0.00/-0.13 (+0.00/-0.005) | G Max. | ØH Max. | P Max. |
|---|---|---|---|---|---|---|---|---|---|
| 08 | **20.62** 0.812 | **15.10** 0.594 | | **12.00** 0.472 | | | | **11.91** 0.469 | |
| 10 | **23.83** 0.938 | **18.30** 0.720 | | **15.00** 0.591 | | | | **15.09** 0.594 | |
| 12 | **26.19** 1.031 | **20.60** 0.811 | | **19.05** 0.750 | | | | **18.26** 0.719 | |
| 14 | **28.57** 1.125 | **23.00** 0.906 | | **22.22** 0.875 | | **16.05** 0.632 | | **21.44** 0.844 | |
| 16 | **30.96** 1.219 | **24.60** 0.969 | **3.20** 0.126 | **25.40** 1.000 | **18.21** 0.717 | | **27.65** 1.089 | **24.61** 0.969 | **3.00** 0.118 |
| 18 | **33.32** 1.312 | **27.00** 1.063 | | **28.57** 1.125 | | | | **27.38** 1.078 | |
| 20 | **36.53** 1.438 | **29.40** 1.157 | | **31.75** 1.250 | | | | **30.56** 1.203 | |
| 22 | **39.67** 1.562 | **31.80** 1.252 | | **34.92** 1.375 | | **15.29** 0.602 | | **33.73** 1.328 | |
| 24 | **42.90** 1.689 | **34.90** 1.374 | **3.70** 0.146 | **38.10** 1.500 | | | **28.72** 1.131 | **36.91** 1.453 | **2.26** 0.089 |

**Millimeters** Inches

# 38999-Style HDJ Series Connectors

## Solder Mount-Shell Style 01H (JN 1003 Style E Type)*

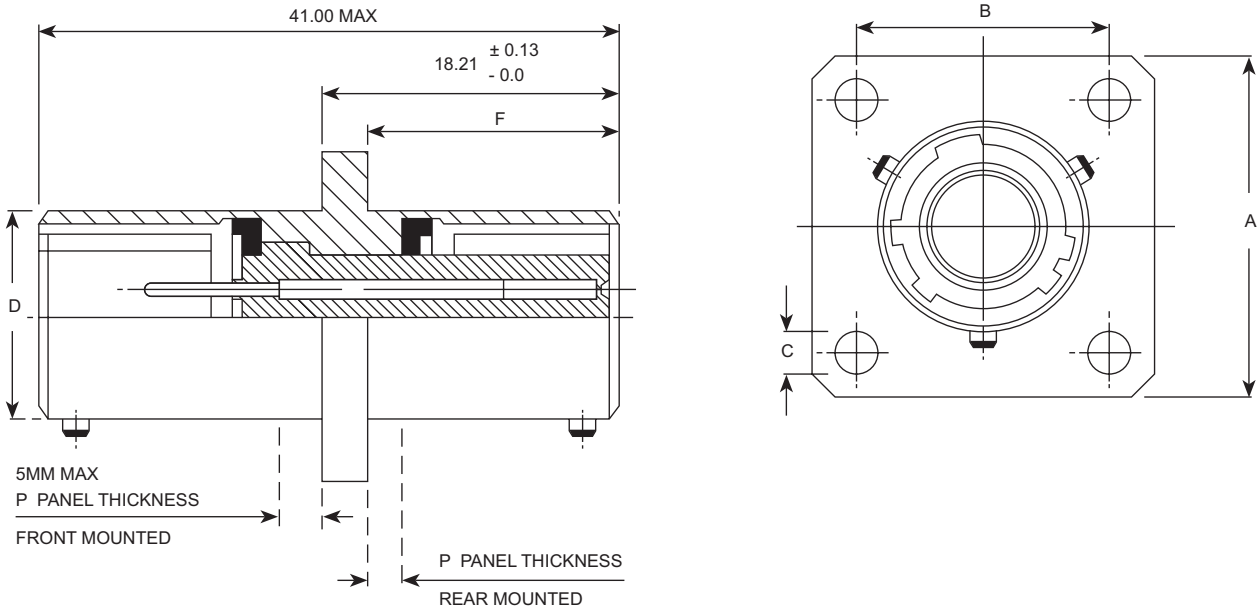



| Shell Size | ØA ±0.05 (±0.002) | B +0.00/-0.16 (+0.00/-0.006) | C ±0.05 (±0.002) | D Max. | E ±1.16 (±0.046) | F Max. |
|---|---|---|---|---|---|---|
| 08 | **17.45**<br>0.687 | **12.00**<br>0.472 | **14.20**<br>0.559 | | | |
| 10 | **20.24**<br>0.797 | **15.00**<br>0.591 | **16.99**<br>0.669 | | | |
| 12 | **23.01**<br>0.906 | **19.05**<br>0.750 | **19.76**<br>0.778 | | | |
| 14 | **26.19**<br>1.031 | **22.22**<br>0.875 | **22.94**<br>0.903 | **17.18**<br>0.676 | **26.29**<br>1.035 | |
| 16 | **29.36**<br>1.156 | **25.40**<br>1.000 | **26.11**<br>1.028 | | | **0.76**<br>0.030 |
| 18 | **32.54**<br>1.281 | **28.57**<br>1.125 | **29.29**<br>1.153 | | | |
| 20 | **34.92**<br>1.375 | **31.75**<br>1.250 | **31.67**<br>1.247 | | | |
| 22 | **38.10**<br>1.500 | **34.92**<br>1.375 | **34.85**<br>1.372 | **17.19**<br>0.677 | **26.30**<br>1.035 | |
| 24 | **41.27**<br>1.625 | **38.10**<br>1.500 | **38.02**<br>1.497 | | | |

**Millimeters** Inches
*Shell Styles '01H' and '03' are not qualified to JN1003

# 38999-Style HDJ Series Connectors

## Through Bulkhead Receptacle Shell Style 03 (JN 1003 Style J Type)*

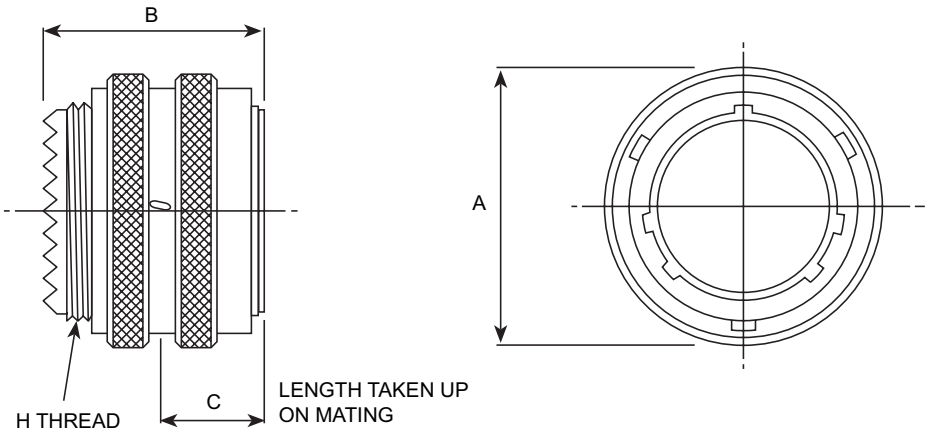



| Shell Size | A +0.40 (±0.016) | B ±0.13 (±0.005) | C ±0.10 (±0.004) | D +0/-0.13 (+0/-0.005) | F +0/-0.13 (+0/-0.005) | P Max. |
|---|---|---|---|---|---|---|
| 08 | **20.62** 0.812 | **15.10** 0.594 | | **12.00** 0.472 | | |
| 10 | **23.83** 0.938 | **18.30** 0.720 | | **15.00** 0.591 | | |
| 12 | **26.19** 1.031 | **20.60** 0.811 | | **19.05** 0.750 | **16.05** 0.632 | |
| 14 | **28.57** 1.125 | **23.00** 0.906 | | **22.22** 0.875 | | |
| 16 | **30.96** 1.219 | **24.60** 0.969 | **3.20** 0.126 | **25.40** 1.000 | | **3.00** 0.118 |
| 18 | **33.32** 1.312 | **27.00** 1.063 | | **28.57** 1.125 | | |
| 20 | **36.53** 1.438 | **29.40** 1.157 | | **31.75** 1.250 | | |
| 22 | **39.67** 1.562 | **31.80** 1.252 | | **34.92** 1.375 | **15.29** 0.602 | |
| 24 | **42.90** 1.689 | **34.90** 1.374 | **3.70** 0.146 | **38.10** 1.500 | | **2.26** 0.089 |

**Millimeters** Inches

# 38999-Style HDJ Series Connectors

## Plugs
## Plug with Grounding Fingers - Shell Style 06 (JN 1003 Style FG)

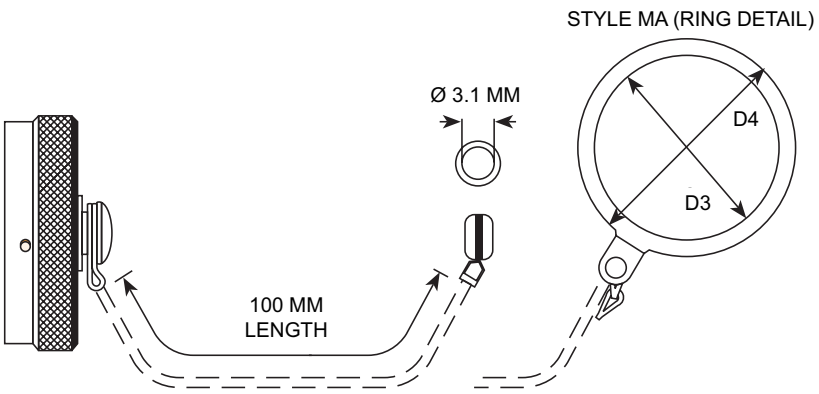



| Shell Size | A Max. | B Max. | C Max. | H Thread UNEF Class 2a |
|---|---|---|---|---|
| 08 | **18.64**<br>0.734 | **30.00**<br>1.181 | **15.00**<br>0.591 | 0.4375 – 28 |
| 10 | **21.44**<br>0.844 | | | 0.5625 – 24 |
| 12 | **25.81**<br>1.016 | | | 0.6875 – 24 |
| 14 | **28.98**<br>1.141 | | | 0.8125 – 20 |
| 16 | **32.13**<br>1.265 | | | 0.9375 – 20 |
| 18 | **35.33**<br>1.391 | | | 1.0625 – 18 |
| 20 | **38.10**<br>1.500 | | | 1.1875 – 18 |
| 22 | **41.27**<br>1.625 | | | 1.3125 – 18 |
| 24 | **44.45**<br>1.750 | **31.50**<br>1.240 | | 1.4375 – 18 |

**Millimeters** Inches

# 38999-Style HDJ Series Connectors

## Accessories
## Protective Cap, Receptacle (JN 1003 Styles MA/MB)*



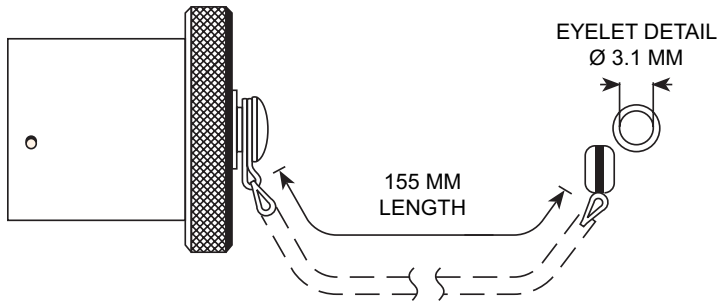

| TE DEUTSCH Part No. | Eurofighter Ref. | Shell Size |
|---|---|---|
| HDJ12 – ** | JN1003MB** | ** |
| HDJ13 – ** | JN1003MA** | ** |

| Shell Size | D3 | D4 |
|---|---|---|
| **08** | **14.6**<br>0.575 | **21.95**<br>0.864 |
| **10** | **17.8**<br>0.701 | **26.77**<br>1.054 |
| **12** | **22.5**<br>0.886 | **31.55**<br>1.242 |
| **14** | **25.7**<br>1.012 | **36.83**<br>1.450 |
| **16** | **28.9**<br>1.138 | **40.31**<br>1.587 |
| **18** | **32.1**<br>1.264 | **43.18**<br>1.700 |
| **20** | **35.2**<br>1.386 | **46.36**<br>1.825 |
| **22** | **38.0**<br>1.496 | **49.19**<br>1.937 |
| **24** | **41.6**<br>1.638 | **52.71**<br>2.075 |

**Millimeters** Inches
*Protective caps are not qualified to JN1003

# 38999-Style HDJ Series Connectors

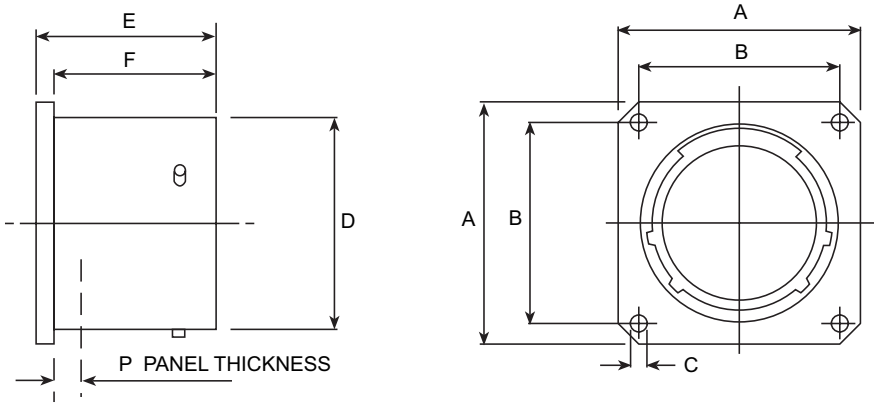
## Accessories
## Protective Cap, Plug (JN 1003 Style MF)




| TE DEUTSCH Part No. | Eurofighter Ref. | Shell Size |
|---|---|---|
| HDJ11 – ** | JN1003MF** | ** |

# 38999-Style HDJ Series Connectors

## Accessories
## Dummy Stowage (JN 1003 Style R)



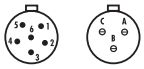

| TE DEUTSCH Part No. | Eurofighter Ref. | Shell Size |
|---|---|---|
| HDJ10 – ** | JN1003R** | ** |

| Shell Size | A +0.40 (+0.016) | B ±0.13 (±0.005) | C ±0.10 (±0.004) | D +0/-0.13 (+0/-0.005) | E +0.15 (+0.006) | F +0/-0.13 (+0/-0.005) | P Max. |
|---|---|---|---|---|---|---|---|
| 08 | **20.62** 0.812 | **15.10** 0.594 | | **12.00** 0.472 | | | |
| 10 | **23.83** 0.938 | **18.30** 0.720 | | **15.00** 0.591 | | | |
| 12 | **26.19** 1.031 | **20.60** 0.811 | | **19.05** 0.750 | | **16.05** 0.632 | |
| 14 | **28.57** 1.125 | **23.00** 0.906 | **3.20** 0.126 | **22.22** 0.875 | | | **3.00** 0.118 |
| 16 | **30.96** 1.219 | **24.60** 0.969 | | **25.40** 1.000 | **18.21** 0.717 | | |
| 18 | **33.32** 1.312 | **27.00** 1.063 | | **28.57** 1.125 | | | |
| 20 | **36.53** 1.438 | **29.40** 1.157 | | **31.75** 1.250 | | | |
| 22 | **39.67** 1.562 | **31.80** 1.252 | | **34.92** 1.375 | | **15.292** 0.602 | |
| 24 | **42.90** 1.689 | **34.90** 1.374 | **3.70** 0.146 | **38.10** 1.500 | | | **2.266** 0.089 |

**Millimeters** Inches

# Insert Arrangements

## SIZE 8



**08-35** 6#22D (M)



**08-98** 3#20 (I)

## SIZE 10



**10-35** 13#22D (M)



**10-98** 6#20 (I)

## SIZE 12



**12-04** 4#16 (I)



**12-35** 22#22D (M)



**12-98** 10#20 (I)

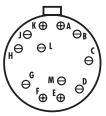
## SIZE 14



**14-19** 19#20 (I)

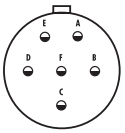


**14-35** 37#22D (M)



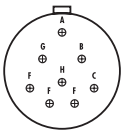
**14-97** 8#20 4#16 (I)

## SIZE 16

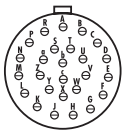


**16-06** 6#12 (I)

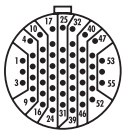
## SIZE 16



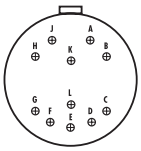
**16-08** 8#16 (II)



**16-26** 26#20 (I)

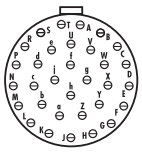


**16-35** 55#22D (M)

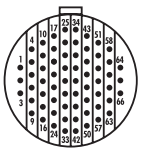


**18-11** 11#16 (II)

## SIZE 18

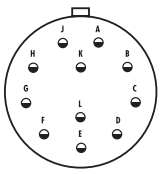


**18-32** 32#20 (I)

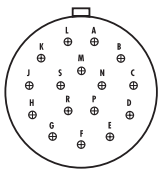


**18-35** 66#22D (M)

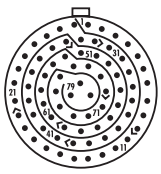
## SIZE 20



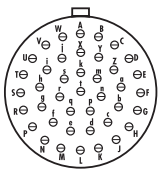
**20-11** 11#12 (I)



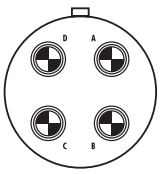
**20-16** 16#16 (II)



**20-35** 79#22D (M)

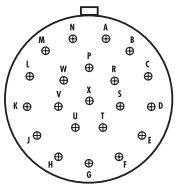


**20-41** 41#20 (I)

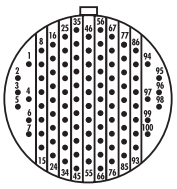


**20-75** 4 TWINAX #8 (M)

## SIZE 22

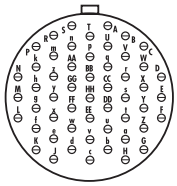


**22-21** 21#16 (II)

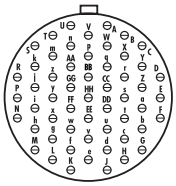


**22-35** 100#22D (M)

## SIZE 22

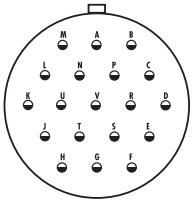


**22-53** 53#20 (I)

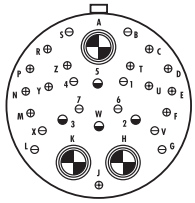


**22-55** 55#20 (I)

## SIZE 24

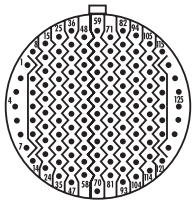


**24-19** 19#12 (I)

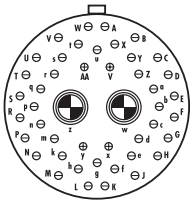


**24-20** 10#20 13#16 4#12
3 TWINAX #8 (N)

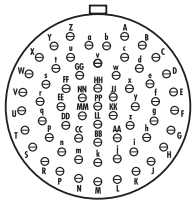
## SIZE 24



**24-35** 128#22D (M)



**24-46** 40#20 4#16 2#8 COAX (I)



**24-61** 61#20 (I)