

# DEUTSCH DL and DBA Series Connectors

Qualified to MIL-DTL-83723 Series III

Weight-Saving Aluminum Connectors Designed for Rugged Use and High Temperatures

# DEUTSCH DL and DBA Series Connectors

Weight-Saving Connectors Designed for Rugged Use and High Temperatures



DEUTSCH DL Series bayonet coupling and DBA Series threaded coupling connectors are built to withstand extreme environmental conditions and are qualified to the MIL-DTL-83723 Series III standard.

## MATERIALS

- **Shell**
  - Class A:** Aluminum shell, black anodized finish
  - Class R:** Aluminum shell, electroless nickel finish
  - Class W:** Aluminum shell, olive drab cadmium over nickel base
- **Contacts:** Copper alloy, plated 50  $\mu$ m selective gold
- **Bayonet Pins:** Passivated stainless steel
- **Insulator:** Rigid plastic dielectric
- **Seals:** Silicone-based elastomer

## ENVIRONMENTAL

- **Temperature:** -65°C to +200°C (Class W -55°C to +175°C)
- **Durability:**
  - 500 mating cycles for all bayonet receptacles (M83723/71 through /76)
  - 250 mating cycles for plugs with RFI fingers (M83723/77 and /78)
  - 250 mating cycles for threaded connectors (M83723/82 through /87)
- **Vibration:** Meets performance requirements of MIL-DTL-83723
- **Shock:** Meets performance requirements of MIL-DTL-83723
- **Shielding:** RFI shielding as per MIL-DTL-83723
- **Conductivity (Voltage Drop):**
  - 5 mV max. (with RFI shielding)
  - 200 mV max. (without RFI shielding)
- **Shell Styles:** Square flange, jam nut, straight plug, and RFI plug (RFI plug in Bayonet series only)

## VOLTAGE RATING

Voltage Rating:	Service Rating 1	Service Rating II
<b>Recommended Operating Voltage</b>		
@ Sea Level	600 VAC <sub>RMS</sub> /850 VDC	900 VAC <sub>RMS</sub> /1250 VDC
<b>Test Voltages (V<sub>RMS</sub>)</b>		
@ Sea Level	1500	2300
@ 50,000 ft.	500	750
@ 70,000 ft.	375	500
@ 110,000 ft.	200	200

### WITHSTAND HARSH ENVIRONMENTS

- Triple wire sealed for sealing over a wide range of wire diameters
- Raised moisture barriers around each pin for individual contact sealing

### EASY INSTALLATION

- Bayonet and threaded coupling options
- Closed-entry socket insert for positive pin alignment
- Scoop proof
- Rear release crimp contact system for excellent contact stability
- Visual confirmation of complete coupling

### APPLICATIONS

- Military Aircraft
- Commercial Aircraft
- Communications Equipment
- High-Temperature Industrial Applications

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## Contact Retention

**Contact Retention: · Size 20: 20lbs · Size 16: 25lbs · Size 12: 30lbs**

Contact Size	Pin Contact	Socket Contact	Sealing Plug	Insertion/ Removal Tool
20	M39029/4-110	M39029/5-115	MS27488-20-1	M81969/14-11 (Red/White)
16	M39029/4-111	M39029/5-116	MS27488-16-1	M81969/14-03 (Blue/White)
12	M39029/4-113	M39029/5-118	MS27488-12-1	M81969/14-04 (Yellow/White)

Contact Size	Wire Range (AWG)	Wire Range (mm <sup>2</sup> )	Crimp Tool	Test Current (Amps)
20	24-20	0.20-0.52	M22520/1-01 or M22520/2-01	7.5
16	20-16	0.52-1.31	M22520/1-01	13
12	14-12	2.08-3.31	M22520/1-01	23

## Insert Arrangements For Bayonet Connectors

Inserts are QPL and available in 6, 7, 8, 9, or Y polarization (Insert 8-3 is not available with Y polarization)

Consult TE for insert arrangements for threaded connectors.

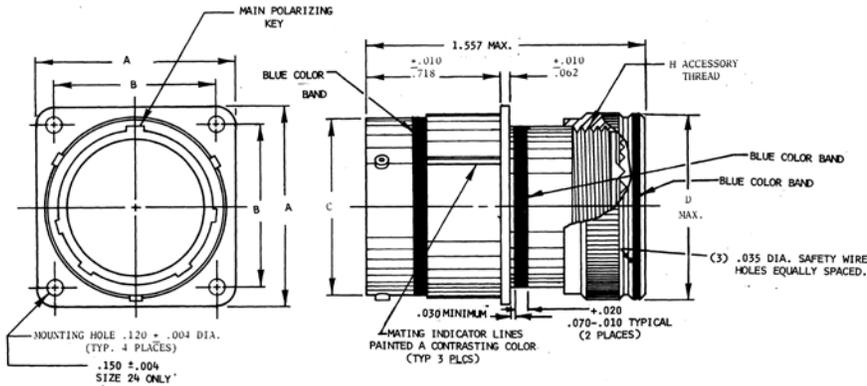
Insert	Contact Size		
	20	16	12
8-3	3		
10-2	2		
10-5	5		
10-6	6		
10-20		2	
12-3		3	
12-12		12	
14-04			4
14-07		7	
14-12	9	3	

Insert	Contact Size		
	20	16	12
14-15	15		
16-10		10	
16-24	24		
18-8			8
18-14		14	
18-31	31		
20-16		16	
20-25	19		6
20-28	24		4
20-39	37	2	

Insert	Contact Size		
	20	16	12
20-41	41		
22-12			12
22-19		19	
22-32	26		6
22-39	27	12	
22-55	55		
24-19			19
24-43	23	20	
24-57	55		2
24-61	61		



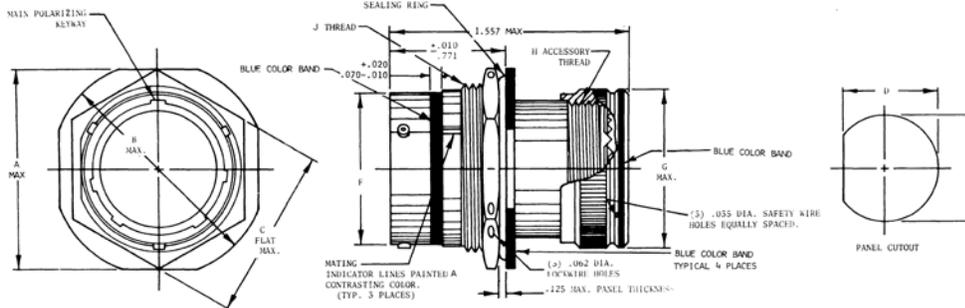
DL60 & M83723/71,72



DL60 & M83723/71,72

Size	A $\pm .005$		B $\pm .005$		C $\pm .000$ / $-.005$		D		H Thread
	in	mm	in	mm	in	mm	in	mm	
8	0.812	20.625	0.594	15.088	0.536	13.614	0.617	15.672	1/2 - 20 UNEF 2A
10	0.937	23.800	0.719	18.263	0.659	16.739	0.734	18.644	5/8 - 24 UNEF 2A
12	1.031	26.187	0.812	20.625	0.829	21.057	0.858	21.793	3/4 - 20 UNEF 2A
14	1.125	28.575	0.906	23.012	0.898	22.809	0.984	24.994	7/8 - 20 UNEF 2A
16	1.250	31.750	0.969	24.613	1.025	26.035	1.112	28.245	1 - 20 UNEF 2A
18	1.343	34.112	1.062	26.975	1.131	28.727	1.218	30.937	1 1/16 - 18 UNEF 2A
20	1.437	36.500	1.156	29.362	1.256	31.902	1.345	34.163	1 3/16 - 18 UNEF 2A
22	1.562	39.675	1.250	31.750	1.381	35.077	1.468	37.287	1 5/16 - 18 UNEF 2A
24	1.703	43.256	1.375	34.925	1.506	38.252	1.593	40.462	1 7/16 - 18 UNEF 2A

DL64 & M83723/73,74

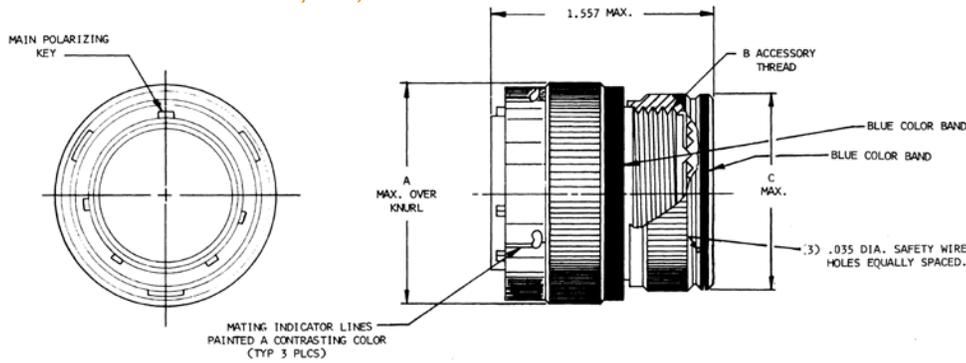


DL64 & M83723/73,74

Size	A		B		C		D $\pm .005$		E $\pm .005$		F $\pm .000$ / $-.005$		G	H Thread	J Thread	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm				
8	0.979	24.867	1.068	27.127	0.828	21.031	0.605	15.367	0.635	16.129	0.536	13.614	0.617	15.672	1/2 - 20 UNF	5/8 - 20 UNEF
10	1.104	28.042	1.192	30.277	0.935	23.749	0.730	18.542	0.760	19.304	0.659	16.739	0.734	18.644	5/8 - 24 UNF	3/4 - 20 UNEF
12	1.291	32.791	1.380	35.052	1.140	28.956	0.917	23.292	0.947	24.054	0.829	21.057	0.858	21.793	3/4 - 20 UNF	15/16 - 20 UNEF
14	1.391	35.331	1.505	38.227	1.250	31.750	0.980	24.892	1.010	25.654	0.898	22.809	0.984	24.994	7/8 - 20 UNF	1 - 20 UNEF
16	1.516	38.506	1.630	41.402	1.329	33.757	1.105	28.067	1.135	28.829	1.025	26.035	1.112	28.245	1 - 20 UNF	1 1/8 - 20 UNEF
18	1.641	41.681	1.756	44.602	1.455	36.957	1.225	31.115	1.260	32.004	1.131	28.727	1.218	30.937	1 1/16 - 18 UNF	1 1/4 - 18 UNEF
20	1.766	44.856	1.860	47.244	1.642	41.707	1.350	34.290	1.385	35.179	1.256	31.902	1.345	34.163	1 3/16 - 18 UNF	1 3/8 - 18 UNEF
22	1.954	49.632	2.068	52.527	1.705	43.307	1.475	37.465	1.510	38.354	1.381	35.077	1.468	37.287	1 5/16 - 18 UNF	1 1/2 - 18 UNEF
24	2.079	52.807	2.160	54.864	1.829	46.457	1.600	40.640	1.635	41.529	1.506	38.252	1.593	40.462	1 7/16 - 18 UNF	1 5/8 - 18 UNEF



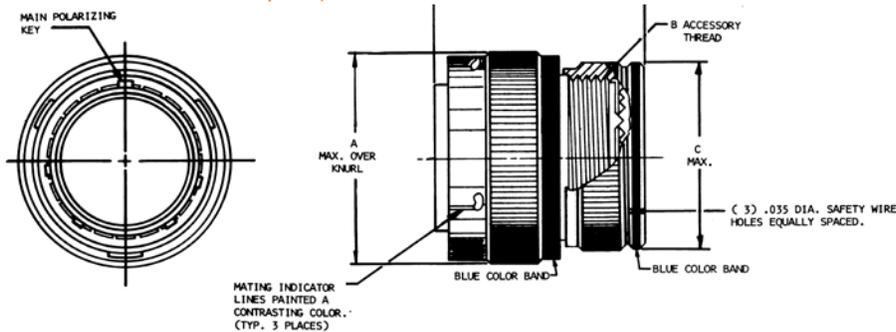
DL66 & M83723/75,76



DL66 & M83723/75,76

Size	A		B Thread	C	
	in	mm		in	mm
8	0.766	19.456	1/2 - 20 UNEF	0.617	15.672
10	0.906	23.012	5/8 - 24 UNEF	0.734	18.644
12	1.078	27.381	3/4 - 20 UNEF	0.858	21.793
14	1.141	28.981	7/8 - 20 UNEF	0.984	24.994
16	1.266	32.156	1 - 20 UNEF	1.112	28.245
18	1.375	34.925	1 1/16 - 18 UNEF	1.218	30.937
20	1.510	38.354	1 3/16 - 18 UNEF	1.345	34.163
22	1.625	41.275	1 5/16 - 18 UNEF	1.468	37.287
24	1.760	44.704	1 7/16 - 18 UNEF	1.593	40.462

DL68 & M83723/77,78



DL68 & M83723/77,78

Size	A		B Thread	C	
	in	mm		in	mm
8	0.766	19.456	1/2 - 20 UNEF	0.617	15.672
10	0.906	23.012	5/8 - 24 UNEF	0.734	18.644
12	1.078	27.381	3/4 - 20 UNEF	0.858	21.793
14	1.141	28.981	7/8 - 20 UNEF	0.984	24.994
16	1.266	32.156	1 - 20 UNEF	1.112	28.245
18	1.375	34.925	1 1/16 - 18 UNEF	1.218	30.937
20	1.510	38.354	1 3/16 - 18 UNEF	1.345	34.163
22	1.625	41.275	1 5/16 - 18 UNEF	1.468	37.287
24	1.760	44.704	1 7/16 - 18 UNEF	1.593	40.462



## Bayonet Coupling Connectors

### MIL-DTL-83723 Series III System

**M83723/ 72 R 22 55 N**

**MILITARY DESIGNATION** \_\_\_\_\_

**SHELL TYPE** \_\_\_\_\_

- 71** Square Flange Mount Receptacle, Socket Contacts
- 72** Square Flange Mount Receptacle, Pin Contacts
- 73** Jam Nut Receptacle, Socket Contacts
- 74** Jam Nut Receptacle, Pin Contacts
- 75** Straight Plug, Socket Contacts
- 76** Straight Plug, Pin Contacts
- 77** RFI Grounding Plug, Socket Contacts (Not Available in A Class)
- 78** RFI Grounding Plug, Pin Contacts (Not Available in A Class)

**CLASS (MATERIAL AND FINISH)** \_\_\_\_\_

- A** Aluminum Shell, Black Anodized Finish
- R** Aluminum Shell, Electroless Nickel Finish
- W** Aluminum Shell, Olive Drab Cadmium over Nickel Base

**SHELL SIZE** \_\_\_\_\_

**8, 10, 12, 14, 16, 18, 20, 22, 24**

**INSERT ARRANGEMENT** \_\_\_\_\_

See insert arrangement table

**CLOCKING/KEYING POSITION** \_\_\_\_\_

- N** Normal
- 6, 7, 8, 9, Y** (Y Not Available in Size 8 Shell)

### DEUTSCH DL Series System

**DL 66 R 18 14 P 8 6116**

**CONNECTOR SERIES** \_\_\_\_\_

**SHELL MOUNTING STYLE** \_\_\_\_\_

- 60** Square Flange Receptacle (/71 Socket; /72 Pin)
- 64** Jam Nut Receptacle (/73 Socket; /74 Pin)
- 66** Straight Plug (/75 Socket; /76 Pin)
- 68** RFI Plug (/77 Socket; /78 Pin)

**CLASS** \_\_\_\_\_

- R** Nonconductive Finish (Black Anodized)
- G** Conductive Finish (Nickel)

**SHELL SIZE** \_\_\_\_\_

**8, 10, 12, 14, 16, 18, 20, 22, 24**

**INSERT ARRANGEMENT** \_\_\_\_\_

See insert arrangement table

**CONTACT STYLE** \_\_\_\_\_

- P** Pin
- S** Socket

**CLOCKING/KEYING POSITION** \_\_\_\_\_

- N, 6, 7, 8, 9, 10** (10 Not Available in Size 8 Shell)
- (Consult TE for available alternate clocking)

**MODIFICATION** \_\_\_\_\_

- 6116** Black Anodized Finish, Blue Color Bands, Less Backshell
- 6106** Electroless Nickel Finish, Blue Color Bands, Less Backshell
- 6117** Olive Drab Cadmium over Nickel Base, Blue Color Bands, Less Backshell



### Threaded Connectors

#### MIL-DTL-83723 Series III System

**M83723 84 R 22 55 N**

**MILITARY DESIGNATION** \_\_\_\_\_

**SHELL TYPE** \_\_\_\_\_

- 82** Square Flange Mount Receptacle, Socket Contacts
- 83** Square Flange Mount Receptacle, Pin Contacts
- 84** Jam Nut Receptacle, Socket Contacts
- 85** Jam Nut Receptacle, Pin Contacts
- 86** Straight Plug, Socket Contacts
- 87** Straight Plug, Pin Contacts

**CLASS (MATERIAL AND FINISH)** \_\_\_\_\_

- A** Aluminum Shell, Black Anodized Finish
- R** Aluminum Shell, Electroless Nickel Finish
- W** Aluminum Shell, Olive Drab Cadmium over Nickel Base

**SHELL SIZE** \_\_\_\_\_

**8, 10, 12, 14, 16, 18, 20, 22, 24**

**INSERT ARRANGEMENT** \_\_\_\_\_

Consult TE

**CLOCKING/KEYING POSITION** \_\_\_\_\_

- N** Normal
- 6, 7, 8, 9, Y** (Y Not Available in Size 8 Shell)

#### DEUTSCH DBA Series System

**DBA 34 - 22-55 P N 6116**

**CONNECTOR SERIES** \_\_\_\_\_

**STYLE** \_\_\_\_\_

- 30** Square Flange Receptacle (/82 Socket; /83 Pin)
- 34** Jam Nut Receptacle (/84 Socket; /85 Pin)
- 36** Plug (/86 Socket; /87 Pin)

**SHELL SIZE** \_\_\_\_\_

**8, 10, 12, 14, 16, 18, 20, 22, 24**

**INSERT ARRANGEMENT** \_\_\_\_\_

Consult TE

**PIN OR SOCKET** \_\_\_\_\_

- P** Pin
- S** Socket

**CLOCKING POSITION** \_\_\_\_\_

Shell Clocking: **N, 6, 7, 8, 9, 10** (10 Not Available in Size 8 Shell)

**MODIFICATION** \_\_\_\_\_

- 6116** Aluminum Shell, Black Anodized Finish
- 6106** Aluminum Shell, Electroless Nickel Finish
- 6117** Aluminum Shell, Olive Drab Cadmium over Nickel Base

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