



## DEUTSCH 984 Series Filter Connectors

### MIL-DTL-83723 SERIES III



DEUTSCH 984 Series connectors are intermateable and interchangeable with ESC11 and ESC16 connectors. With medium-density insert arrangements, fine threaded coupling, and corrosion resistant stainless steel shells, they are designed for the harsh environments of engines. They offer different keying options.

#### SPECIFICATIONS

##### Environmental

- **Temperature Range:** -55°C to 125°C
- **Physical Shock:** Typical to EIA-364-27
- **Vibration:** Typical to EIA-364-28
- **Fungus Resistance:** Based on MIL-STD-810
- **Fluid Immersion:** Typically tested to EIA-364-10
- **Salt Spray:** Typically based on EIA/ECA-364-26
- **Humidity:** Typically EIA-364-31 test method IV
- **Durability:** 500 cycles per MIL-DTL-83723

##### Electrical

- **Grounded Line Resistance (Typ.):** 15 mΩ
- **Insulation Resistance (Typ.):** >5 GΩ
- **Dielectric Withstand (Typ.):** <5 μA
- **DWV:** up to 2000 VDC
- **Working Voltage:** up to 2000 VDC
- **Typical Test Specifications Used:**
  - MIL-STD-810: Test Method Standard
  - MIL-STD-202: Electrical & Electronic Component Parts
  - RTCA DO-160: Test Procedures for Airborne Equipment
  - EIA-364: Electrical Connector & Socket Test Procedures

##### Filtering

- **Capacitance Range:** 20 pF to 4 μF
- **Capacitance Tolerance:** Typically 20%
- **Unfiltered Line Cap (Typ.):** 15 pF
- **Filtering Topologies:** L, C, LC, CL, Pi, T, Double T

Transient protection available as per RTCA Publication DO 160 (see page 55).

#### MATING COMPATIBILITY

- MIL-DTL-83723 Series 3 connectors
- ESC11 and ESC16 Connectors

#### RUGGED

- Designed specifically for engines
- Antivibration screw coupling connectors

#### RELIABLE

- 100% scoop proof
- RFI shell-to-shell continuity

#### VERSATILE

- Wide range of connector shell configurations
- Configurable filter topologies

#### DESIGNED FOR HARSH ENVIRONMENTS

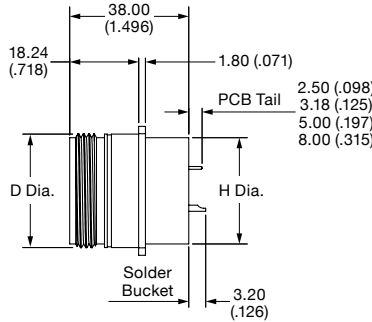
- Vibration and shock
- Temperature extremes
- High humidity
- Altitude
- Salt spray



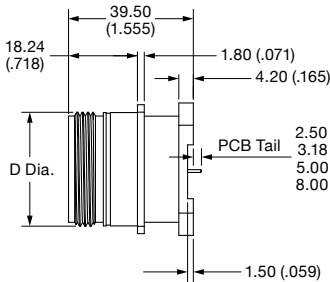
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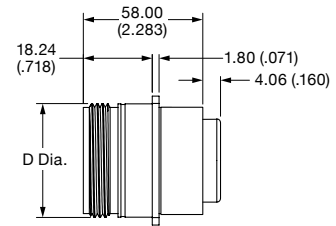
### Square Flange Receptacles



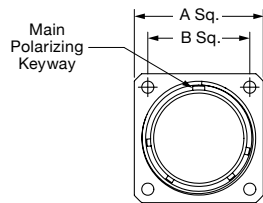
Single Flange



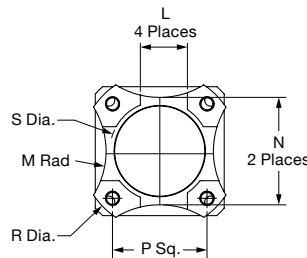
Double Flange



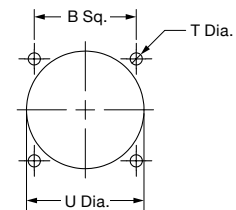
Single Flange, Crimp Contacts



Front View



Double Flange Footprint



Square Flange Mounting

Shell Size	A Sq. Max.	B Sq.	D Dia. Max.	H Dia. Max.	L Ref.	M Rad Ref.	N Ref.	P Sq.	R Dia.	S Dia.	Mounting Holes	
											T Dia.	U Dia.
8	20.75 (0.817)	15.09 (0.594)	14.27 (0.562)	12.70 (0.500)	8.00 (0.315)	9.00 (0.354)	15.50 (0.610)	14.00 (0.551)	27.06 (1.065)	14.34 (0.565)		15.80 (0.622)
10	23.93 (0.942)	18.26 (0.719)	17.47 (0.688)	15.88 (0.625)	8.00 (0.315)	9.00 (0.354)	15.50 (0.610)	14.00 (0.551)	27.06 (1.065)	14.34 (0.565)		18.70 (0.736)
12	26.32 (1.036)	20.62 (0.812)	22.22 (0.875)	19.05 (0.750)	8.00 (0.315)	12.00 (0.472)	18.65 (0.734)	17.00 (0.669)	32.06 (1.262)	17.42 (0.686)		23.40 (0.921)
14	28.71 (1.130)	23.01 (0.906)	23.82 (0.938)	22.23 (0.875)	12.00 (0.472)	18.00 (0.709)	22.00 (0.866)	19.00 (0.748)	35.06 (1.380)	20.72 (0.816)	3.05 (0.120)	24.90 (0.980)
16	31.88 (1.255)	24.61 (0.969)	26.97 (1.062)	25.40 (1.000)	12.00 (0.472)	20.00 (0.787)	25.25 (0.994)	22.00 (0.866)	39.06 (1.538)	23.89 (0.941)		28.30 (1.114)
18	34.24 (1.348)	26.97 (1.062)	30.18 (1.188)	26.97 (1.062)	16.00 (0.630)	22.00 (0.866)	28.40 (1.118)	25.00 (0.984)	42.06 (1.656)	26.43 (1.041)		31.10 (1.224)
20	36.63 (1.442)	29.36 (1.156)	33.32 (1.312)	30.18 (1.187)	16.00 (0.630)	22.00 (0.866)	31.55 (1.242)	27.00 (1.063)	45.06 (1.774)	29.58 (1.165)		34.50 (1.358)
22	39.80 (1.567)	31.75 (1.250)	36.53 (1.438)	33.32 (1.312)	16.00 (0.630)	22.00 (0.866)	34.50 (1.358)	29.00 (1.142)	48.06 (1.892)	32.76 (1.290)		37.50 (1.476)
24	43.39 (1.708)	34.92 (1.375)	39.67 (1.562)	36.53 (1.437)	16.00 (0.630)	24.00 (0.945)	37.30 (1.469)	31.00 (1.221)	51.06 (2.010)	35.83 (1.411)	3.80 (0.150)	40.60 (1.598)
28	50.93 (2.005)	39.67 (1.562)	46.02 (1.812)	44.45 (1.750)	18.00 (0.709)	24.00 (0.945)	44.50 (1.752)	35.00 (1.378)	56.06 (2.207)	39.01 (1.536)		48.00 (1.890)

See page 48 for insert arrangements and back cover for configuration sheet.

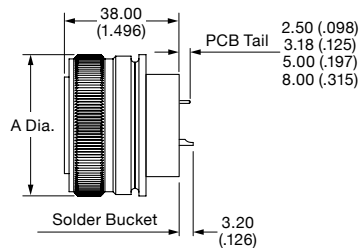


# DEUTSCH 984 Series Filter Connectors

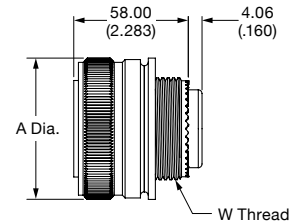
## MIL-DTL-83723 SERIES III

### Plug Connectors

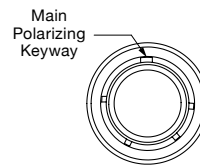
Shell Size	A Dia. Max.	W Thread Class 2B
8	21.30 (0.838)	0.5000-20 UNF
10	24.89 (0.980)	0.6250-24 UNEF
12	29.59 (1.165)	0.7500-20 UNEF
14	31.24 (1.230)	0.8750-20 UNEF
16	34.42 (1.355)	1.0000-20 UNEF
18	37.34 (1.470)	1.0625-18 UNEF
20	41.91 (1.650)	1.1875-18 UNEF
22	44.07 (1.735)	1.3125-18 UNEF
24	47.24 (1.860)	1.4375-18 UNEF
28	55.24 (2.175)	1.7500-18 UNS



PCB/Solder Bucket Contacts



Crimp Contacts



Front View

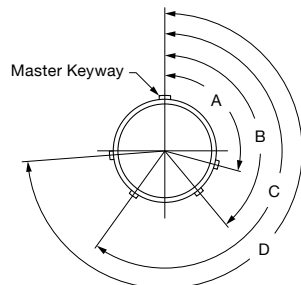
### Insert Arrangements

- Filter Connector Series: 984
- Industry Specification: EN4067
- Insert Arrangement Specification: MIL-STD-1554

Shell Size	Arrangement	Size 20 Contacts
14	14-15	15
16	16-24	24
18	18-31	31
20	20-41	41
22	22-55	55
24	24-61	61

### Keying Options

(Plug Mating Face Shown)



Key/Keyway	Keyway (In Degrees)											
	Size 8				Size 10				Size 12 to 28			
	A	B	C	D	A	B	C	D	A	B	C	D
N (Normal)	105	140	215	265	105	140	215	265	105	140	215	265
6	102	132	248	320	102	132	248	320	18	148	192	259
7	80	118	230	312	80	118	230	312	92	152	222	342
8	35	140	205	275	35	140	205	275	84	152	204	334
9	64	155	234	304	64	155	234	304	24	135	199	240
Y	—	—	—	—	25	115	220	270	98	152	268	338