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

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

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 µin 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 I	Service Rating II
Recommended Operating Voltage		
@ Sea Level	600 VAC_{RMS}/850 VDC	900 VAC_{RMS}/1250 VDC
Test Voltages (V_{RMS})		
@ Sea Level	1500	2300
@ 50,000 ft.	500	750
@ 70,000 ft.	375	500
@ 110,000 ft.	200	200

TE Components . . . TE Technology . . . TE Know-how . . .
AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH
SEACON Phoenix | Phoenix Optix | SEACON

Empower Engineers to Solve Problems, Moving the World Forward.

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^2)	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)

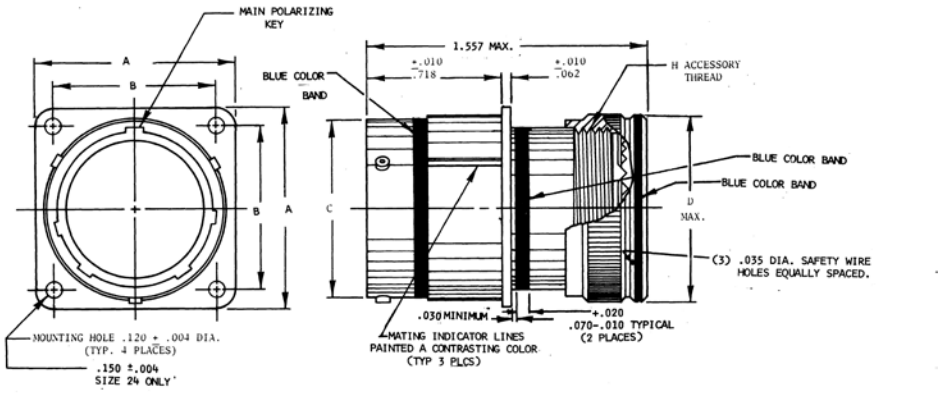
Consult TE for insert arrangements for threaded connectors.

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		

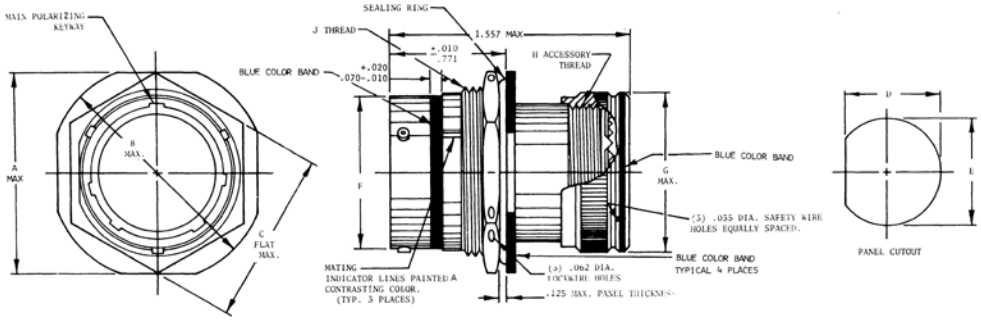
DL60 & M83723/71,72



DL60 & M83723/71,72

Size	A ± .005		B ± .005		C ± .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

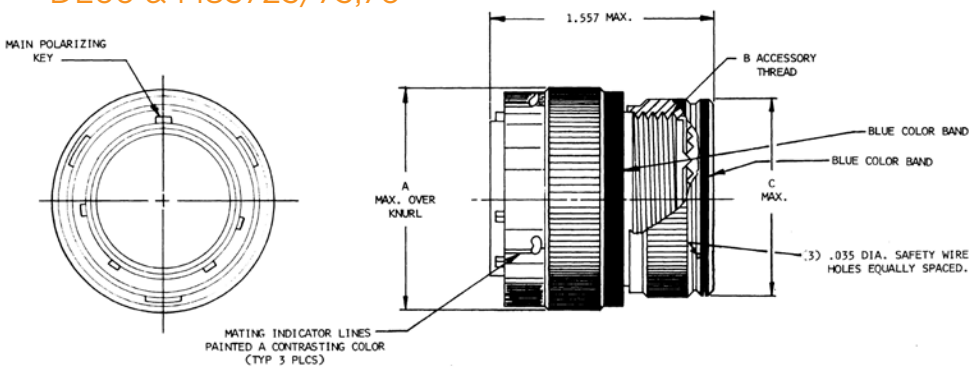
DL64 & M83723/73,74



DL64 & M83723/73,74

Size	A		B		C		D ± .005		E ± .005		F ± .000/-.005		G		H Thread	J Thread
	in	mm	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 UNEF	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 UNEF	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 UNEF	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 UNEF	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 UNEF	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 UNEF	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 UNEF	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 UNEF	1 5/8 - 18 UNEF

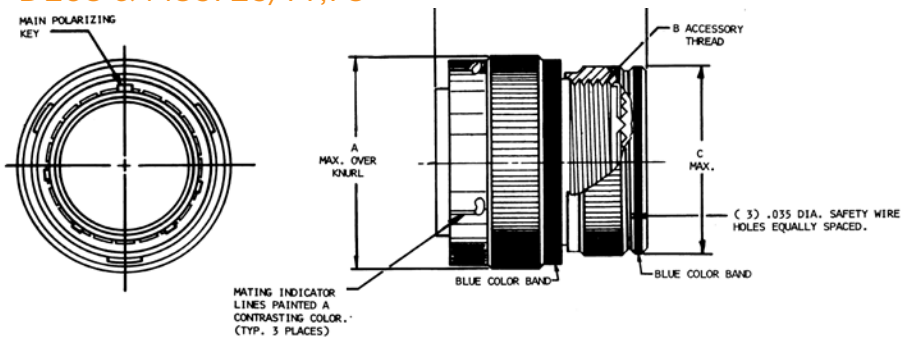
DL66 & M83723/75,76



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

LET'S CONNECT

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Consult TE for the latest dimensions and design specifications.

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