

MCD Series connectors are standard density D-Sub connectors, built for high-performance applications requiring rugged machined shells. Features include:

- Machined shells for ruggedness, planarity, and precision
- Interfacial seals and rear grommets for waterproofing
- Unique accessories include EMI grounding strips, keyed jackscrews, and banding backshell
- Quality and performance in accordance with MIL-DTL-24308

Trust the **MCD** to deliver **The Science of Certainty** in mission-critical applications.

TECH SPECS

GENERAL

Part Number Prefix	MCD
Performance Level	Mil/Aero Spaceflight
Conformance	Meets or exceeds performance requirements for MIL-DTL-24308; fully intermateable to MIL-DTL-24308 connectors Meets or exceeds performance requirements for NASA Goddard GSFC-311; fully intermateable to GSFC-311 connectors
RoHS Compliance	Optional

MATERIAL

IN ACCORDANCE WITH

Insulator	PBT (PCB terminations) DAP (wire terminations)	MIL-DTL-24308 §3.3.5.1
Insulator Color	Blue (PBT), Green (DAP)	
Flammability Rating	UL 94V-0	UL 94
Contact Material	Copper alloy	MIL-DTL-24308 §3.3.4; AS39029 MIL-DTL-24308 §3.3.4.2; AS39029
Contact Plating	50 µin gold over nickel or copper underplate	MIL-DTL-24308 §3.3.4.1; AS39029
Shell Material	Aluminum Stainless steel <i>For other shell options, please contact Technical Sales</i>	ASTM B221 ASTM A240
Shell Finish	Electroless nickel Stainless steel, passivated Cadmium Chemical conversion coating	See page 3
Interfacial Seal	Fluorosilicone	MIL-R-25988 Type II Class I Grade 40
Rear Grommet	Fluorosilicone	MIL-R-25988 Type II Class I Grade 40

TECH SPECS

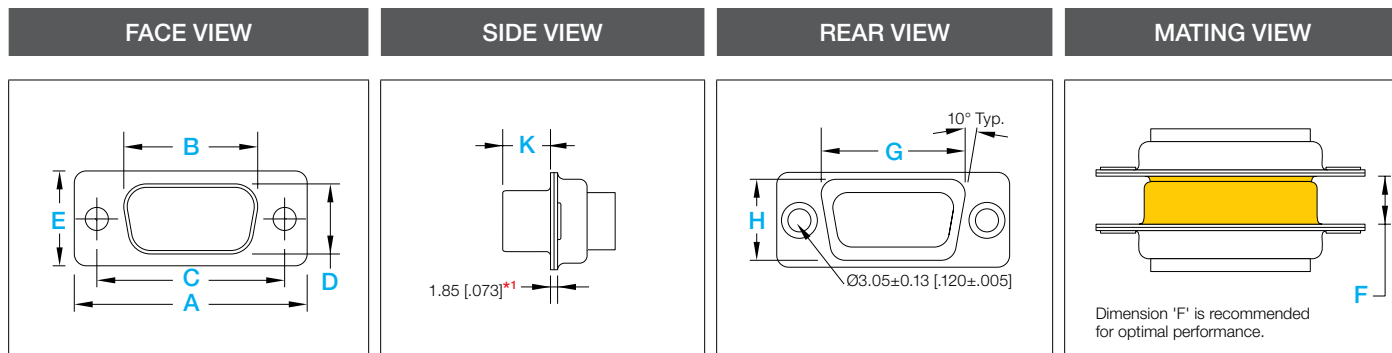
MATERIAL		IN ACCORDANCE WITH
EMI Spring	Copper alloy, plated electroless nickel	ASTM B194; AMS-C-26074
Adhesive/Sealant	MasterBond Supreme 10AOHT 3M DP190 <i>For low outgassing requirements, please contact Technical Sales</i>	
Conductive Gasket	CHOFORM 5513 <i>For non-conductive options or configurations compatible with Spira-Shield metal EMI shielding, please contact Technical Sales</i>	

ELECTRICAL		IN ACCORDANCE WITH
Working Voltage (rms)	300V	EIA-364-20
Initial Contact Resistance	4 mΩ maximum	MIL-DTL-24308 §3.5.9; EIA-364-06; IEC 60512-2, Test 2b
Contact Current Rating at 70°C Temperature Rise	18A 2 contacts energized 14A 6 contacts energized 11A 15 contacts energized 10A 25 contacts energized 9A 50 contacts energized	UL 1977
Insulation Resistance	5 GΩ	MIL-DTL-24308 §3.5.8; EIA-364-21
Proof Voltage (rms)	1000V	EIA-364-20

MECHANICAL		IN ACCORDANCE WITH
Female Contact Design	PosiBand closed entry	
Contact Retention in Insulator	40N [9 lbs] (removable contacts only)	MIL-DTL-24308 §3.5.5; EIA-364-29
Resistance to Soldering Heat		
- Hand Soldering	360°C [680°F] for 4 seconds	MIL-STD-202-210, condition A
- Wave Soldering	260°C [500°F] for 20 seconds	MIL-STD-202-210, condition C
Polarization	Trapezoidal shape of shell	
Mechanical Durability	500 cycles	MIL-DTL-24308 §3.5.16; EIA-364-09
Shock and Vibration	See page 36 for more details	

ENVIRONMENTAL		IN ACCORDANCE WITH
Operating Temperature	-55 to 125°C	MIL-DTL-24308 §3.5.11; EIA-364-32
Outgassing	Low outgassing options (TML <1.0%, CVCM <0.1%, RML <1.0%) are available, <i>please contact Technical Sales.</i>	ASTM E 595; ECSS-Q-ST-70-02C
Waterproof	IP67 (<i>when ordered with the IP-rated panel mount accessories</i>)	IEC 60529

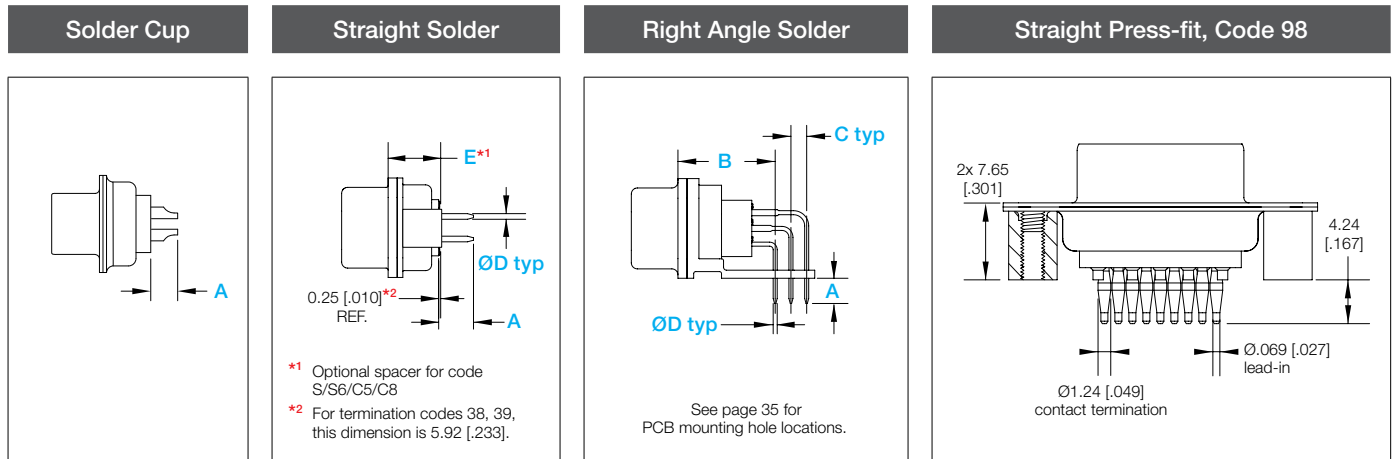
SHELL DIMENSIONS



*1 The 1.85 [.073] shell thickness in the SIDE VIEW is only valid for configurations without angle brackets.

SHELL SIZE	GENDER	A ±0.38 [.015]	B ±0.13 [.005]	C ±0.13 [.005]	D ±0.13 [.005]	E ±0.38 [.015]	G ±0.25 [.010]	H ±0.25 [.010]	K ±0.13 [.005]	F ±0.38 [.015]
1	Male	30.81 [1.213]	18.75 [.738]	24.99 [.984]	10.19 [.401]	12.55 [.494]	19.82 [.780]	10.82 [.426]	5.92 [.233]	6.73 [.265]
	Female		16.33 [.643]		7.90 [.311]				6.17 [.243]	
2	Male	39.14 [1.541]	27.08 [1.066]	33.32 [1.312]	10.19 [.401]	12.55 [.494]	28.15 [1.108]	10.82 [.426]	5.92 [.233]	6.73 [.265]
	Female		24.66 [.971]		7.90 [.311]				6.17 [.243]	
3	Male	53.04 [2.088]	40.79 [1.606]	47.04 [1.852]	10.19 [.401]	12.55 [.494]	41.87 [1.648]	10.82 [.426]	5.84 [.230]	6.50 [.256]
	Female		38.19 [1.504]		7.90 [.311]				6.17 [.243]	
4	Male	69.32 [2.729]	57.25 [2.254]	63.50 [2.500]	10.19 [.401]	12.55 [.494]	58.28 [2.294]	10.82 [.426]	5.84 [.230]	6.50 [.256]
	Female		54.84 [2.159]		7.90 [.311]				6.17 [.243]	
5	Male	66.93 [2.635]	54.64 [2.151]	61.11 [2.406]	13.03 [.513]	15.37 [.605]	55.88 [2.200]	13.67 [.538]	5.84 [.230]	6.50 [.256]
	Female		52.43 [2.064]		10.74 [.423]				6.17 [.243]	

CONTACT TERMINATIONS



Code	Termination type	A	B	C	ØD	E
0/1	Crimp	--	--	--	--	6.60 [.260]
2	Solder cup	3.18 [.125]	--	--	--	11.37 [.448]
3	Straight solder	4.31 [.170]	--	--	0.76 [.030]	6.60 [.260]
31	Straight solder	4.31 [.170]	--	--	1.01 [.040]	6.60 [.260]
32	Straight solder	9.52 [.375]	--	--	0.76 [.030]	6.60 [.260]
33	Straight solder	12.70 [.500]	--	--	0.76 [.030]	6.60 [.260]
36	Straight solder	6.00 [.236]	--	--	0.60 [.024]	6.60 [.260]
38	Straight solder	8.45 [.333]	--	--	0.76 [.030]	12.29 [.484]
39	Straight solder	11.63 [.458]	--	--	0.76 [.030]	12.29 [.484]
4	Right angle solder	4.31 [.170]	12.34 [.486]	2.84 [.112]	0.76 [.030]	--
42	Right angle solder	5.00 [.197]	10.3 [.406]	2.54 [.100]	0.60 [.024]	--
5	Right angle solder	4.31 [.170]	8.07 [.318]	2.84 [.112]	0.76 [.030]	--
51	Right angle solder	3.18 [.125]	8.07 [.318]	2.84 [.112]	0.76 [.030]	--
52	Right angle solder	6.35 [.250]	8.07 [.318]	2.84 [.112]	0.76 [.030]	--
53	Right angle solder	4.31 [.170]	8.07 [.318]	2.84 [.112]	1.01 [.040]	--
54	Right angle solder	3.18 [.125]	8.07 [.318]	2.84 [.112]	1.01 [.040]	--