

MIL-DTL-83723

SERIES III

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MILITARY CIRCULAR CONNECTORS

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PERFORMANCE SPECIFICATIONS

<u>CONTACT RATING</u>	<u>VOLTAGE RATING</u>	<u>TEST VOLTAGE (SEA LEVEL)</u>
SIZE 20 ~ 7.5A MAX	I ~ 600AC (RMS)	1500 V RMS
Size 16 ~ 13A MAX	II ~ 900AC (RMS)	2300 V RMS
Size 12 ~ 23A MAX		

MEETS THE MIL-DTL-83723 REQUIREMENTS FOR:

- A. DURABILITY
- B. SHOCK & VIBRATION
- C. SHIELDING EFFECTIVENESS
- D. FLUID RESISTANCE
- E. CONDUCTIVITY (EXCEPT CLASS A)

MIL-DTL-83723

MIL-DTL-83723 SERIES III



83723 SERIES III CORSAIR PART NUMBER REFERENCE

MILITARY PREFIX M83723/ 82 W 14 4 7

CORSAIR PREFIX CJ16 82 W 14 4 7

CONNECTOR CONFIGURATION

82 WALL MOUNT RECEPTACLE SOCKET CONTACT
83 WALL MOUNT RECEPTACLE PIN CONTACT
95 PLUG (SELF-LOCKING) SOCKET CONTACT
96 PLUG (SELF-LOCKING) PIN CONTACT
97 PLUG (SELF-LOCKING) RFI GROUNDING SOCKET CONTACT
98 PLUG (SELF-LOCKING) RFI GROUNDING PIN CONTACT

CLASS (MATERIALS/FINISH)

A ALUMINUM SHELL, ANODIZE, NONCONDUCTIVE FINISH, FLUID RESISTANT INSERT. -65°C TO 200°C (-85°F TO 392°F).

G STAINLESS STEEL SHELL, PASSIVATED, FLUID RESISTANT INSERT. -65°C TO 200°C (-85°F TO 392°F).

K STAINLESS STEEL SHELL, PASSIVATED, FLUID RESISTANT INSERT. -65°C TO 200°C (-85°F TO 392°F).

N PLUGS, ELECTRODEPOSITED NICKEL FINISH, FLUID RESISTANT INSERT, RFI GROUNDING, FIREWALL, SELF-LOCKING. RECEPTACLES, ELECTRODEPOSITED NICKEL FINISH, FLUID RESISTANT INSERT, ENVIRONMENTALLY SEALED WITH CRIMP CONTACTS OR HERMETICALLY SEALED WITH SOLDER CUP CONTACTS. -65°C TO 200°C (-85°F TO 392°F).

R ALUMINUM SHELL, ELECTROLESS NICKEL, CONDUCTIVE FINISH, FLUID RESISTANT INSERT. -65°C TO 200°C (-85°F TO 392°F).

S STAINLESS STEEL SHELL, PASSIVATED, FLUID RESISTANT INSERT, FIREWALL (PLUG AND RECEPTACLE), RFI GROUNDING, SELF-LOCKING (PLUG). -65° TO 200°C (-85°F TO 392°F).

T ALUMINUM SHELL, NICKEL FLUOROCARBON POLYMER, CONDUCTIVE FINISH, NONREFLECTIVE, 500 HOURS SALT SPRAY, FLUID RESISTANT INSERT. -65° TO 175°C (-85°F TO 347°F)

W ALUMINUM SHELL, CADMIUM, CONDUCTIVE FINISH 500 HOURS SALT SPRAY, FLUID RESISTANT INSERT. -65°C TO 175°C (-85°F TO 347°F).

Z ALUMINUM SHELL, ZINC NICKEL ALLOY, CONDUCTIVE FINISH, NONREFLECTIVE, 500 HOURS SALT SPRAY, FLUID RESISTANT INSERT. -65°C TO 175°C (-85°F TO 347°F)

SHELL SIZE

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

INSERT ARRANGEMENT

REFER TO LAYOUT PATTERNS
SEE PAGES 9 TO 12

POLARIZATION

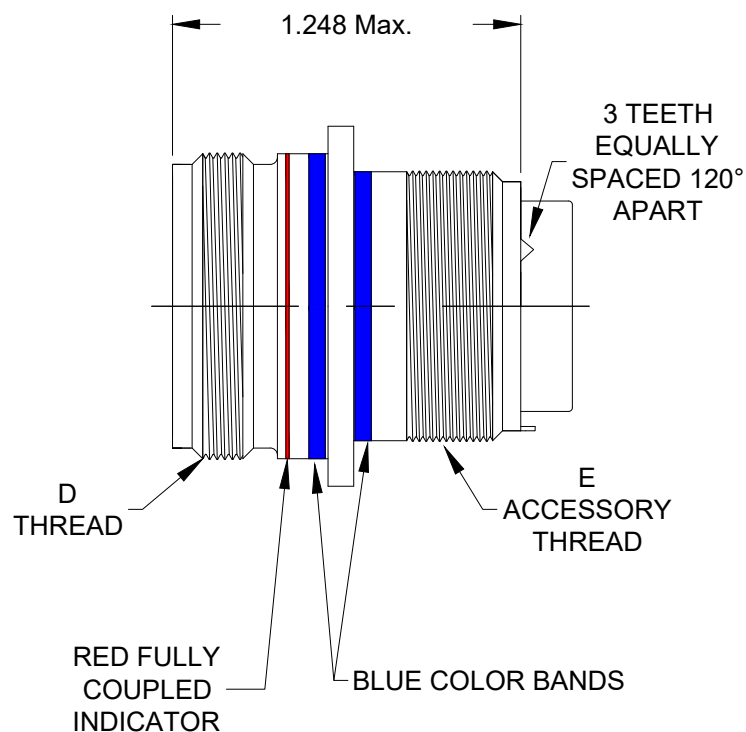
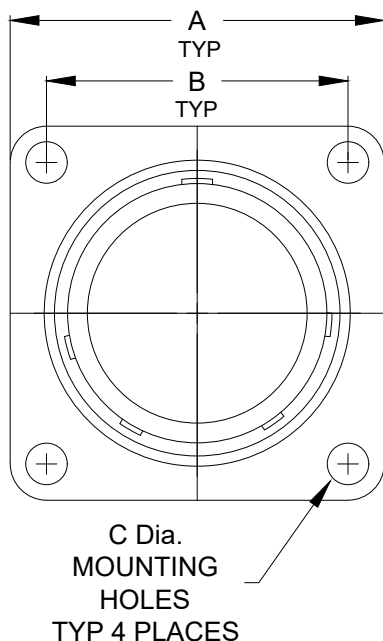
SHELL KEY POSITIONS

N= NORMAL
6, 7, 8, 9, OR Y = KEYED POSITIONS
1, 2, 3, 4, 5 = CLOCKED INSERT POLARIZATION
REFER TO POLARIZATION CHART SEE PAGE 13

TOLERANCE	TITLE	SHEET	DWG. NO.	REV
XX ± .010	MIL-DTL-83723, SERIES III CORSAIR PART NUMBER	1 OF 1	MIL-DTL-83723	-
.XXX ± .005	CROSS REFERENCE	http://www.corsairelectricalconnectors.com (949) 833-0273		
ANGLES ± 1°				

M83723/82 & /83

MIL-DTL-83723 SERIES III (FOR CLASSES R, W, A, G, K, Z & T)



SHELL SIZE	A	B	C Dia.	D THREAD	E THREAD
8	0.812	0.594	.125/.116	.5625-24 UNEF-2A	.5000-20 UNF-2A
10	0.937	0.719	.125/.116	.6875-24 UNEF-2A	.6250-24 UNEF-2A
12	1.031	0.812	.125/.116	.8750-20 UNEF-2A	.7500-20 UNEF-2A
14	1.125	0.906	.125/.116	.9375-20 UNEF-2A	.8750-20 UNEF-2A
16	1.250	0.969	.125/.116	1.0625-18 UNEF-2A	1.000-20 UNEF-2A
18	1.343	1.062	.125/.116	1.1875-18 UNEF-2A	1.0625-18 UNEF-2A
20	1.437	1.156	.125/.116	1.3125-18 UNEF-2A	1.1875-18 UNEF-2A
22	1.562	1.250	.125/.116	1.4375-18 UNEF-2A	1.3125-18 UNEF-2A
24	1.703	1.375	.154/.145	1.5625-18 UNEF-2A	1.4375-18 UNEF-2A

TOLERANCE
XX ± .020
.XXX ± .015
ANGLES ± 1°

TITLE
RECEPTACLE, THREADED, WALL MOUNTING FLANGE,
MIL-DTL-83723 SERIES III
(FOR CLASSES R, W, A, G, K, Z & T)

SHEET
1 OF 1

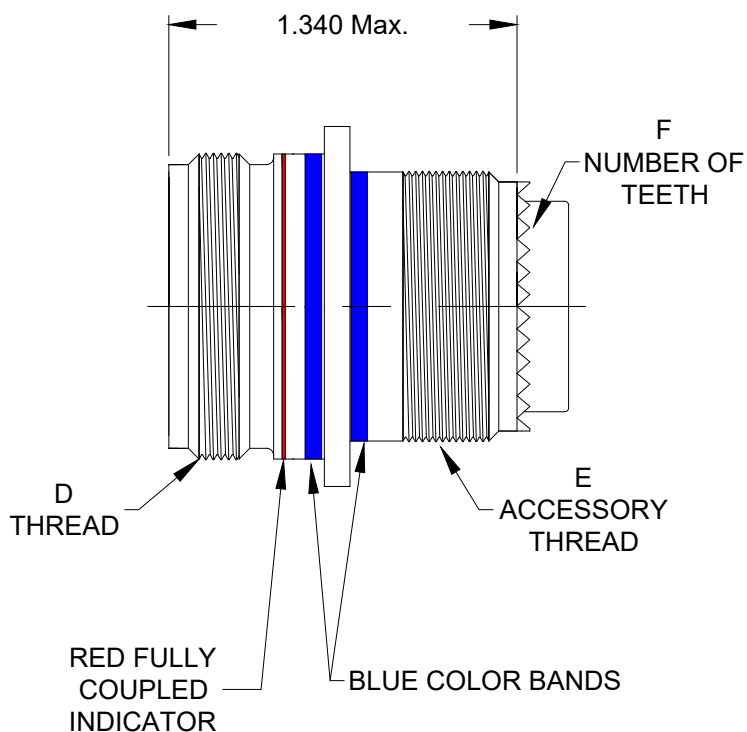
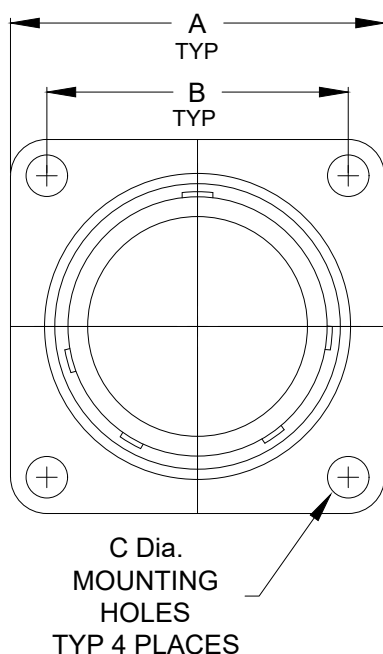
DWG. NO.
M83723/82/83

REV
-

<http://www.corsairelectricalconnectors.com> (949) 833-0273

M83723/82 & /83

MIL-DTL-83723 SERIES III (FOR CLASSES N & S)



SHELL SIZE	A	B	C Dia.	D THREAD	E THREAD	F NUMBER OF TEETH
8	0.812	0.594	.125/.116	.5625-24 UNEF-2A	.5000-20 UNF-2A	12
10	0.937	0.719	.125/.116	.6875-24 UNEF-2A	.6250-24 UNEF-2A	15
12	1.031	0.812	.125/.116	.8750-20 UNEF-2A	.7500-20 UNEF-2A	21
14	1.125	0.906	.125/.116	.9375-20 UNEF-2A	.8750-20 UNEF-2A	24
16	1.250	0.969	.125/.116	1.0625-18 UNEF-2A	1.000-20 UNEF-2A	30
18	1.343	1.062	.125/.116	1.1875-18 UNEF-2A	1.0625-18 UNEF-2A	33
20	1.437	1.156	.125/.116	1.3125-18 UNEF-2A	1.1875-18 UNEF-2A	36
22	1.562	1.250	.125/.116	1.4375-18 UNEF-2A	1.3125-18 UNEF-2A	39
24	1.703	1.375	.154/.145	1.5625-18 UNEF-2A	1.4375-18 UNEF-2A	42

TOLERANCE
XX ± .010
.XXX ± .005
ANGLES ± 1°

TITLE
RECEPTACLE, THREADED, WALL MOUNTING FLANGE,
MIL-DTL-83723 SERIES III
(FOR CLASSES N & S)

SHEET
1 OF 1

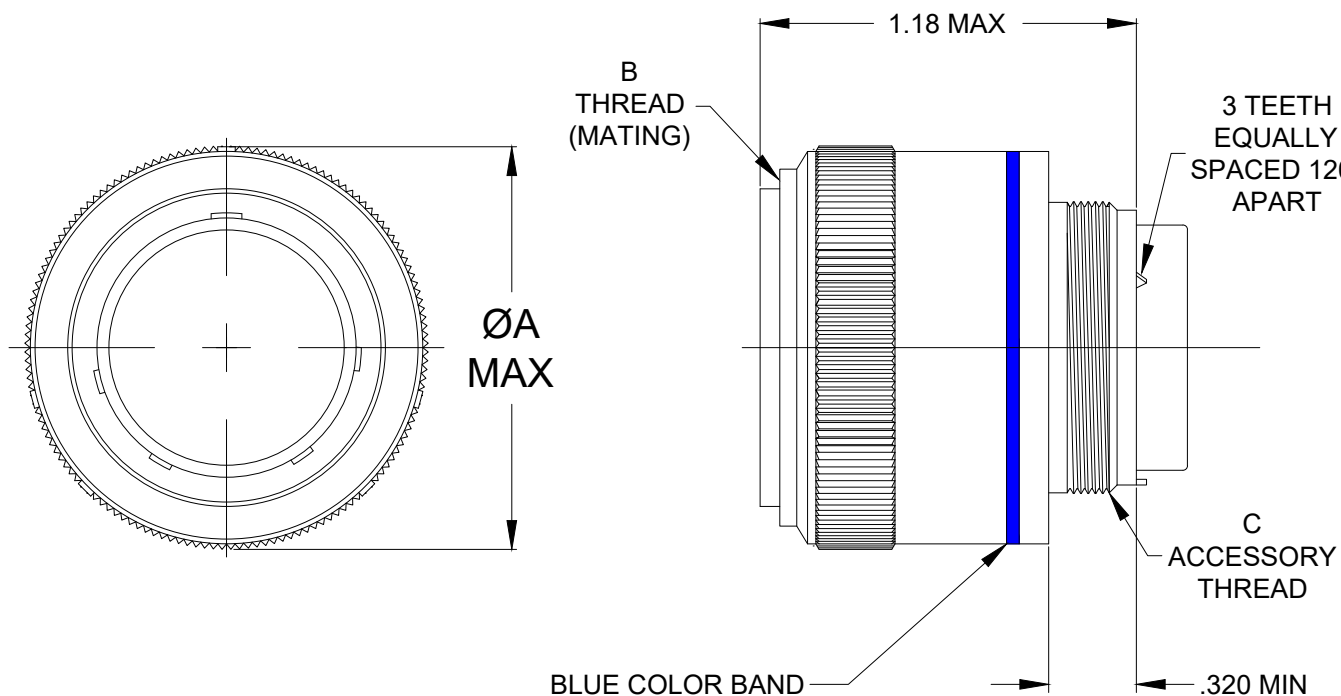
DWG. NO.
M83723/82/83

REV
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<http://www.corsairelectricalconnectors.com> (949) 833-0273

M83723/95 & /96

MIL-DTL-83723 SERIES III (FOR CLASSES A, G, K, R, & W)



SHELL SIZE	A	B THREAD	C THREAD
8	0.832	.5625-24 UNEF-2B	.5000-20 UNF-2A
10	0.959	.6875-24 UNEF-2B	.6250-24 UNEF-2A
12	1.097	.8750-20 UNEF-2B	.7500-20 UNEF-2A
14	1.236	.9375-20 UNEF-2B	.8750-20 UNEF-2A
16	1.360	1.0625-18 UNEF-2B	1.000-20 UNEF-2A
18	1.473	1.1875-18 UNEF-2B	1.0625-18 UNEF-2A
20	1.586	1.3125-18 UNEF-2B	1.1875-18 UNEF-2A
22	1.703	1.4375-18 UNEF-2B	1.3125-18 UNEF-2A
24	1.846	1.5625-18 UNEF-2B	1.4375-18 UNEF-2A

TOLERANCE
XX ± .010
.XXX ± .005
ANGLES ± 1°

TITLE
PLUG THREAD COUPLING AND SELF-LOCKING
SERIES III, M83723/95/96

SHEET
1 OF 1

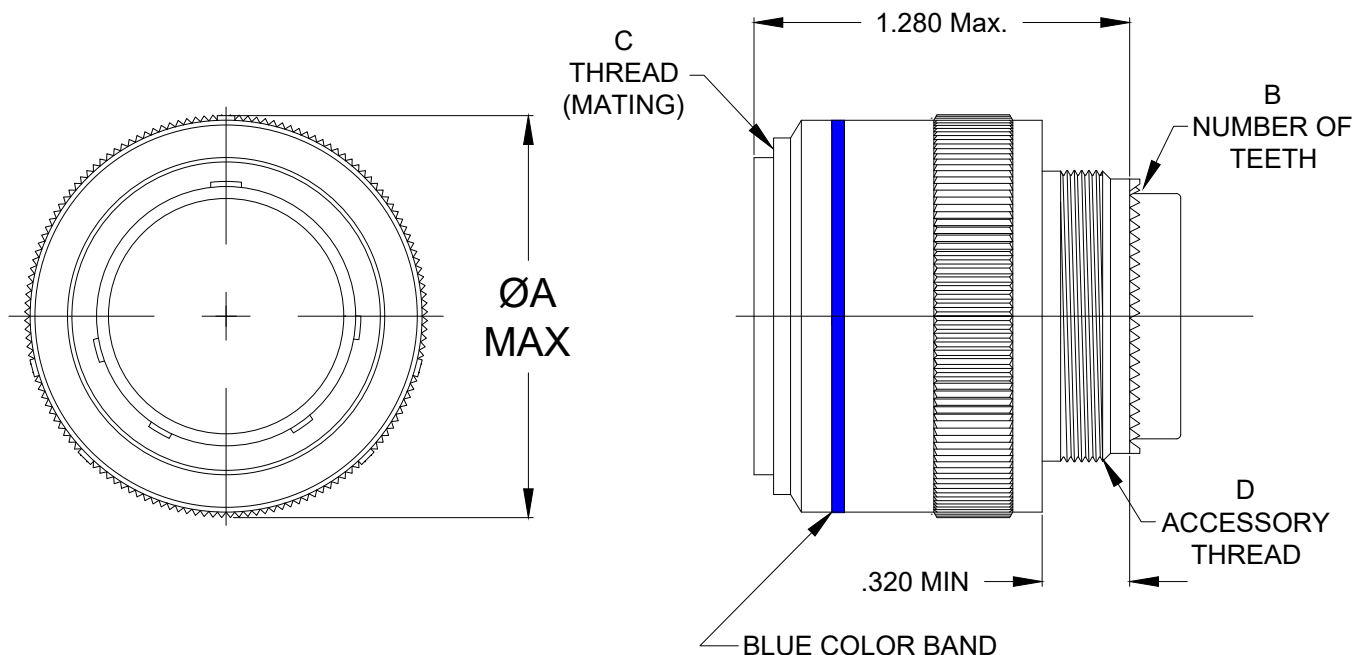
DWG. NO.
M83723/95/96

REV
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M83723/97 & /98

MIL-DTL-83723 SERIES III (CLASS N & S)



SHELL SIZE	A	B Number of teeth	C THREAD	D THREAD
8	0.967	12	.5625-24 UNEF-2B	.5000-20 UNF-2A
10	1.093	15	.6875-24 UNEF-2B	.6250-24 UNEF-2A
12	1.170	21	.8750-20 UNEF-2B	.7500-20 UNEF-2A
14	1.310	24	.9375-20 UNEF-2B	.8750-20 UNEF-2A
16	1.500	30	1.0625-18 UNEF-2B	1.000-20 UNEF-2A
18	1.562	33	1.1875-18 UNEF-2B	1.0625-18 UNEF-2A
20	1.710	36	1.3125-18 UNEF-2B	1.1875-18 UNEF-2A
22	1.812	39	1.4375-18 UNEF-2B	1.3125-18 UNEF-2A
24	1.948	42	1.5625-18 UNEF-2B	1.4375-18 UNEF-2A

TOLERANCE
XX ± .010
.XXX ± .005
ANGLES ± 1°

TITLE
PLUG THREAD COUPLING RFI GROUNDING AND
SELF-LOCKING
SERIES III, M83723/97/98

SHEET
1 OF 1

DWG. NO.
M83723/97/98

REV
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MIL-DTL-83723

SERIES III



Shell Size	Insert Arrangement			Contact Size		
	Series III	Service Rating	Total # of Contacts	20	16	12
8	8-2	I	2	2		0
	8-3	I	3	3		0
	8-98	I	3	3	0	0
10	10-2	I	2	2	0	0
	10-5	I	5	5	0	0
	10-6	I	6	6	0	0
	10-20	I	2	0	2	0
12	12-3	I	3	0	3	0
	12-12	I	12	12	0	0
14	14-4	I	4	0	0	4
	14-7	I	7	0	7	0
	14-12	I	12	9	3	0
	14-15	I	15	15	0	0
16	16-10	I	10	0	10	0
	16-24	I	24	24	0	0
18	18-8	I	8	0	0	8
	18-14	I	14	0	14	0
	18-31	I	31	31	0	0
20	20-16	I	16	0	16	0
	20-25	I	25	19	0	6
	20-28	I	28	24	0	4
	20-39	I	39	37	2	0
	20-41	I	41	41	0	0
22	22-12	I	12	0	0	12
	22-19	I	19	0	19	0
	22-32	I	32	26	0	6
	22-39	I	39	27	12	0
	22-55	I	55	55	0	0
24	24-19	I	19	0	0	19
	24-43	I	43	23	20	0
	24-57	I	57	55	0	2
	24-61	I	61	61	0	0

TOLERANCE XX ± .010 .XXX ± .005 ANGLES ± 1°	TITLE MIL-DTL-83723, INSERT ARRANGEMENTS SERIES III	SHEET 1 OF 1	DWG. NO. MIL-DTL-83723	REV -
		http://www.corsairelectricalconnectors.com (949) 833-0273		

MIL-DTL-83723

SERIES III



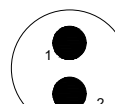
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2 - #20



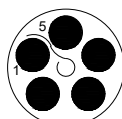
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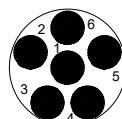
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3 - #20



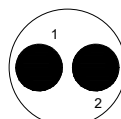
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2 - #16



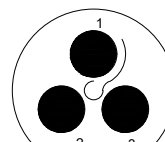
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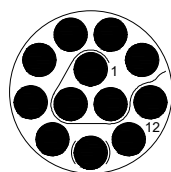
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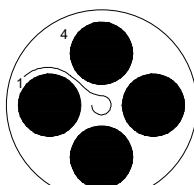
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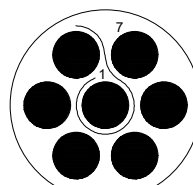
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3 - #16



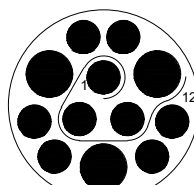
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12 - #20



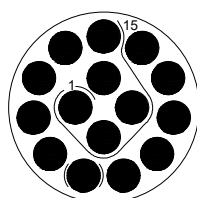
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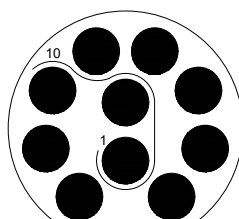
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7 - #16



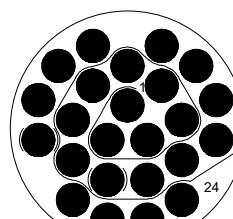
1412
9 - #20
3 - #16



1415
15 - #20



1610
10 - #16



1624
24 - #20

CONTACT
SIZE
LEGEND:



SIZE
20



SIZE
16



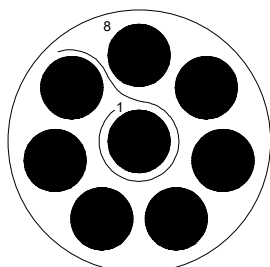
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NOTE: SOCKET INSERT SHOWN (PIN INSERT OPPOSITE)

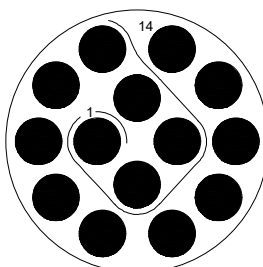
TOLERANCE XX ± .010 .XXX ± .005 ANGLES ± 1°	TITLE MIL-DTL-83723, INSERT ARRANGEMENTS SERIES III	SHEET 1 OF 3	DWG. NO. MIL-DTL-83723	REV -
http://www.corsairelectricalconnectors.com (949) 833-0273				

MIL-DTL-83723

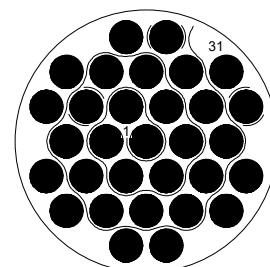
SERIES III



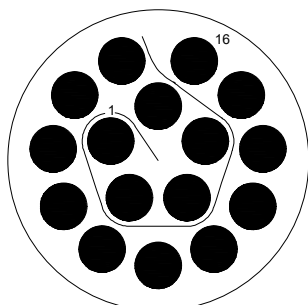
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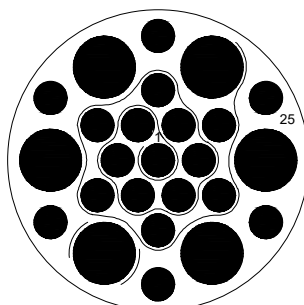
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14 - #16



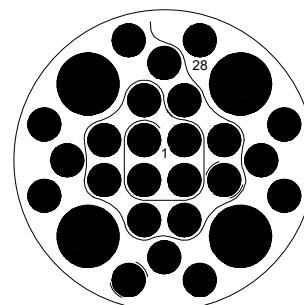
1831
31 - #20



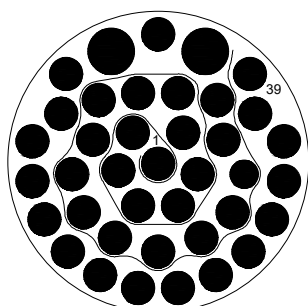
2016
16 - #16



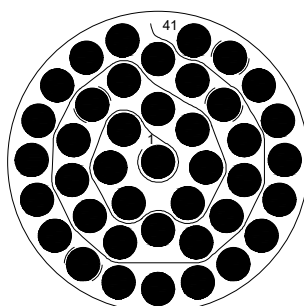
2025
19 - #20
6 - #12



2028
24 - #20
4 - #12



2039
37 - #20
2 - #16



2041
41 - #20

CONTACT
SIZE
LEGEND:



SIZE
20



SIZE
16



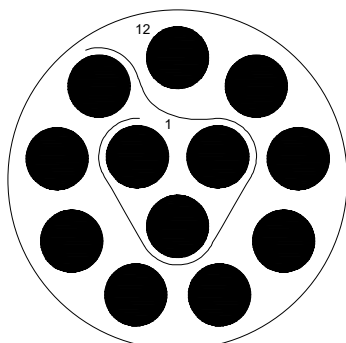
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NOTE: SOCKET INSERT SHOWN (PIN INSERT OPPOSITE)

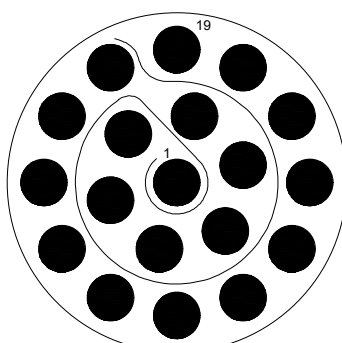
TOLERANCE XX ± .010 .XXX ± .005 ANGLES ± 1°	TITLE MIL-DTL-83723, INSERT ARRANGEMENTS SERIES III	SHEET 2 OF 3	DWG. NO. MIL-DTL-83723	REV -
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MIL-DTL-83723

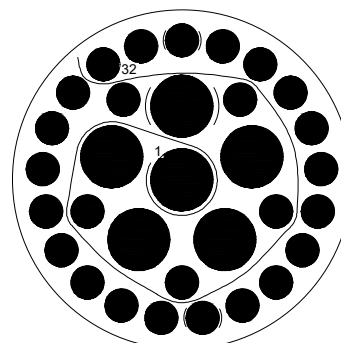
SERIES III



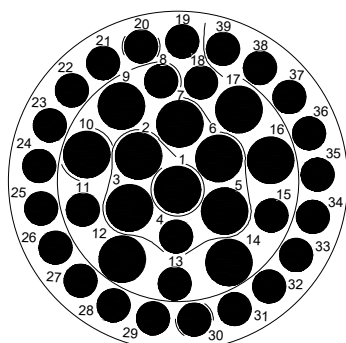
2212
12 - #12



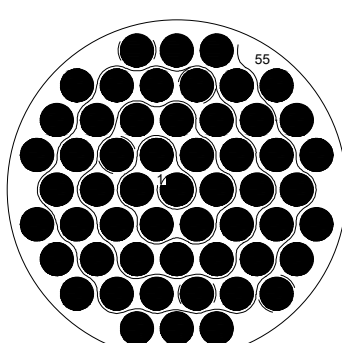
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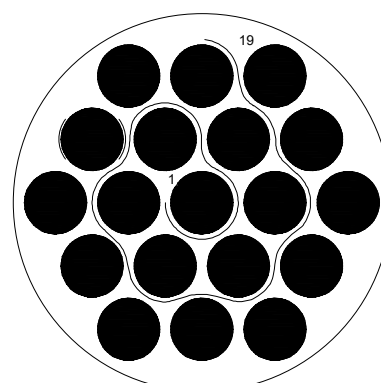
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26 - #20
6 - #12



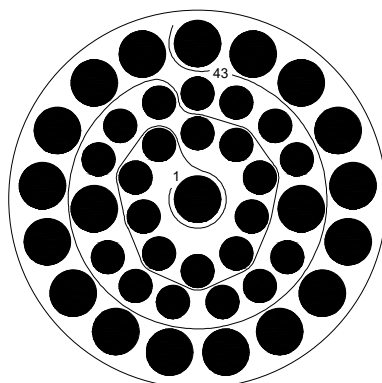
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27 - #20
12 - #16



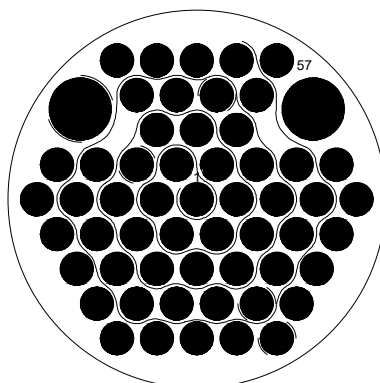
2255
55 - #20



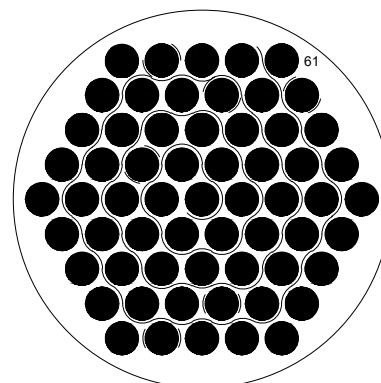
2419
19 - #12



2443
23 - #20
20 - #16

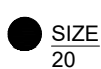


2457
55 - #20
2 - #12



2461
61 - #20

CONTACT
SIZE
LEGEND:



SIZE
20



SIZE
16



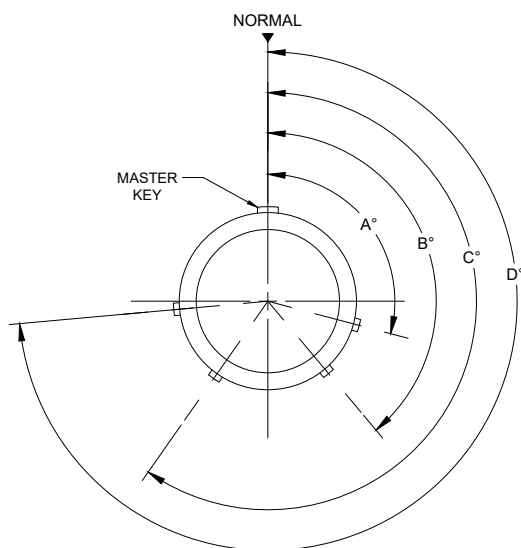
SIZE
12

NOTE: SOCKET INSERT SHOWN (PIN INSERT OPPOSITE)

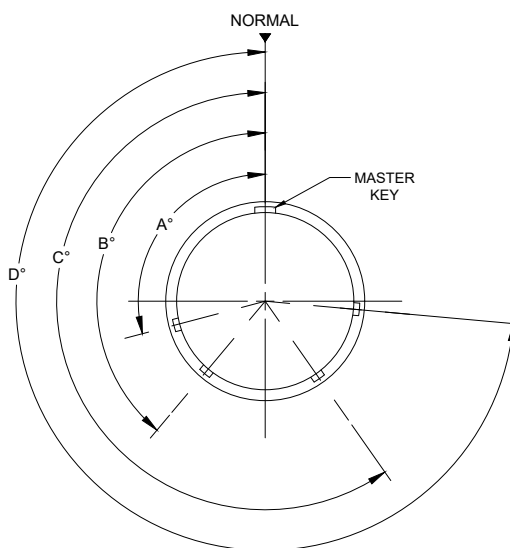
TOLERANCE XX ± .010 .XXX ± .005 ANGLES ± 1°	TITLE MIL-DTL-83723, INSERT ARRANGEMENTS SERIES III	SHEET 3 OF 3	DWG. NO. MIL-DTL-83723	REV -
http://www.corsairelectricalconnectors.com (949) 833-0273				

MIL-DTL-83723

SERIES III



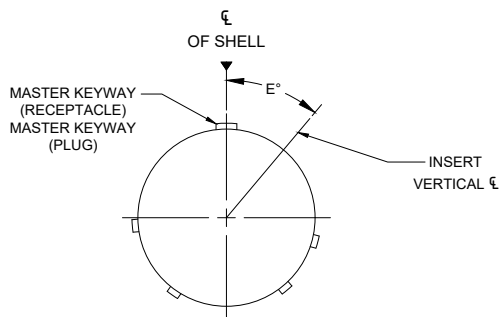
PLUG SHELL
MATING FACE (PIN OR SOCKET INSERT)



RECEPTACLE SHELL
MATING FACE (PIN OR SOCKET INSERT)

Shell Size	Polarizing Position	Shell key/keyway positions			
		A°	B°	C°	D°
8 thru 24	N	105	140	215	265
8 & 10	6	102	132	248	320
	7	80	118	230	312
	8	35	140	205	275
	9	64	155	234	304
10 only	Y*	25	115	220	270
12, 14, 16, 18, 20, 22 & 24	6	18	149	192	259
	7	92	152	222	342
	8	84	152	204	334
	9	24	135	199	240
	Y*	98	152	268	338

* Alternate position "Z" is cancelled and superseded by position "Y".



ROTATED INSERT POSITION

MATING FACE VIEW
SOCKET INSERT SHOWN
PIN INSERT OPPOSITE

Shell Size	Polarizing Position	Insert Position E°
8 thru 24	N	0
	1	10
	2	20
	3	30
	4	40
	5	50

Positions 1-5 are inactive for new designs per MIL-STD-1554.

TOLERANCE XX ± .010 .XXX ± .005 ANGLES ± 1°	TITLE MAIN KEY/KEYWAY POLARIZATION, SERIES III MIL-DTL-83723	SHEET 1 OF 1	DWG. NO. MIL-DTL-83723	REV -
		http://www.corsairelectricalconnectors.com (949) 833-0273		

MIL-DTL-83723

SERIES III



MIL-DTL-83723, SERIES III CRIMP CONTACTS

CONTACT SIZE	WIRE RANGE		SOCKET CONTACTS P/N	PIN CONTACTS P/N
	AWG	mm ²	Military Part Number	Military Part Number
20	24-20	0.2-0.6	M39029/5-115	M39029/4-110
16	20-16	0.5-1.4	M39029/5-116	M39029/4-111
12	14-12	2-3	M39029/5-118	M39029/4-113

CRIMP TOOLS AND INSERTION/REMOVAL TOOLS

Contact Size	Plastic Tools Insert/Removal	Crimp Tool	Positioner
20	M81969/14-11 RED/WHITE	M22520/1-01 OR M22520/2-01	M22520/1-02 OR M22520/2-02
16	M81969/14-03 BLUE/WHITE	M22520/1-01	M22520/1-02
12	M81969/14-04 YELLOW/WHITE	M22520/1-01	M22520/1-02

SEALING PLUGS MS27488

CONTACT SIZE	MIL STD P/N	COLOR KEY
20	MS27488-20-2	RED
16	MS27488-16-2	BLUE
12	MS27488-12-2	YELLOW

TOLERANCE

XX ± .010

.XXX ± .005

ANGLES ± 1°

TITLE

CONTACTS AND TOOLS

SHEET

1 OF 1

DWG. NO.

MIL-DTL-83723

REV

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