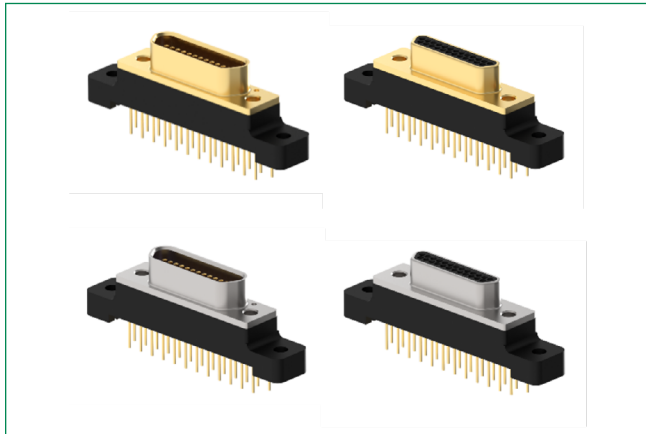


MDM Series

Micro D connectors

PCB straight termination ESAQ - ESCC 3401/029 Certified



Type	Mating/Unmating Force (N max)	Unmating Force (N min)	Max weight without accessories (g)
Size 9	25	1.3	4.6
Size 15	42	2.0	5.0
Size 21	58	2.9	5.4
Size 25	70	3.5	6.5
Size 31	86	4.3	7.7
Size 37	103	5.1	9.2
Size 51	142	7.1	10.5

Electrical & Mechanical Characteristics

Characteristics	Specifications	
Working voltage	150	Vrms max (at sea level)
	100	Vrms max (33000 m of altitude)
Rated current	2.5	A max
Contact resistance (Low level current)	25	mΩ max (10mA / 20 mV DC)*
Contact resistance	25	mΩ max (Rated current)*
Insulation resistance	5000	MΩ min (500 V DC)
Voltage proof	600	Vrms / 2mA (leakage current)
Contact retention in insert	22.25	N min (no axial move allowed)
Engagement force	1.667	N max per contact
Separation force	0.137	N min per contact
Mechanical endurance	500	Cycles (mating / unmating)
Soldering temperature	260°	°C (10 seconds max)
Temperature range	-55/+125	°C
Storage temperature	-55/+125	°C

*Include all parts of the contact including the contact body and the wire leads.

Description

High performance microminiature connectors, ESA qualified for space applications. Meet the performance and dimensional requirements of the ESCC 3401 specifications.

Compliant to ESCC specification 3401/029.

Suitable for use in space Board to Cable applications.

Twist Pin contacts technology.

Sizes available : 9, 15, 21, 25, 31, 37, 51 ways

Pitch between two contacts rows : 1.09 mm (.043")

Pitch between two horizontally adjacent contacts : 1.27 mm (.050")

Features & Benefits

- Compliant with ESCC specifications
- High performance Micropin™ contact system: "Twist pin" spring male contact and tubular socket contact
- Solder type contacts
- Non-outgassing
- Low size connectors
- Low weight

Applications

- Space equipment
- Satellites harnesses and payloads

Quality Level

ESA : ESCC 3401 (Flying model).
Qualification reviewed every 2 years.

Packaging

Individual plastic tube.
Traceability and documentation according to ESCC specifications.
Each MDM connector is sold with a dust cap.
Each MDM socket connector™ is sold with an interfacial seal.

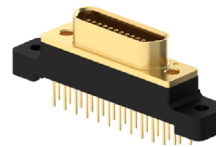
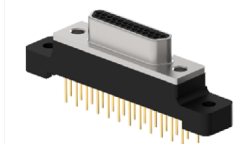
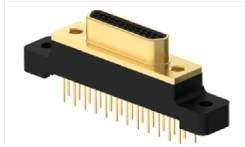
MDM Series

Micro D connectors

PCB straight termination ESAQ - ESCC 3401/029 Certified

How To Order Connector

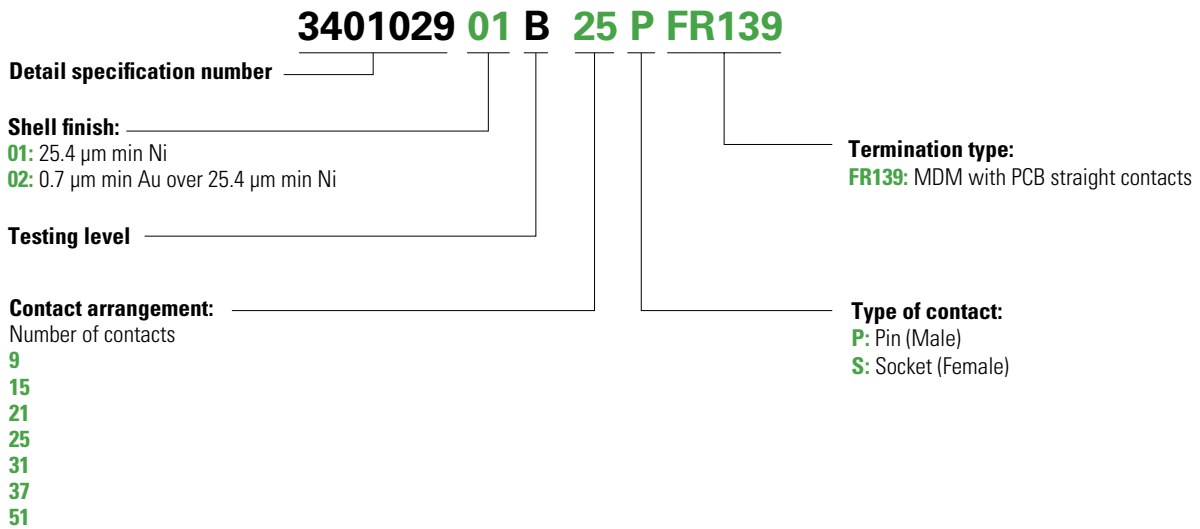
Our easy build-a-connector concept allows you to mix and match options to create the MDM, PCB straight type, you need. To order, select desired option from each category and place it in the appropriate box.



Pin connectors with shell Gold plated or shell Nickel plated

Socket connectors with shell Gold plated or shell Nickel plated

ESCC specification:



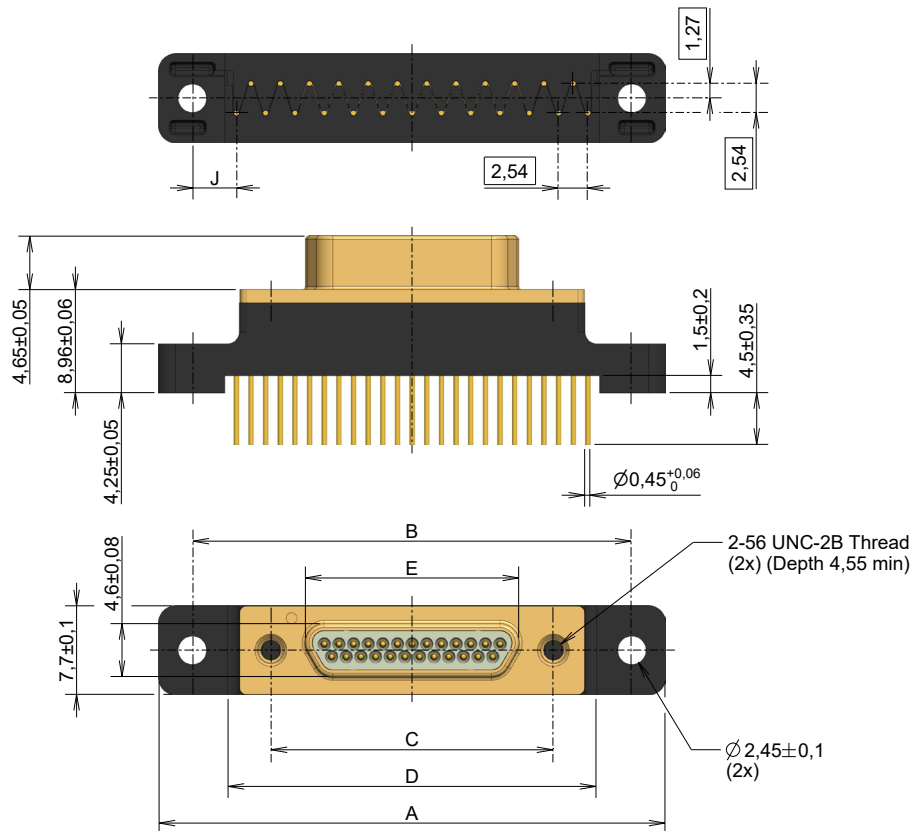
Materials & Finishes

Components	Materials	Finishes
Shell	Aluminum alloy	01: 25.4 µm min Electroless Nickel 02: 0.7 µm min Gold over 25.4 µm min Electroless Nickel
Insulator	LCP	UL 94-V0, Glass-filled, Black color
Housing	LCP	UL 94-V0, Glass-filled, Black color
Female contacts	Copper alloy	1.27 µm min Gold over Copper
Male contacts	Copper alloy	1.27 µm min Gold over Copper
Interfacial seal	Fluorosilicone elastomer	Pink color
Dust cap	Polyethylene	Black color, antistatic
Encapsulant	Epoxy	Black color

MDM Series

Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

Pin connector dimensions - FR139 - Size 9 to 37

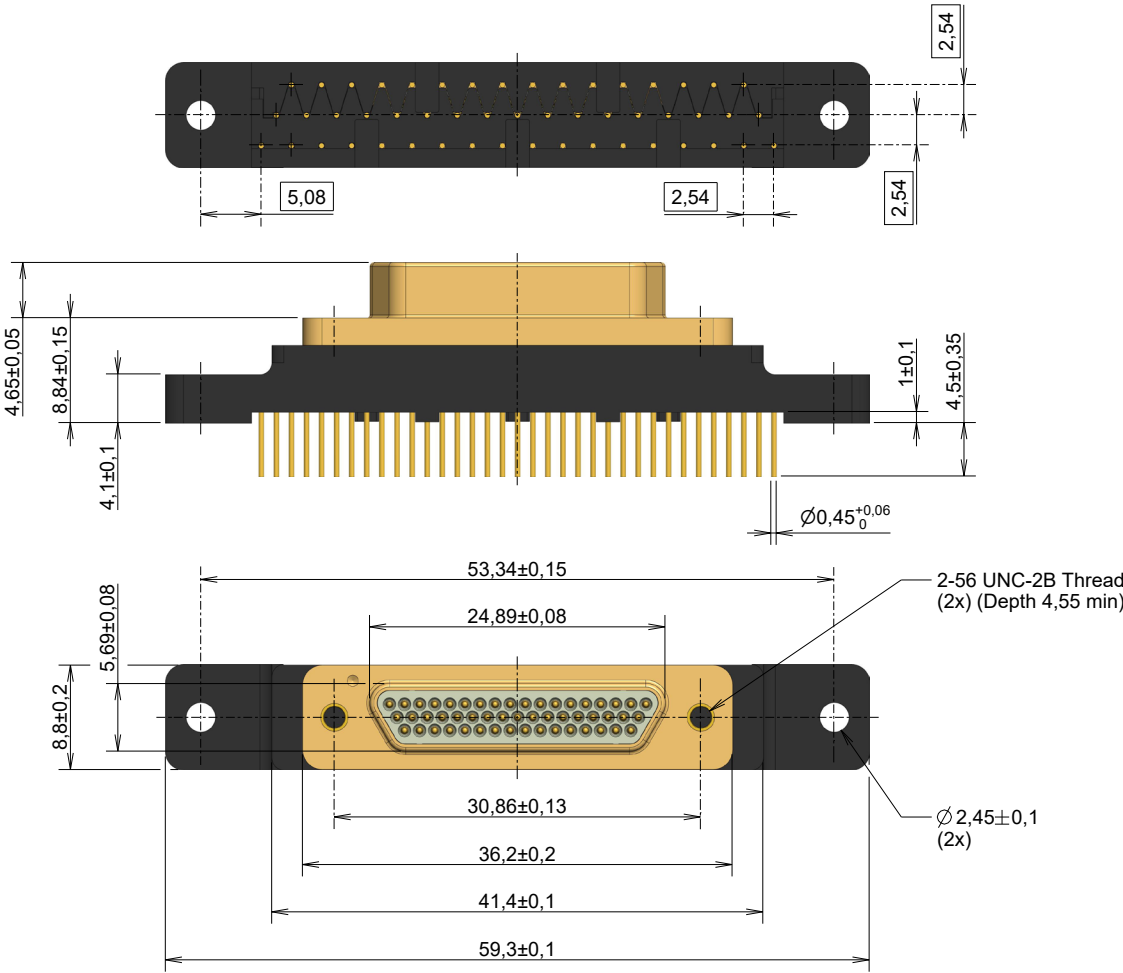


Shell Size	A ±0.1	B ±0.15	C ±0.05	D ±0.1	E ±0.07	J Typ
9P	35.10	29.21	14.35	19.70	8.39	9.525
15P	35.10	29.21	18.16	23.51	12.20	5.715
21P	42.80	36.83	21.97	27.30	16.01	5.715
25P	44.00	38.10	24.51	30.00	18.55	3.81
31P	51.60	45.72	28.32	33.80	22.36	3.81
37P	59.30	53.34	32.13	37.60	26.17	3.81

MDM Series

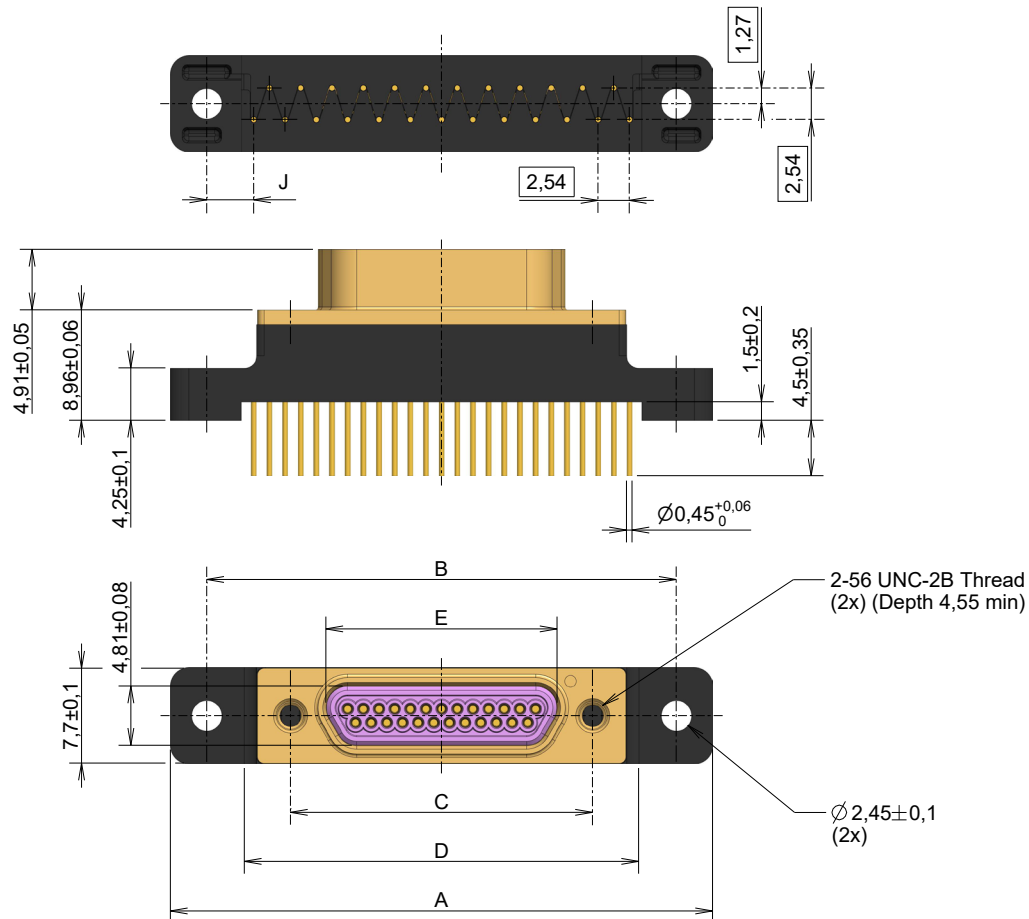
Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

Pin connector dimensions - FR139 - Size 51



MDM Series
 Micro D connectors
 PCB straight termination ESAQ - ESCC 3401/029 Certified

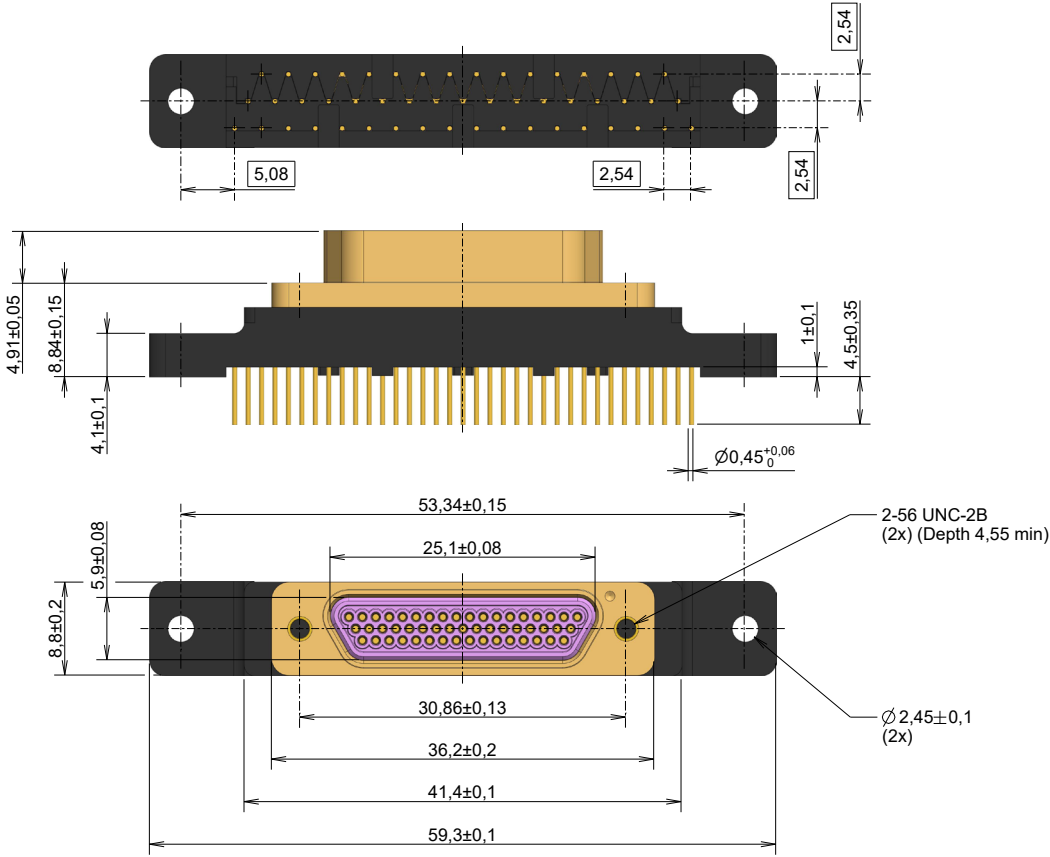
Socket connector dimensions - FR139 - Size 9 to 37



Shell Size	A ± 0.1	B ± 0.15	C ± 0.05	D ± 0.1	E ± 0.07	J Typ
9S	35.10	29.21	14.35	19.70	8.60	9.525
15S	35.10	29.21	18.16	23.51	12.41	5.715
21S	42.80	36.83	21.97	27.30	16.22	5.715
25S	44.00	38.10	24.51	30.00	18.76	3.81
31S	51.60	45.72	28.32	33.80	22.57	3.81
37S	59.30	53.34	32.13	37.60	26.38	3.81

MDM Series
Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

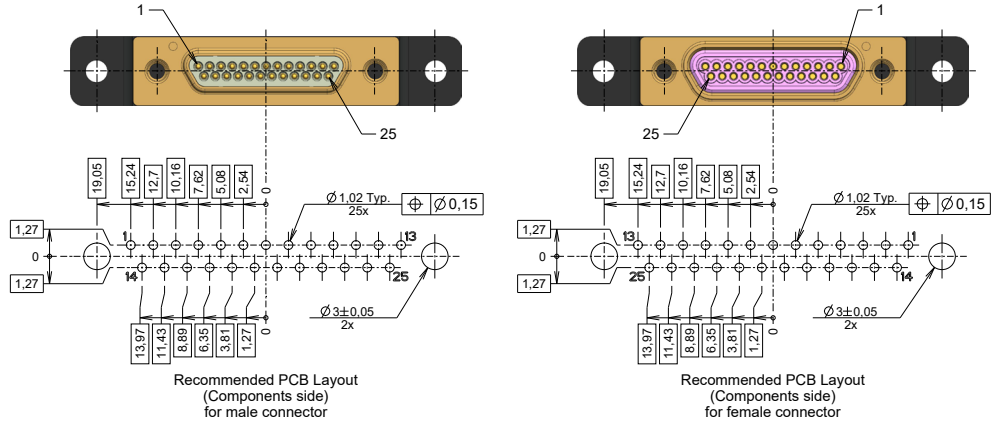
Socket connector dimensions - FR139 - Size 51



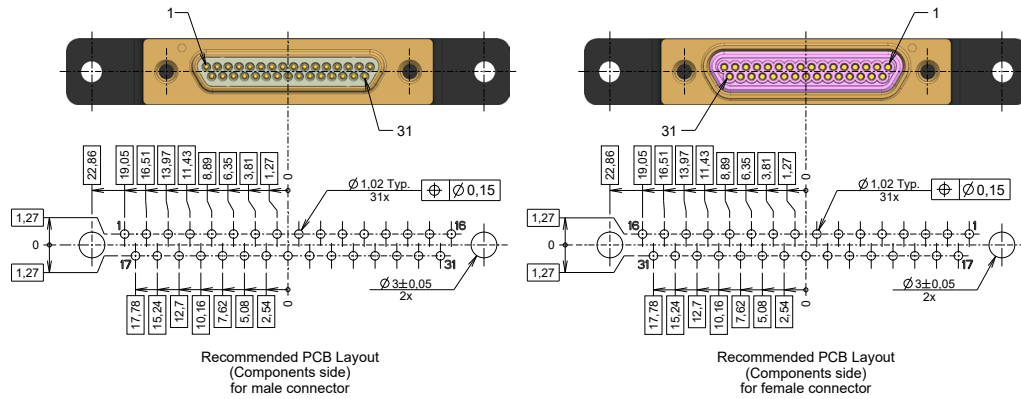
MDM Series

Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

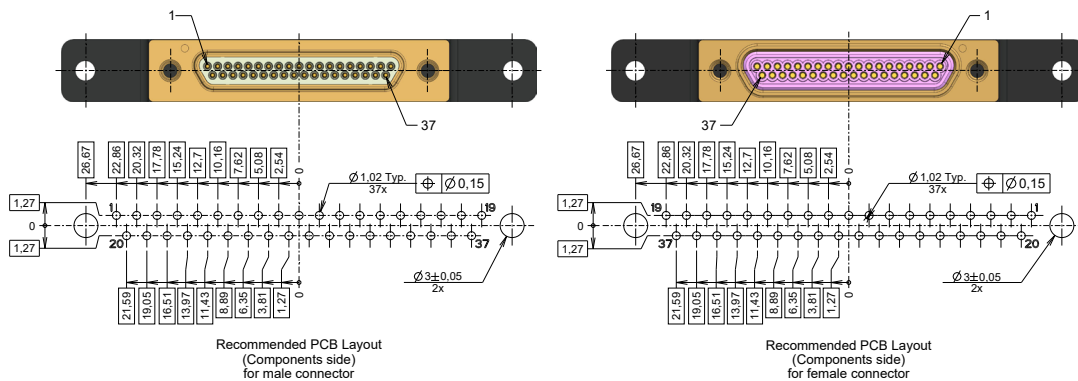
PCB layout – FR139 - 25 positions



PCB layout – FR139 - 31 positions

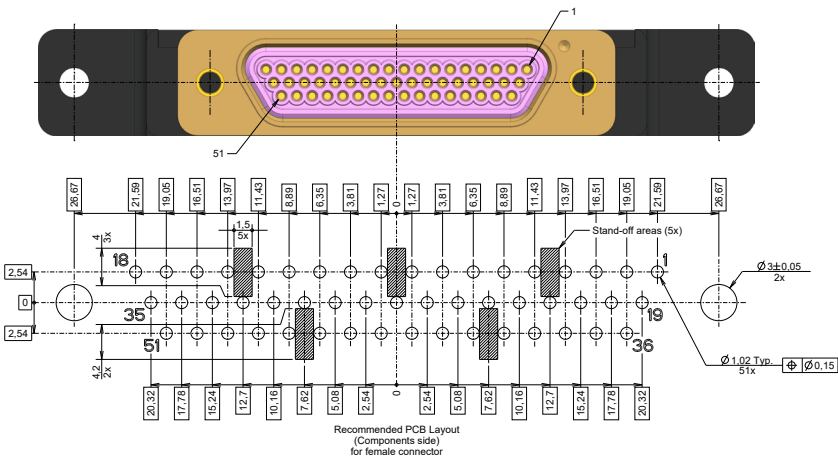
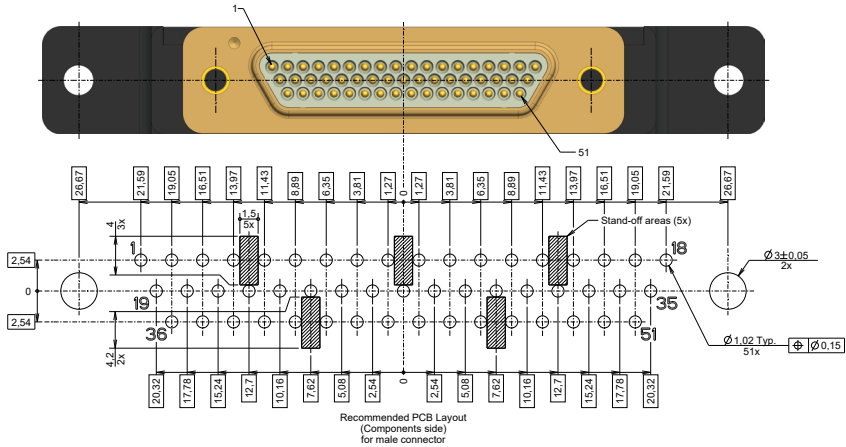


PCB layout – FR139 - 37 positions



MDM Series
 Micro D connectors
 PCB straight termination ESAQ - ESCC 3401/029 Certified


PCB layout – FR139 - 51 positions




MDM Series

Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

Accessories

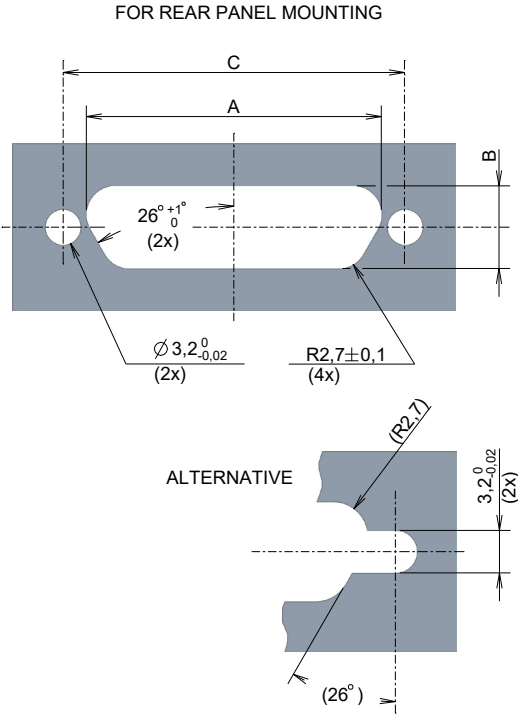
Dust cap (if additional need)	Size	Description	P/N
	9P	MDM-DUSTCAP-9P-FR022	C115288-6927
	9S	MDM-DUSTCAP-9S-FR022	C115288-6928
	15P	MDM-DUSTCAP-15P-FR022	C115288-6929
	15S	MDM-DUSTCAP-15S-FR022	C115288-6930
	21P	MDM-DUSTCAP-21P-FR022	C115288-6931
	21S	MDM-DUSTCAP-21S-FR022	C115288-6932
	25P	MDM-DUSTCAP-25P-FR022	C115288-6933
	25S	MDM-DUSTCAP-25S-FR022	C115288-6934
	31P	MDM-DUSTCAP-31P-FR022	C115288-6935
	31S	MDM-DUSTCAP-31S-FR022	C115288-6936
	37P	MDM-DUSTCAP-37P-FR022	C115288-6937
	37S	MDM-DUSTCAP-37S-FR022	C115288-6938
	51P	MDM-DUSTCAP-51P-FR022	C115288-6939
	51S	MDM-DUSTCAP-51S-FR022	C115288-6940

Female screwlocks for rear panel mounting (To be ordered separately)	Panel thickness (mm)	ESCC description	P/N
 <p>Weight for one pair: 0.86 g max</p>	0.7 < Thickness < 1.1	MDM-115366-9225C	C115366-9225C
	1.1 < Thickness < 1.5	MDM-115366-9226C	C115366-9226C
	1.5 < Thickness < 2.0	MDM-115366-9227C	C115366-9227C

Female screwlocks, mouting without panel (To be ordered separately)	ESCC description	P/N
 <p>Weight for one pair: 1.32 g max</p>	340103211B	C115366-9222C

MDM Series
 Micro D connectors
 PCB straight termination ESAQ - ESCC 3401/029 Certified

Panel cutouts – FR139 – Size 9 to 51



Rear panel mounting			
Shell Size	A ±0.05	B ±0.05	C ±0.1
9	10.56	6.77	14.35
15	14.37	6.77	18.16
21	18.18	6.77	21.97
25	20.72	6.77	24.51
31	24.53	6.77	28.32
37	28.34	6.77	32.13
51	27.07	7.86	30.86

MDM Series

Micro D connectors
PCB straight termination ESAQ - ESCC 3401/029 Certified

Connectors description and Part Numbers

Shell plating	Contact type	Number of contacts	Standard profile FR139	
			ESCC description	P/N
Nickel plated	Pin	9	340102901B 9PFR139	C115366-1100C
		15	340102901B 15PFR139	C115366-1102C
		21	340102901B 21PFR139	C115366-1104C
		25	340102901B 25PFR139	C115366-1106C
		31	340102901B 31PFR139	C115366-1108C
		37	340102901B 37PFR139	C115366-1110C
		51	340102901B 51PFR139	C115366-9042C
	Socket	9	340102901B 9SFR139	C115366-1101C
		15	340102901B 15SFR139	C115366-1103C
		21	340102901B 21SFR139	C115366-1105C
		25	340102901B 25SFR139	C115366-1107C
		31	340102901B 31SFR139	C115366-1109C
		37	340102901B 37SFR139	C115366-1111C
		51	340102901B 51SFR139	C115366-9043C
Gold plated	Pin	9	340102902B 9PFR139	C115366-1114C
		15	340102902B 15PFR139	C115366-1116C
		21	340102902B 21PFR139	C115366-1118C
		25	340102902B 25PFR139	C115366-1120C
		31	340102902B 31PFR139	C115366-1122C
		37	340102902B 37PFR139	C115366-1124C
		51	340102902B 51PFR139	C115366-8554C
	Socket	9	340102902B 9SFR139	C115366-1115C
		15	340102902B 15SFR139	C115366-1117C
		21	340102902B 21SFR139	C115366-1119C
		25	340102902B 25SFR139	C115366-1121C
		31	340102902B 31SFR139	C115366-1123C
		37	340102902B 37SFR139	C115366-1125C
		51	340102902B 51SFR139	C115366-8555C