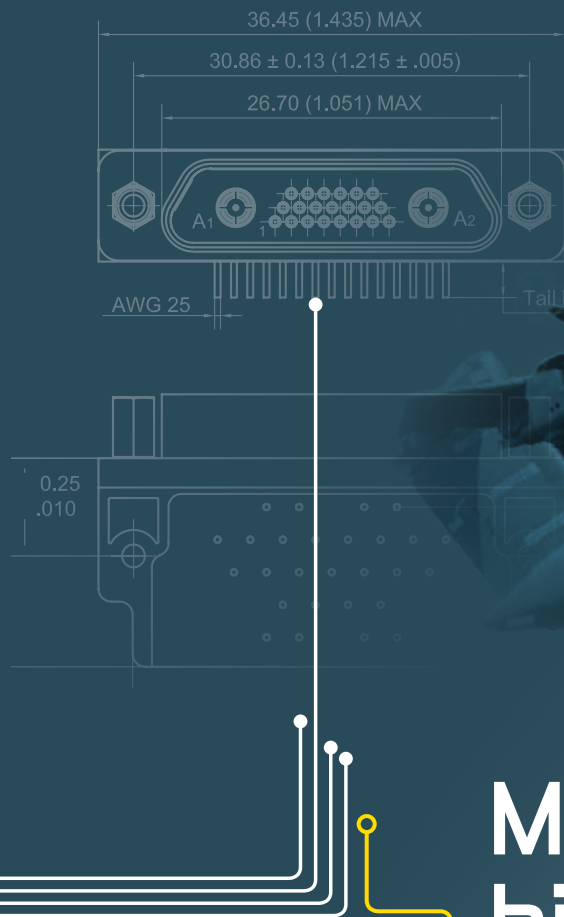




Miniature high performance twist pin connectors

Micro-D & Nano-D,
Rectangular & Circular



PIGTAIL, SOLDER CUP, PCB, SAVERS & MICROSTRIP CONNECTORS

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PIGTAILS, SOLDER CUP, PCB, SAVERS & MICROSTRIP CONNECTORS

RECTANGULAR CONNECTORS

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Plastic shell 80
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Low profile - Plastic shell 88
PCB layout for CBP type 90
- BR (Board Right Angle) type - 0.100" pitch - Metal shell 92
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PCB layout for CBR 0.075" type. 108
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- BS (Board Straight) type - 0.075" pitch - Metal shell 116
- BS (Board Straight) type - 0.075" pitch - Plastic shell 118
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PCB layout for BS 0.075" type – Specific layout – Plugs 122
PCB layout for BS 0.075" type – Specific layout – Receptacles . . . 124

CONNECTOR SAVERS

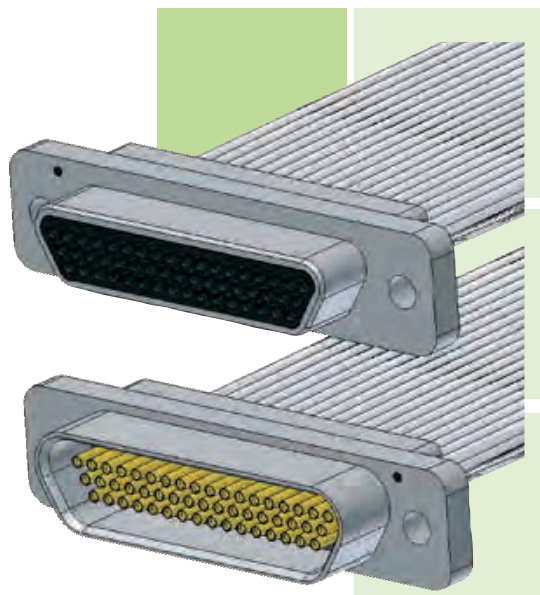
- One piece design - Metal or plastic shell 126
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MICROSTRIP CONNECTORS

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RECTANGULAR CONNECTORS

PIGTAIL CONNECTOR

METAL SHELL

- High performance metal connector and PTFE wire.
- Environmentally sealed.
- Operating temperature: 150°C or 200°C.
- 9 to 100 contacts.

IDENTIFICATION CODE

MDA 2 51 S 4 L 050 B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS **09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.**
 See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

WIRE TYPE

For colour codes **F, L, W**

- 1:** E 2607, AWG 26, 7 strands, 600V.
4: E 2619, AWG 26, 19 strands, 600V.
6: E 2807, AWG 28, 7 strands, 600V.
8: E 3007, AWG 30, 7 strands, 600V.
A: E 2407, AWG 24, 7 strands, 600V.
C: E 2419, AWG 24, 19 strands, 600V.
E: M22759/33, AWG 26, 19 strands, 600V.

For colour code **V** only

- 3:** M22759/11, AWG26, 19 strands, 600V.
F: E2607, AWG26, 7 strands, 600V.
 Solid uninsulated wires
G: AWG 25 gold plated.
T: AWG 24 tin plated.

See page 29 for wire types.

COLOUR CODE

- F:** All yellow.
L: All white.

BLANK: If wire type is G or T.
W: 10 colour repeat.

V: MIL-STD-681 striped (only for wire types 3 and F).
 See page 30 for colour code.

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10mm = 0.394").

L	L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	L ≤ 3.940	3.940 < L ≤ 39.40	L > 39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE

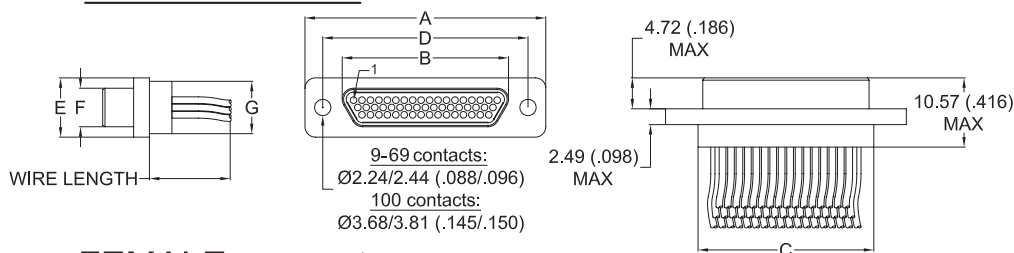
- B:** No hardware.
C: U-clips with low profile hex socket head jackscrews (removable).
D: U-clips with low profile slot head jackscrews (removable).
M: Low profile hex socket head jackscrews (removable).
N: High profile hex socket head jackscrews (removable).
S: Low profile slot head jackscrews (removable).
T: High profile slot head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
K: High profile slot head jackscrews (non removable).
L: Low profile hex socket head jackscrews (non removable).
F: Float mount, front panel mount (non removable).
FR: Float mount, rear panel mount (non removable).
 See pages 190 to 200 for hardware description.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

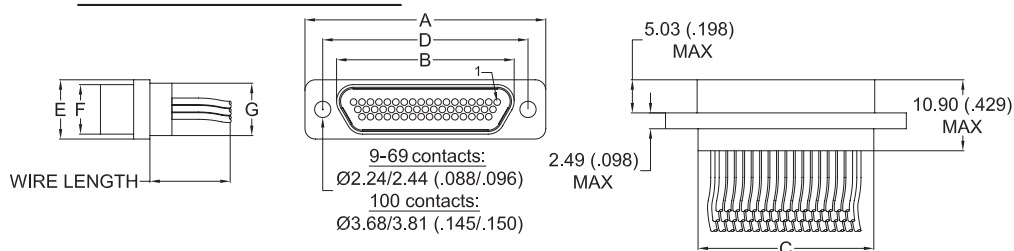
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+0.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.69 .775	8.48 .334	10.16 .400	9.91 .390	14.35 .565	7.57 .298	4.69 .185	6.35 .250	6.86 .270
15 P / 15 S	23.50 .925	12.29 .484	14.00 .551	13.72 .540	18.16 .715	7.57 .298	4.69 .185	6.35 .250	6.86 .270
21 P / 21 S	27.31 1.075	16.10 .634	17.81 .701	17.53 .690	21.97 .865	7.57 .298	4.69 .185	6.35 .250	6.86 .270
25 P / 25 S	29.85 1.175	18.64 .734	20.35 .801	20.07 .790	24.51 .965	7.57 .298	4.69 .185	6.35 .250	6.86 .270
31 P / 31 S	33.66 1.325	22.45 .884	24.16 .951	23.88 .940	28.32 1.115	7.57 .298	4.69 .185	6.35 .250	6.86 .270
37 P / 37 S	37.47 1.475	26.26 1.034	27.96 1.101	27.69 1.090	32.13 1.265	7.57 .298	4.69 .185	6.35 .250	6.86 .270
51DR P / 51DR S	46.36 1.825	35.15 1.384	36.83 1.450	36.58 1.440	41.02 1.615	7.57 .298	4.69 .185	6.35 .250	6.86 .270
51 P / 51 S	36.20 1.425	24.99 .984	26.70 1.051	26.42 1.040	30.86 1.215	8.66 .341	5.79 .228	7.44 .293	7.87 .310
69 P / 69 S	43.82 1.725	32.61 1.1284	34.29 1.350	34.04 1.340	38.48 1.515	8.66 .341	5.79 .228	7.44 .293	7.87 .310
100 P / 100 S	54.86 2.160	35.15 1.384	36.86 1.451	36.37 1.432	45.72 1.800	9.75 .384	6.88 .271	8.46 .333	9.14 .360

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



RECTANGULAR CONNECTORS

PIGTAIL CONNECTOR

LOW PROFILE METAL SHELL

- High performance metal connector and PTFE wire.
- Operating temperature: 150°C or 200°C.
- 9 to 51 contacts.

IDENTIFICATION CODE

MDA 2 L51 S 4 L 050 B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium aluminium shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS L09, L15, L21, L25, L31, L37, L51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

WIRE TYPE

For colour codes F, L, W

- 1:** E 2607, AWG 26, 7 strands, 600V.
4: E 2619, AWG 26, 19 strands, 600V.
6: E 2807, AWG 28, 7 strands, 600V.
8: E 3007, AWG 30, 7 strands, 600V.
A: E 2407, AWG 24, 7 strands, 600V.
C: E 2419, AWG 24, 19 strands, 600V.
E: M22759/33, AWG 26, 19 strands, 600V.

For colour code V only

- 3:** M22759/11, AWG26, 19 strands, 600V.
F: E 2607, AWG 26, 7 strands, 600V.
Solid uninsulated wires
G: AWG 25 gold plated
T: AWG 24 tin plated

See page 29 for wire types.

COLOUR CODE

- F:** All yellow.
L: All white.

BLANK: If wire type is G or T.

W: 10 colour repeat.

V: MIL-STD-681 striped (only for wire types 3 and F).

See page 30 for colour code.

WIRE LENGTH (in cm)

Attention! Wire length in centimetres - (1cm = 10mm = 0.394").

L	L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	L ≤ 3.940	3.940 < L ≤ 39.40	L > 39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE

B: No hardware.

C: U-clips with low profile hex socket head jackscrews (removable).

D: U-clips with low profile slot head jackscrews (removable).

M: Low profile hex socket head jackscrews (removable).

N: High profile hex socket head jackscrews (removable).

S: Low profile slot head jackscrews (removable).

T: High profile slot head jackscrews (removable).

P: Jackposts (removable).

Px (x: 1 to 5): Panel mount jackposts.

K: High profile slot head jackscrews (non removable).

L: Low profile hex socket head jackscrews (non removable).

F: Float mount, front panel mount (non removable).

FR: Float mount, rear panel mount (non removable).

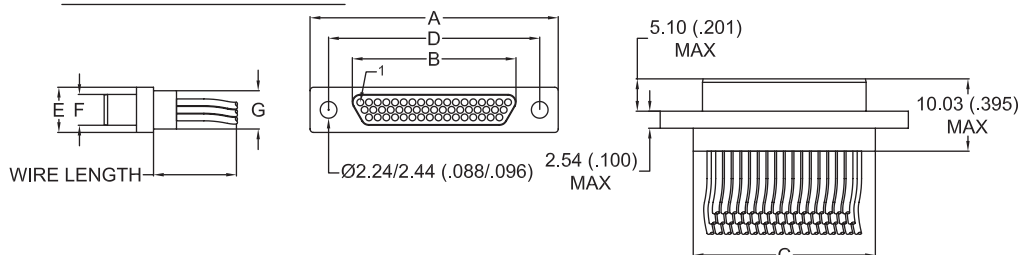
See pages 190 to 200 for hardware description.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

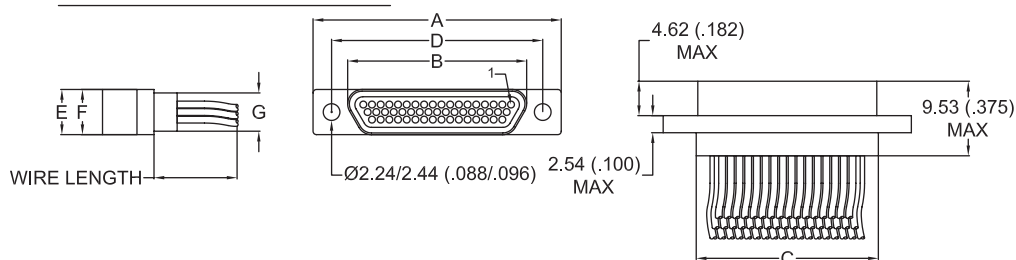
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



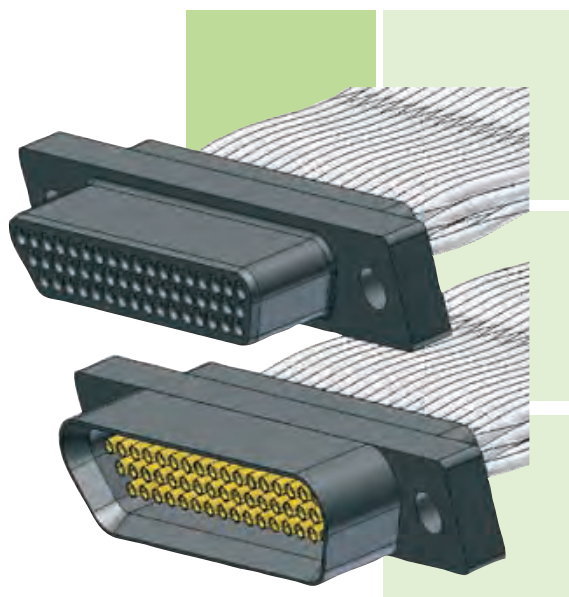
	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+0.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.76 .778	7.47 .294	9.65 .380	10.11 .398	14.35 .565	5.28 .208	3.40 .134	5.53 .218	4.39 .173
15 P / 15 S	23.57 .928	11.28 .444	13.46 .530	13.92 .548	18.16 .715	5.28 .208	3.40 .134	5.53 .218	4.39 .173
21 P / 21 S	27.38 1.078	15.09 .594	17.27 .680	17.73 .698	21.97 .865	5.28 .208	3.40 .134	5.53 .218	4.39 .173
25 P / 25 S	29.92 1.178	17.63 .694	19.81 .780	20.27 .798	24.51 .965	5.28 .208	3.40 .134	5.53 .218	4.39 .173
31 P / 31 S	33.73 1.328	21.44 .844	23.62 .930	24.08 .948	28.32 1.115	5.28 .208	3.40 .134	5.53 .218	4.39 .173
37 P / 37 S	37.54 1.478	25.25 1.080	27.43 1.080	27.89 1.098	32.13 1.265	5.28 .208	3.40 .134	5.53 .218	4.39 .173
51 P / 51 S	36.27 1.428	23.98 .944	26.16 1.030	26.62 1.048	30.86 1.215	6.35 .250	4.50 .177	6.60 .260	5.59 .220

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 VAc Altitude 21 km (70,000 ft): 150 VAc
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2,26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1μs
SHOCK	50g's - No discontinuity > 1μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULENT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



RECTANGULAR CONNECTORS

PIGTAIL CONNECTOR

PLASTIC SHELL

- Low cost plastic connector.
- Operating temperature: 150°C or 200°C.
- 9 to 51 contacts.

IDENTIFICATION CODE

MDA P 51 S 4 L 050 B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.
L: LCP shell + potting 200°C.

NUMBER OF CONTACTS 09, 15, 21, 25, 31, 37, 51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).
S: Female (socket contacts).

WIRE TYPE

For colour codes **F, L, W**

1: E 2607, AWG 26, 7 strands, 600V.
4: E 2619, AWG 26, 19 strands, 600V.
6: E 2807, AWG 28, 7 strands, 600V.
8: E 3007, AWG 30, 7 strands, 600V.
A: E 2407, AWG 24, 7 strands, 600V.
C: E 2419, AWG 24, 19 strands, 600V.
E: M22759/33, AWG 26, 19 strands, 600V.

For colour code **V** only

3: M22759/11, AWG26, 19 strands, 600V.
F: E2607, AWG26, 7 strands, 600V.
Solid uninsulated wires
G: AWG 25 gold plated.
T: AWG 24 tin plated.

See page 29 for wire types.

COLOUR CODE

F: All yellow.
L: All white.

BLANK: If wire type is G or T.

W: 10 colour repeat.

V: MIL-STD-681 striped (only for wire types 3 and F).

See page 30 for colour code.

WIRE LENGTH (in cm)

Attention! wire length in centimetres - (1cm = 10mm = 0.394").

L	L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	L ≤ 3.940	3.940 < L ≤ 39.40	L > 39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

HARDWARE

B: No hardware.

C: U-clips with low profile hex socket head jackscrows (removable).

D: U-clips with low profile slot head jackscrows (removable).

M: Low profile hex socket head jackscrows (removable).

N: High profile hex socket head jackscrows (removable).

S: Low profile slot head jackscrows (removable).

T: High profile slot head jackscrows (removable).

P: Jackposts (removable).

Px (x: 1 to 5): Panel mount jackposts.

K: High profile slot head jackscrows (non removable).

L: Low profile hex socket head jackscrows (non removable).

F: Float mount, front panel mount (non removable).

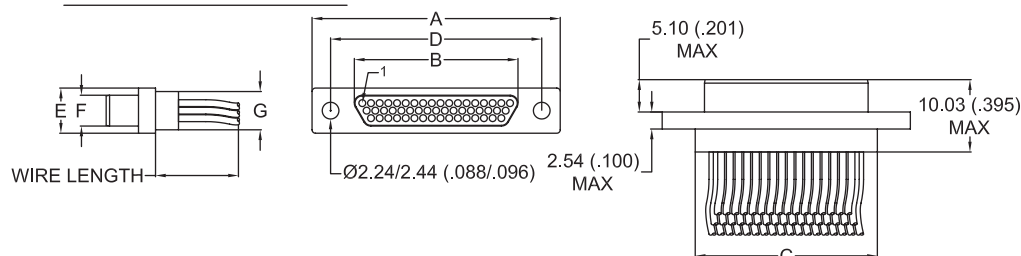
FR: Float mount, rear panel mount (non removable).

See pages 190 to 200 for hardware description.

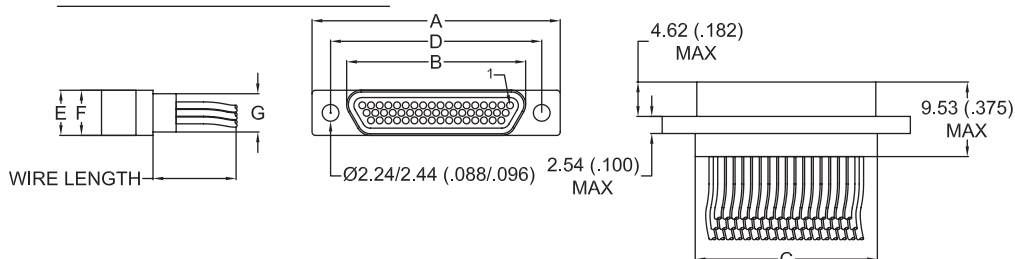
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



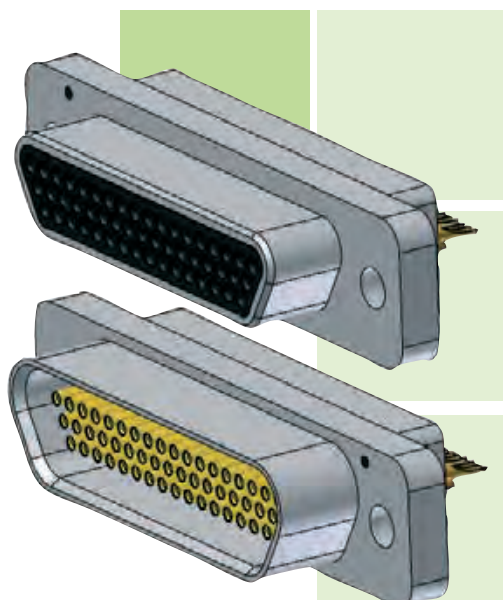
	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.76 .778	7.41 .292	9.65 .380	10.11 .398	14.35 .565	5.28 .208	3.40 .134	5.53 .218	4.39 .173
15 P / 15 S	23.57 .928	11.22 .442	13.46 .530	13.92 .548	18.16 .715	5.28 .208	3.40 .134	5.53 .218	4.39 .173
21 P / 21 S	27.38 1.078	15.03 .592	17.27 .680	17.73 .698	21.97 .865	5.28 .208	3.40 .134	5.53 .218	4.39 .173
25 P / 25 S	29.92 1.178	17.57 .692	19.81 .780	20.27 .798	24.51 .965	5.28 .208	3.40 .134	5.53 .218	4.39 .173
31 P / 31 S	33.73 1.328	21.38 .842	23.62 .930	24.08 .948	28.32 1.115	5.28 .208	3.40 .134	5.53 .218	4.39 .173
37 P / 37 S	37.54 1.478	25.19 .992	27.43 1.080	27.89 1.098	32.13 1.265	5.28 .208	3.40 .134	5.53 .218	4.39 .173
51 P / 51 S	36.27 1.428	23.92 .942	26.16 1.030	26.62 1.048	30.86 1.215	6.35 .250	4.50 .177	6.60 .260	5.59 .220

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 VAc Altitude 21 km (70,000 ft): 150 VAc
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper Alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



RECTANGULAR CONNECTORS

SOLDER CUP CONNECTOR

METAL SHELL

- High performance metal connector and solder cup contacts.
- Environmentally sealed.
- Ideal for prototyping or where pigtail type connectors cannot be used.
- Operating temperature: 150°C or 200°C.
- 9 to 100 contacts.

IDENTIFICATION CODE

MDA

2

51

S

FS

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

SOLDER CUP

HARDWARE

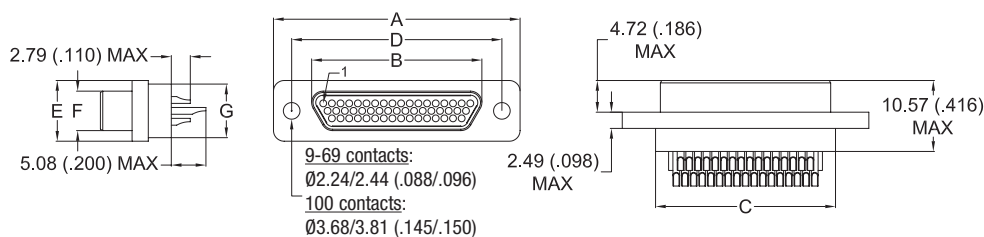
- B:** No hardware.
C: U-clips with low profile hex socket head jackscrews (removable).
D: U-clips with low profile slot head jackscrews (removable).
M: Low profile hex socket head jackscrews (removable).
N: High profile hex socket head jackscrews (removable).
S: Low profile slot head jackscrews (removable).
T: High profile slot head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
K: High profile slot head jackscrews (non removable).
L: Low profile hex socket head jackscrews (non removable).
F: Float mount, front panel mount (non removable).
FR: Float mount, rear panel mount (non removable).
See pages 190 to 200 for hardware description.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

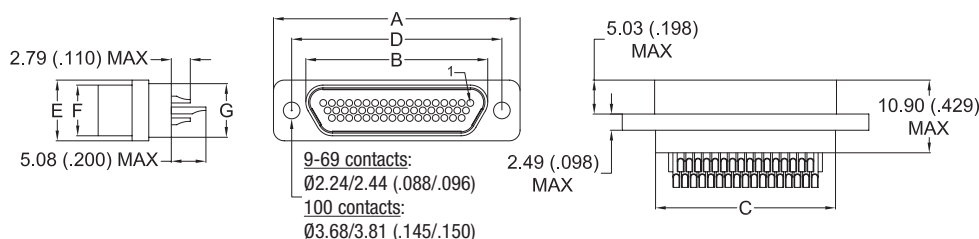
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



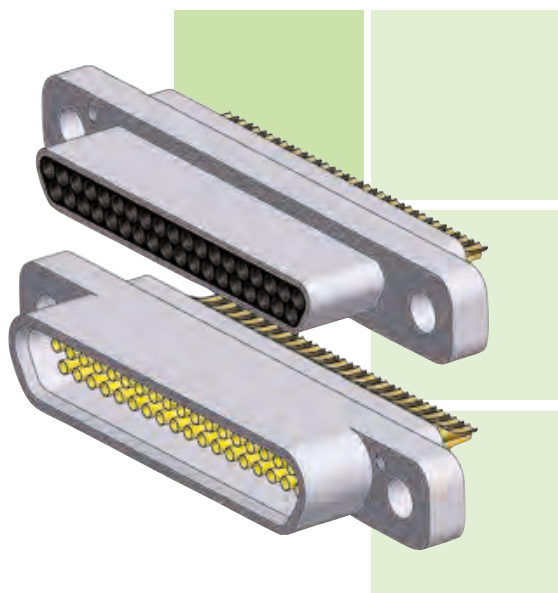
	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.69 .775	8.48 .334	10.16 .400	9.91 .390	14.35 .565	7.57 .298	4.69 .185	6.35 .250	6.86 .270
15 P / 15 S	23.50 .925	12.29 .484	14.00 .551	13.72 .540	18.16 .715	7.57 .298	4.69 .185	6.35 .250	6.86 .270
21 P / 21 S	27.31 1.075	16.10 .634	17.81 .701	17.53 .690	21.97 .865	7.57 .298	4.69 .185	6.35 .250	6.86 .270
25 P / 25 S	29.85 1.175	18.64 .734	20.35 .801	20.07 .790	24.51 .965	7.57 .298	4.69 .185	6.35 .250	6.86 .270
31 P / 31 S	33.66 1.325	22.45 .884	24.16 .951	23.88 .940	28.32 1.115	7.57 .298	4.69 .185	6.35 .250	6.86 .270
37 P / 37 S	37.47 1.475	26.26 1.034	27.96 1.101	27.69 1.090	32.13 1.265	7.57 .298	4.69 .185	6.35 .250	6.86 .270
51DR P / 51DR S	46.36 1.825	35.15 1.384	36.83 1.450	36.58 1.440	41.02 1.615	7.57 .298	4.69 .185	6.35 .250	6.86 .270
51 P / 51 S	36.20 1.425	24.99 .984	26.70 1.051	26.42 1.040	30.86 1.215	8.66 .341	5.79 .228	7.44 .293	7.87 .310
69 P / 69 S	43.82 1.725	32.61 1.284	34.29 1.350	34.04 1.340	38.48 1.515	8.66 .341	5.79 .228	7.44 .293	7.87 .310
100 P / 100 S	54.86 2.160	35.15 1.384	36.86 1.451	36.37 1.432	45.72 1.800	9.75 .384	6.88 .271	8.46 .333	9.14 .360

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium Alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
SOLDER CUP	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



RECTANGULAR CONNECTORS

SOLDER CUP CONNECTOR

LOW PROFILE METAL SHELL

- High performance metal connector and solder cup contacts.
- Ideal for prototyping or when pigtail type connectors cannot be used.
- Operating temperature: 150°C or 200°C.
- 9 to 51 contacts.

IDENTIFICATION CODE

MDA

2

L51

S

FS

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1: Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

L09, L15, L21, L25, L31, L37, L51.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

SOLDER CUP

HARDWARE

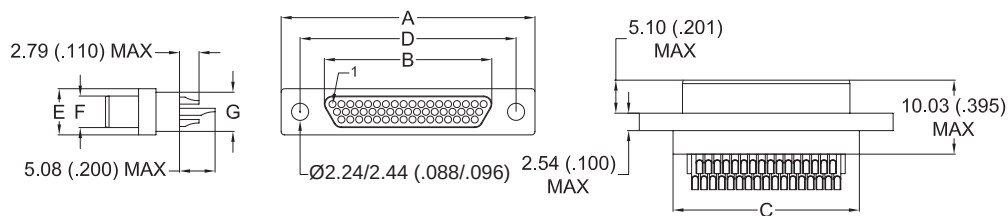
- B:** No hardware.
C: U-clips with low profile hex socket head jackscrews (removable).
D: U-clips with low profile slot head jackscrews (removable).
M: Low profile hex socket head jackscrews (removable).
N: High profile hex socket head jackscrews (removable).
S: Low profile slot head jackscrews (removable).
T: High profile slot head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
K: High profile slot head jackscrews (non removable).
L: Low profile hex socket head jackscrews (non removable).
F: Float mount, front panel mount (non removable).
FR: Float mount, rear panel mount (non removable).
See pages 190 to 200 for hardware description.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

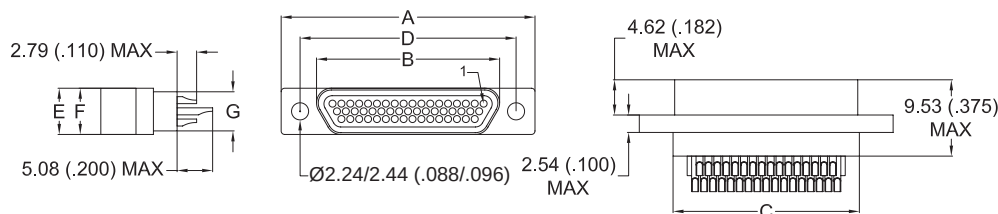
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



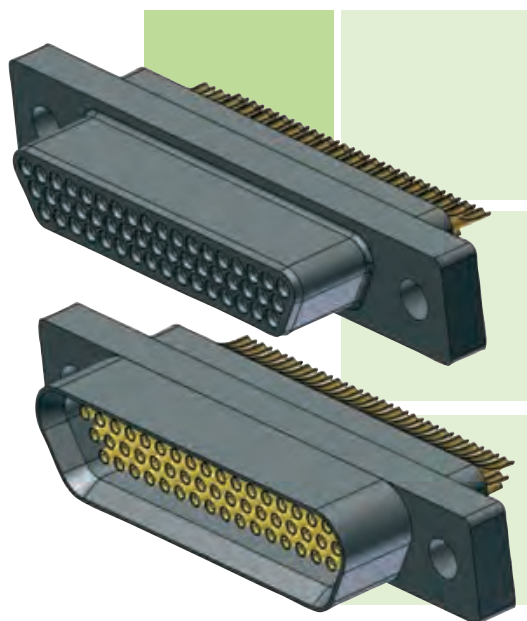
	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+0.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.76 .778	7.47 .294	9.65 .380	10.11 .398	14.35 .565	5.28 .208	3.40 .134	5.53 .218	4.39 .173
15 P / 15 S	23.57 .928	11.28 .444	13.46 .530	13.92 .548	18.16 .715	5.28 .208	3.40 .134	5.53 .218	4.39 .173
21 P / 21 S	27.38 1.078	15.09 .594	17.27 .680	17.73 .698	21.97 .865	5.28 .208	3.40 .134	5.53 .218	4.39 .173
25 P / 25 S	29.92 1.178	17.63 .694	19.81 .780	20.27 .798	24.51 .965	5.28 .208	3.40 .134	5.53 .218	4.39 .173
31 P / 31 S	33.73 1.328	21.44 .844	23.62 .930	24.08 .948	28.32 1.115	5.28 .208	3.40 .134	5.53 .218	4.39 .173
37 P / 37 S	37.54 1.478	25.25 .994	27.43 1.080	27.89 1.098	32.13 1.265	5.28 .208	3.40 .134	5.53 .218	4.39 .173
51 P / 51 S	36.27 1.428	23.98 .944	26.16 1.030	26.62 1.048	30.86 1.215	6.35 .250	4.50 .177	6.60 .260	5.59 .220

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac
	Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2,26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1μs
SHOCK	50g's - No discontinuity > 1μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
SOLDER CUP	Copper alloy, gold over nickel plating
ENCAPSULENT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



RECTANGULAR CONNECTORS

SOLDER CUP CONNECTOR

PLASTIC SHELL

- Low cost plastic connector and solder cup contacts.
- Ideal for prototyping or where pigtail type connectors cannot be used.
- Operating temperature: 150°C or 200°C.
- 9 to 51 contacts.

IDENTIFICATION CODE

MDA

P

51

S

FS

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.
L: LCP shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).
S: Female (socket contacts).

SOLDER CUP

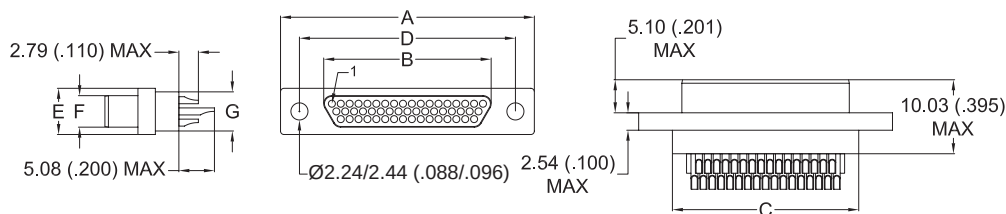
HARDWARE

- B:** No hardware.
- C:** U-clips with low profile hex socket head jackscrews (removable).
D: U-clips with low profile slot head jackscrews (removable).
M: Low profile hex socket head jackscrews (removable).
N: High profile hex socket head jackscrews (removable).
S: Low profile slot head jackscrews (removable).
T: High profile slot head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
K: High profile slot head jackscrews (non removable).
L: Low profile hex socket head jackscrews (non removable).
F: Float mount, front panel mount (non removable).
FR: Float mount, rear panel mount (non removable).
See pages 190 to 200 for hardware description.

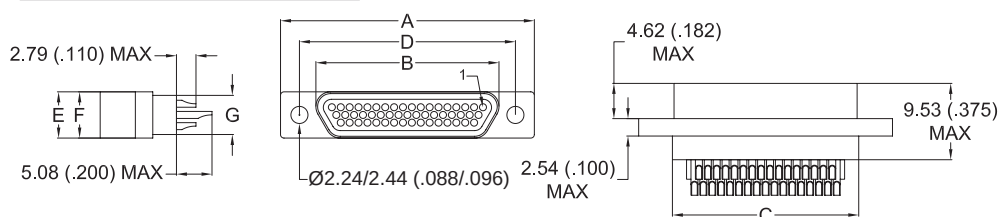
DIMENSIONS

Dimensions are in millimetres (inches).

MALE connector



FEMALE connector



	A ± 0.25 (±.010)	B max.		C -0.46/+0.25 (-.018/+.010)	D ± 0.13 (±.005)	E ± 0.25 (±.010)	F max.		G max.
		Male	Female				Male	Female	
9 P / 9 S	19.76 .778	7.41 .292	9.65 .380	10.11 .398	14.35 .565	5.28 .208	3.40 .134	5.53 .218	4.39 .173
15 P / 15 S	23.57 .928	11.22 .442	13.46 .530	13.92 .548	18.16 .715	5.28 .208	3.40 .134	5.53 .218	4.39 .173
21 P / 21 S	27.38 1.078	15.03 .592	17.27 .680	17.73 .698	21.97 .865	5.28 .208	3.40 .134	5.53 .218	4.39 .173
25 P / 25 S	29.92 1.178	17.57 .692	19.81 .780	20.27 .798	24.51 .965	5.28 .208	3.40 .134	5.53 .218	4.39 .173
31 P / 31 S	33.73 1.328	21.38 .842	23.62 .930	24.08 .948	28.32 1.115	5.28 .208	3.40 .134	5.53 .218	4.39 .173
37 P / 37 S	37.54 1.478	25.19 .992	27.43 1.080	27.89 1.098	32.13 1.265	5.28 .208	3.40 .134	5.53 .218	4.39 .173
51 P / 51 S	36.27 1.428	23.92 .942	26.16 1.030	26.62 1.048	30.86 1.215	6.35 .250	4.50 .177	6.60 .260	5.59 .220

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
SOLDER CUP	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION

Micro-D connectors

PCB CONNECTORS OVERVIEW

AXON' Micro-D Printed Circuit Board connectors are designed for interconnection of PCB's inside-the-box to external cables.

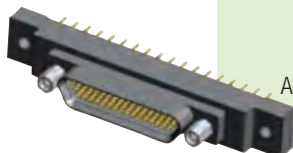
AXON' Micro-D PCB connectors are available in two layouts (0.100" pitch and 0.075" pitch) and in two configurations (vertical mount and right angle mount connector) for flexible and rigid printed circuit boards.

NOTE: typically, the PCB connector tends to be female, however male versions are equally available.

PCB CONNECTORS 0.100" PITCH

BS 0.100" Vertical mount

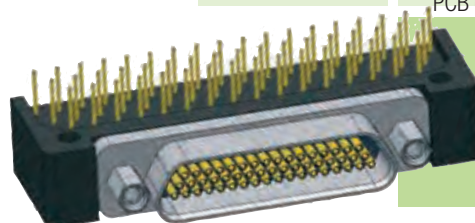
Available from 9 to 100 ways
Available in metal and plastic shell
PCB code: **BS**



Pages 98 & 100

BR 0.100" Right Angle mount

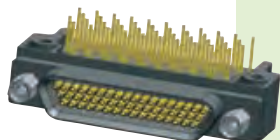
Available from 9 to 100 ways
Available in metal shell
PCB code: **BR**



Page 92

CBR 0.100" Condensed Right Angle mount

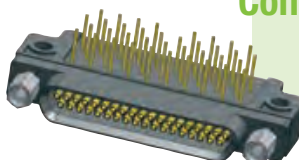
Available from 9 to 100 ways
Available in metal and plastic shell
PCB code: **CBR**



Pages 78 & 80

CBP 0.100" Condensed Right Angle mount low profile

Available from 9 to 51 ways
Available in metal and plastic shell
PCB code: **CBP**

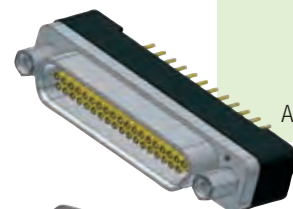


Pages 86 & 88

PCB CONNECTORS 0.075" PITCH

BS 0.075" Vertical mount

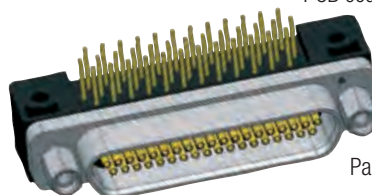
Available from 9 to 100 ways
Available in metal and plastic shell
PCB code: **75SA / 75SB**



Pages 116 & 118

CBR 0.075" Condensed Right Angle mount

Available from 9 to 100 ways
Available in metal shell
PCB code: **75RB / 75RC**



Pages 106 & 112

PCB CONNECTOR VERSIONS

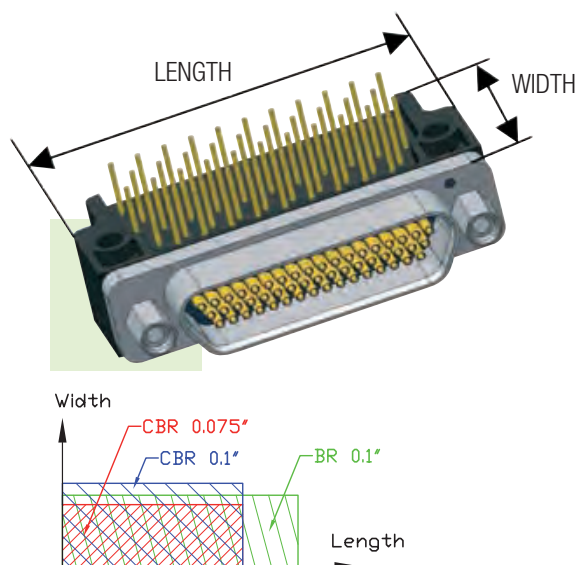
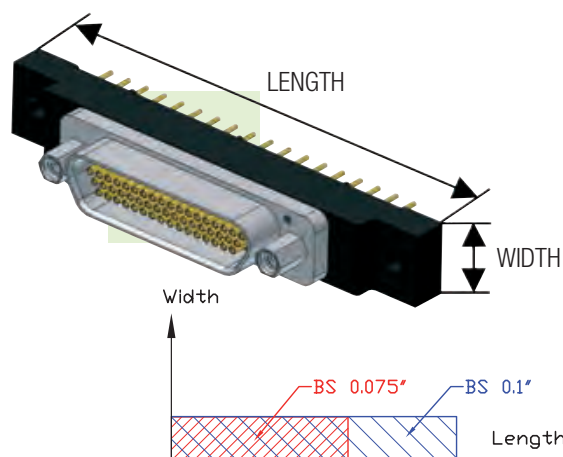
Differences in length and width

Example of the 51 way connectors

The main advantage of the Micro-D PCB connectors with a pitch of 0.075 inch in comparison to the 0.1 inch version is to save space on the PCB layout.

VERTICAL CONNECTOR

The 0.075" BS version has more or less the same width as the 0.100" BS version but is shorter in length.



RIGHT ANGLE CONNECTOR

The 0.100" CBR connector is a little wider, but substantially shorter than the 0.100" BR connector.

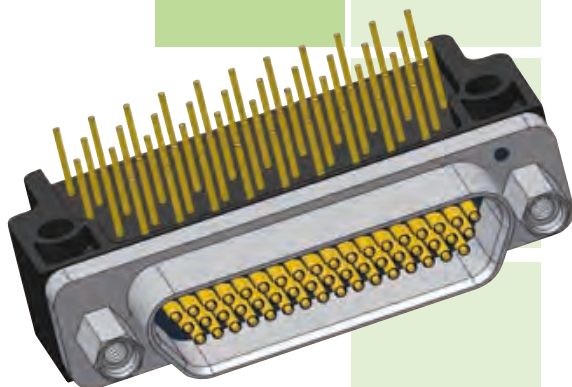
The 0.075" CBR connector is more or less the same length as the 0.100" CBR version, but is narrower in width in comparison to both the CBR and even the BR connectors in the 0.100" format.

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea Level: 600 VAc Altitude 21 km (70,000 ft): 150 VAc
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1 μs
SHOCK	50g's - No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061, 300 series stainless steel or LCP, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber (metal version)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

CBR TYPE 0.100" PITCH

METAL SHELL

- Condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

2

51

S

CBR

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

CBR: 0.100" Condensed Board Right Angle.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

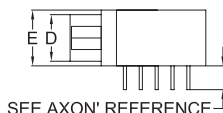
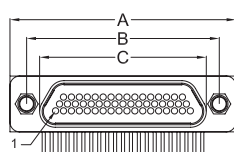
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

DIMENSIONS

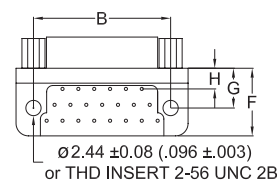
Dimensions are in millimetres (inches).

FEMALE connector

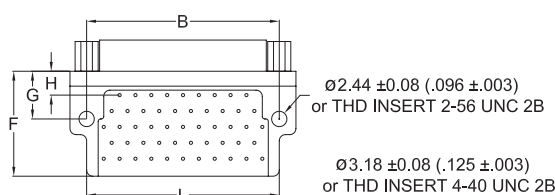


SEE AXON' REFERENCE

9-25 way connectors

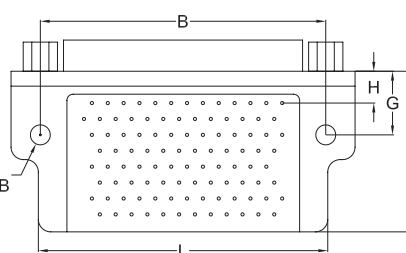


31-69 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 82 TO 85

100 way connectors



	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)	L max.
			Male	Female	Male	Female					
9 P / 9 S	19.94 .785	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	10.80 .425	6.35 .250	5.84 .230	-
15 P / 15 S	23.75 .935	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	10.80 .425	6.35 .250	3.30 .130	-
21 P / 21 S	27.56 1.085	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	7.82 .308	10.80 .425	6.35 .250	3.30 .130	-
25 P / 25 S	30.10 1.185	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	10.80 .425	6.35 .250	3.30 .130	-
31 P / 31 S	33.91 1.335	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	7.82 .308	13.34 .525	6.35 .250	3.30 .130	27.69 1.090
37 P / 37 S	37.72 1.485	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	7.82 .308	13.34 .525	6.35 .250	3.30 .130	30.23 1.190
51DR P / 51DR S	46.61 1.835	41.02 1.615	35.15 1.384	36.83 1.450	4.69 .185	6.35 .250	7.82 .308	13.34 .525	6.35 .250	3.30 .130	39.12 1.540
51 P / 51 S	36.45 1.435	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	8.92 .351	16.76 .660	7.62 .300	3.81 .150	31.24 1.230
69 P / 69 S	44.07 1.735	38.48 1.515	32.61 1.284	34.29 1.350	5.79 .228	7.44 .293	8.92 .351	19.05 .750	7.62 .300	3.81 .150	38.86 1.530
100 P / 100 S	55.11 2.170	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	10.01 .394	25.65 1.010	10.16 .400	5.08 .200	46.36 1.825

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km (70,000 ft): 150 V _{AC}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1 μs
SHOCK	50g's - No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium Alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

CBR TYPE 0.100" PITCH

PLASTIC SHELL

- Condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

L

51

S

CBR

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.

L: LCP shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).

S: Female (socket contacts).

PCB VERSION

CBR: 0.100" Condensed Board Right Angle.

HARDWARE

B: No hardware.

P: Jackposts.

Px (x: 1 to 5): Panel mount jackposts.

T: Threaded inserts installed.

W: Jackposts and threaded inserts installed.

Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.

See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

G: Gold plated solid conductor AWG 25.

T: Tin plated solid conductor AWG 24.

See page 29 for conductor types.

TAIL LENGTH

1: 2.80 mm (0.110").

2: 3.80 mm (0.150").

3: 4.80 mm (0.190").

4: 6.35 mm (0.250").

5: 3.25 mm (0.127").

6: 3.56 mm (0.140").

7: 4.37 mm (0.172").

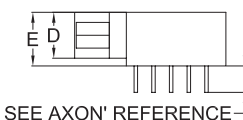
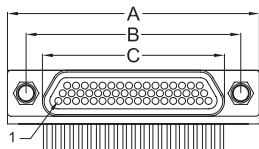
Tolerance: ± 0.38 mm (0.015").

Other lengths available on request.

DIMENSIONS

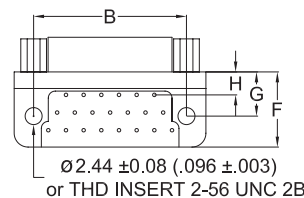
Dimensions are in millimetres (inches).

FEMALE connector

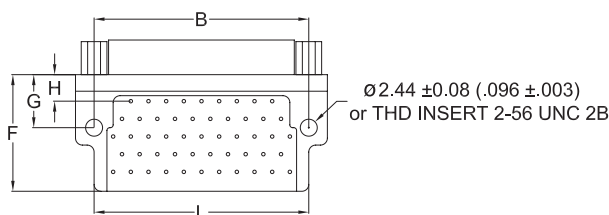


SEE AXON' REFERENCE

9-25 way connectors



31-51 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 82 TO 85

	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)	L max.
			Male	Female	Male	Female					
9 P / 9 S	19.94 .785	14.35 .565	7.41 .292	9.65 .380	3.40 .134	5.53 .218	6.80 .268	10.80 .425	6.35 .250	5.84 .230	-
15 P / 15 S	23.75 .935	18.16 .715	11.22 .442	13.46 .530	3.40 .134	5.53 .218	6.80 .268	10.80 .425	6.35 .250	3.30 .130	-
21 P / 21 S	27.56 1.085	21.97 .865	15.03 .592	17.27 .680	3.40 .134	5.53 .218	6.80 .268	10.80 .425	6.35 .250	3.30 .130	-
25 P / 25 S	30.10 1.185	24.51 .965	17.57 .692	19.81 .780	3.40 .134	5.53 .218	6.80 .268	10.80 .425	6.35 .250	3.30 .130	-
31 P / 31 S	33.91 1.335	28.32 1.115	21.38 .842	23.62 .930	3.40 .134	5.53 .218	6.80 .268	13.34 .525	6.35 .250	3.30 .130	27.69 1.090
37 P / 37 S	37.72 1.485	32.13 1.265	25.19 .992	27.43 1.080	3.40 .134	5.53 .218	6.80 .268	13.34 .525	6.35 .250	3.30 .130	30.23 1.190
51 P / 51 S	36.45 1.435	30.86 1.215	23.92 .942	26.16 1.030	4.50 .177	6.60 .260	7.90 .311	16.76 .660	7.62 .300	3.81 .150	31.24 1.230

SUMMARY OF CHARACTERISTICS

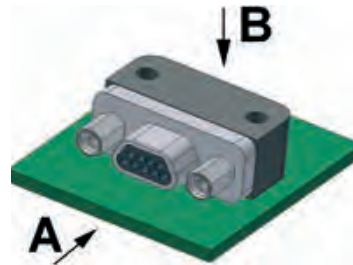
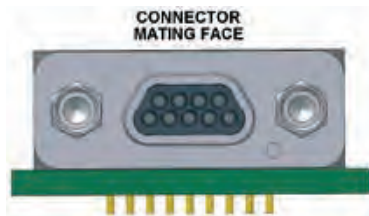
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

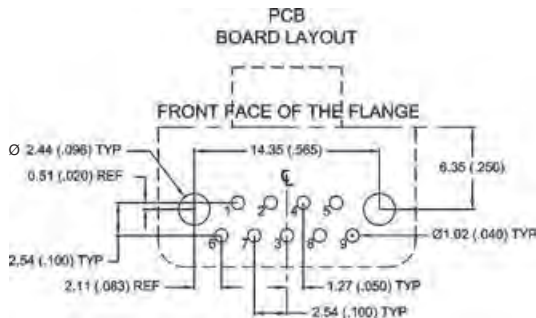
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR CBR TYPE 0.100" PITCH - MALE CONNECTORS

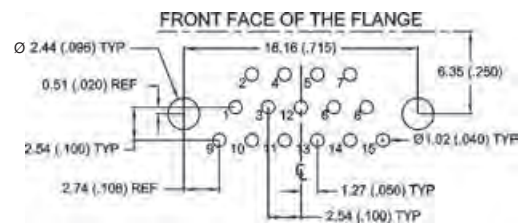
VIEW A



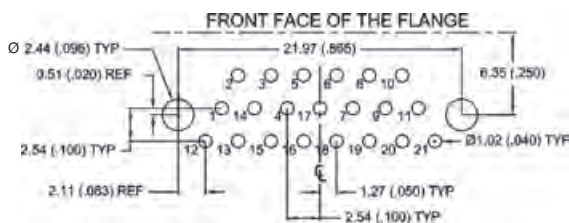
9 CONTACTS - VIEW B



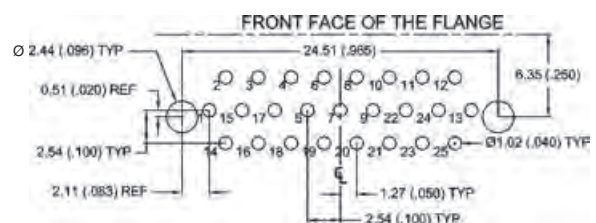
15 CONTACTS - VIEW B



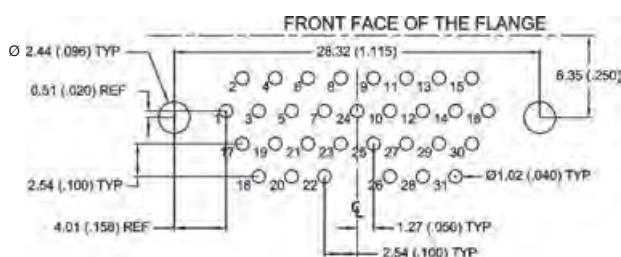
21 CONTACTS - VIEW B



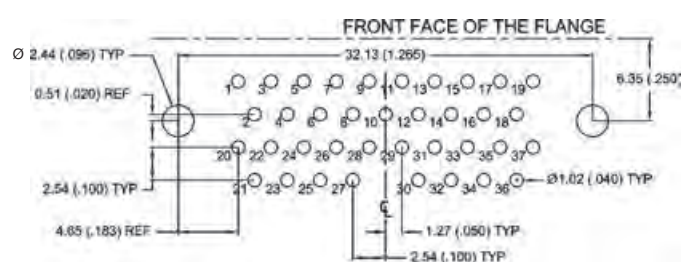
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

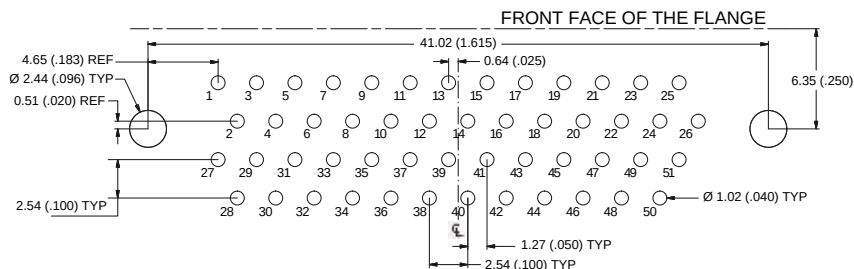


37 CONTACTS - VIEW B

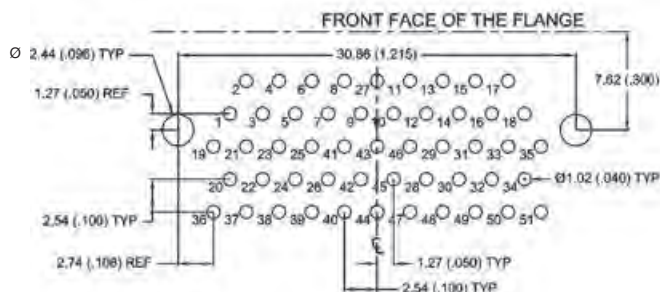


PCB LAYOUT FOR CBR TYPE 0.100" PITCH - MALE CONNECTORS

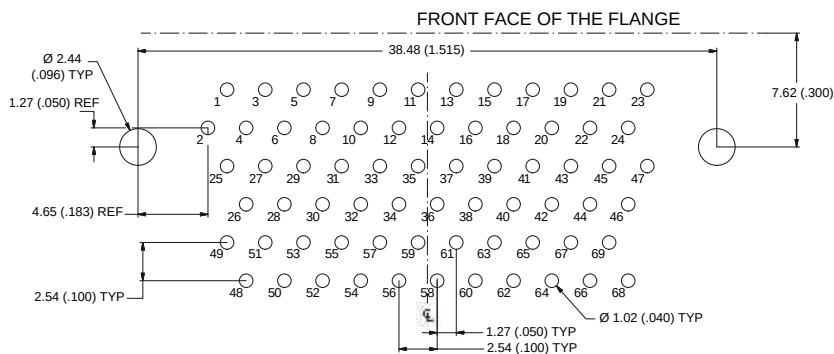
51 CONTACTS (DOUBLE ROW) - VIEW B



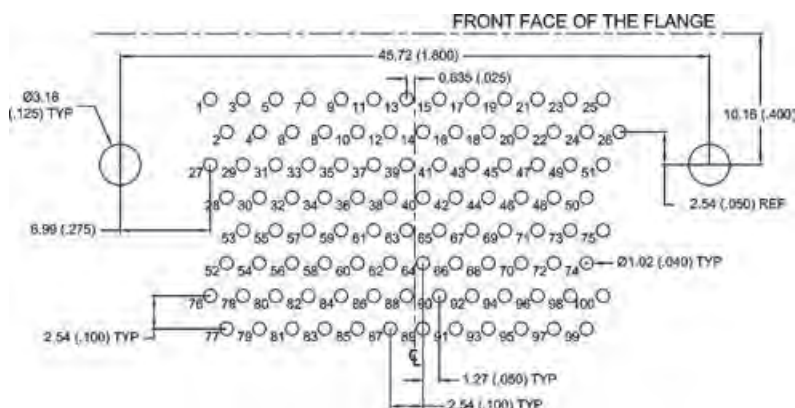
51 CONTACTS - VIEW B



69 CONTACTS - VIEW B

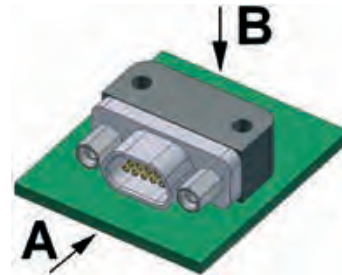


100 CONTACTS - VIEW B

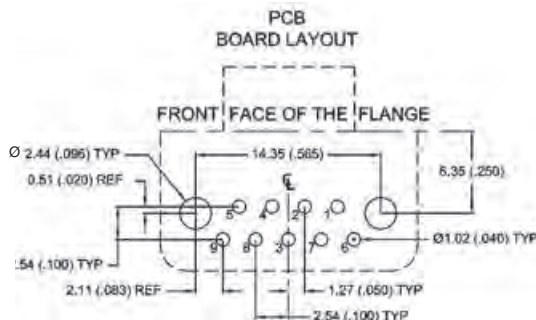


PCB LAYOUT FOR CBR TYPE 0.100" PITCH - FEMALE CONNECTORS

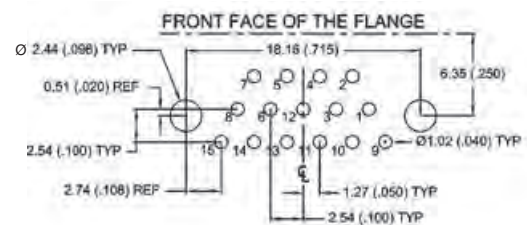
VIEW A



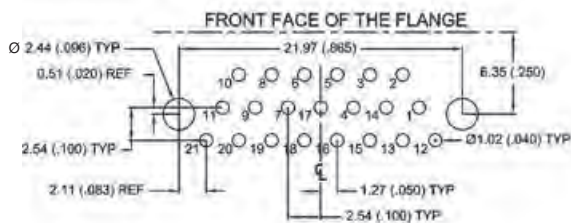
9 CONTACTS - VIEW B



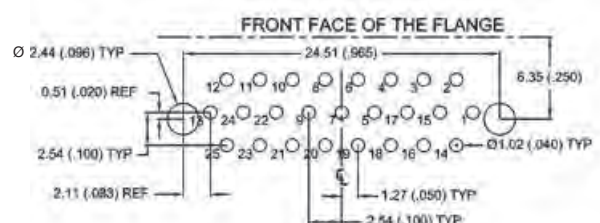
15 CONTACTS - VIEW B



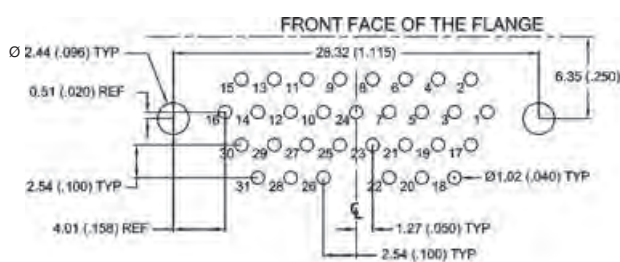
21 CONTACTS - VIEW B



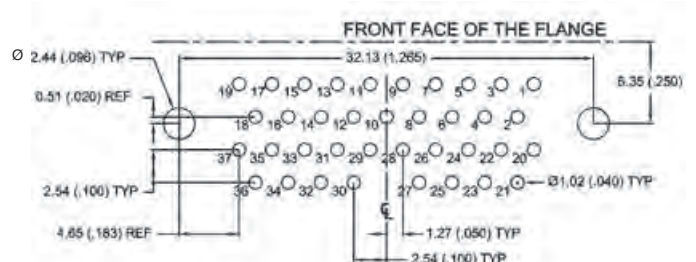
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

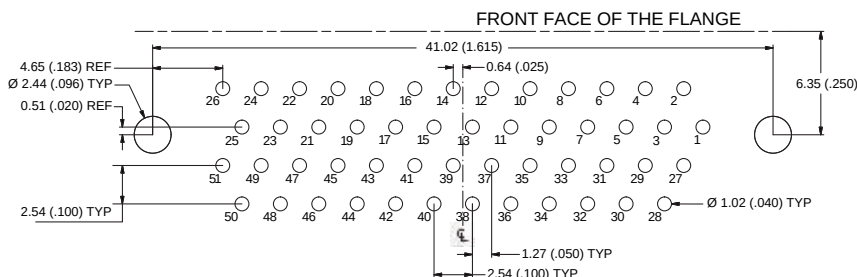


37 CONTACTS - VIEW B

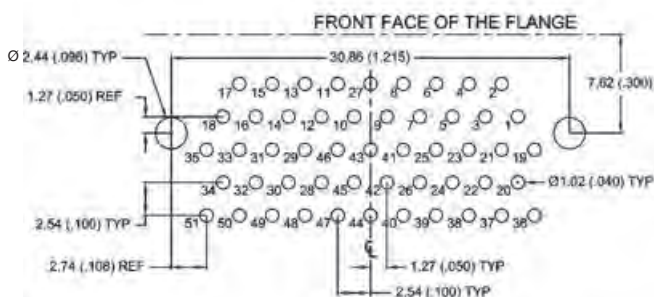


PCB LAYOUT FOR CBR TYPE 0.100" PITCH - FEMALE CONNECTORS

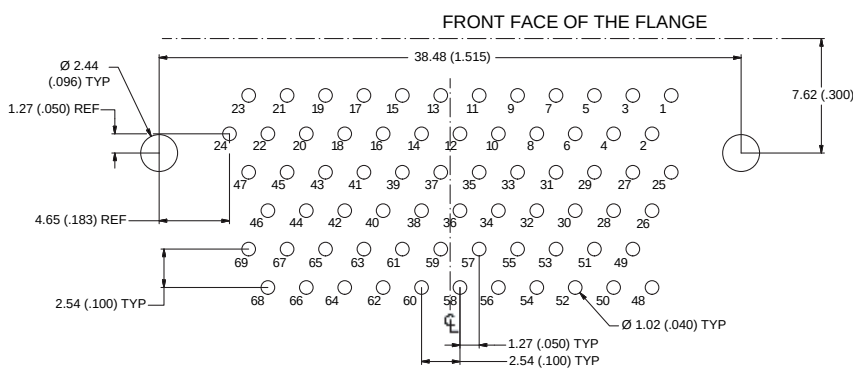
51 CONTACTS (DOUBLE ROW) - VIEW B



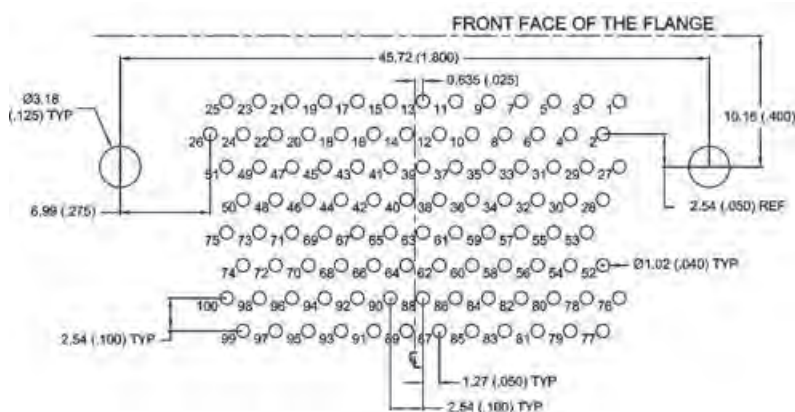
51 CONTACTS - VIEW B

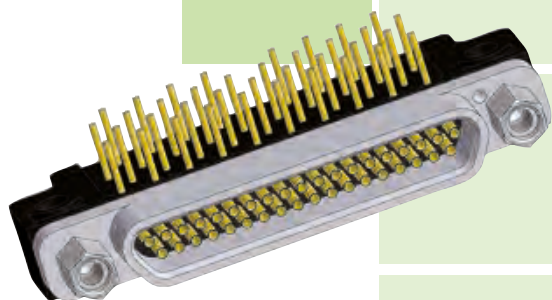


69 CONTACTS - VIEW B



100 CONTACTS - VIEW B





RECTANGULAR CONNECTORS

CBP TYPE LOW PROFILE CBR 0.100" PITCH

METAL SHELL

- Low profile condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA 2 L51 S CBP P G 3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

L09, L15, L21, L25, L31, L37, L51.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

CBP: 0.100" Condensed Board Right Angle, low profile.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

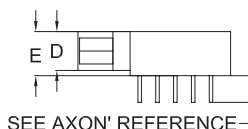
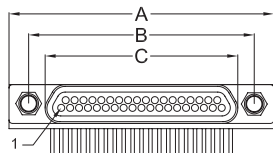
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

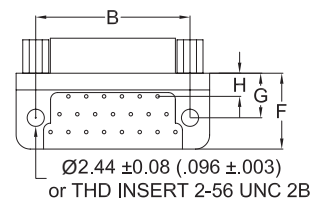
DIMENSIONS

Dimensions are in millimetres (inches).

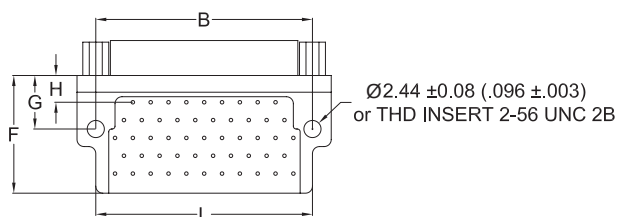
FEMALE connector



9-25 way connectors



31-51 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 90 & 91

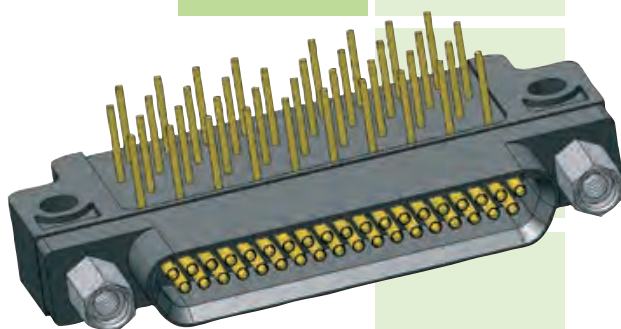
	A ± 0.25 (±.010)	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)	L max.
			Male	Female	Male	Female					
9 P / 9 S	19.94 .785	14.35 .565	7.47 .294	9.65 .380	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	5.84 .230	-
15 P / 15 S	23.75 .935	18.16 .715	11.28 .444	13.46 .530	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
21 P / 21 S	27.56 1.085	21.97 .865	15.09 .594	17.27 .680	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
25 P / 25 S	30.10 1.185	24.51 .965	17.63 .694	19.81 .780	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
31 P / 31 S	33.91 1.335	28.32 1.115	21.44 .844	23.62 .930	3.40 .134	5.53 .218	5.70 .224	13.34 .525	6.35 .250	3.30 .130	27.69 1.090
37 P / 37 S	37.72 1.485	32.13 1.265	25.25 .994	27.43 1.080	3.40 .134	5.53 .218	5.70 .224	13.34 .525	6.35 .250	3.30 .130	30.23 1.100
51 P / 51 S	36.45 1.435	30.86 1.215	23.98 .944	26.16 1.030	4.50 .177	6.60 .260	6.81 .268	16.76 .660	7.62 .300	3.81 .150	31.24 1.230

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac
	Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1μs
SHOCK	50g's - No discontinuity > 1μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULENT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

CBP TYPE LOW PROFILE CBR 0.100" PITCH

PLASTIC SHELL

- Low profile condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

L

37

S

CBP

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.

L: LCP shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).

S: Female (socket contacts).

PCB VERSION

CBP: 0.100" Condensed Board Right Angle, low profile.

HARDWARE

B: No hardware.

P: Jackposts.

Px (x: 1 to 5): Panel mount jackposts.

T: Threaded inserts installed.

W: Jackposts and threaded inserts installed.

Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.

See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

G: Gold plated solid conductor AWG 25.

T: Tin plated solid conductor AWG 24.

See page 29 for conductor types.

TAIL LENGTH

1: 2.80 mm (0.110").

2: 3.80 mm (0.150").

3: 4.80 mm (0.190").

4: 6.35 mm (0.250").

5: 3.25 mm (0.127").

6: 3.56 mm (0.140").

7: 4.37 mm (0.172").

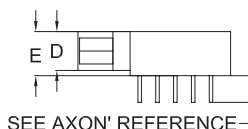
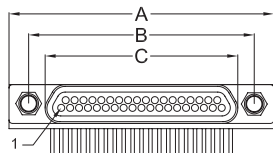
Tolerance: ± 0.38 mm (0.015").

Other lengths available on request.

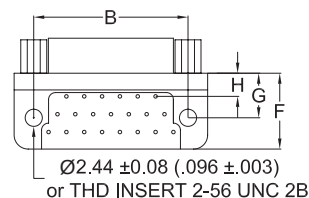
DIMENSIONS

Dimensions are in millimetres (inches).

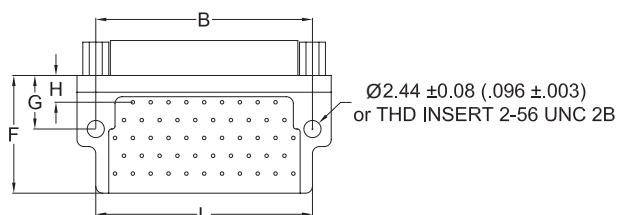
FEMALE connector



9-25 way connectors



31-51 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 90 & 91

	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)	L max.
			Male	Female	Male	Female					
9 P / 9 S	19.94 .785	14.35 .565	7.41 .292	9.65 .380	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	5.84 .230	-
15 P / 15 S	23.75 .935	18.16 .715	11.22 .442	13.46 .530	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
21 P / 21 S	27.56 1.085	21.97 .865	15.03 .592	17.27 .680	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
25 P / 25 S	30.10 1.185	24.51 .965	17.57 .692	19.81 .780	3.40 .134	5.53 .218	5.70 .224	10.80 .425	6.35 .250	3.30 .130	-
31 P / 31 S	33.91 1.335	28.32 1.115	21.38 .842	23.62 .930	3.40 .134	5.53 .218	5.70 .224	13.34 .525	6.35 .250	3.30 .130	27.69 1.090
37 P / 37 S	37.72 1.485	32.13 1.265	25.19 .992	27.43 1.080	3.40 .134	5.53 .218	5.70 .224	13.34 .525	6.35 .250	3.30 .130	30.23 1.100
51 P / 51 S	36.45 1.435	30.86 1.215	23.92 .942	26.16 1.030	4.50 .177	6.60 .260	6.81 .268	16.76 .660	7.62 .300	3.81 .150	31.24 1.230

SUMMARY OF CHARACTERISTICS

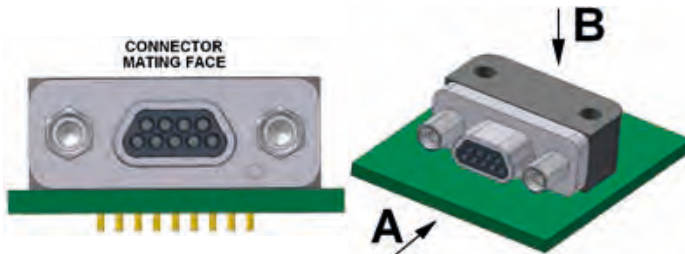
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, Gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

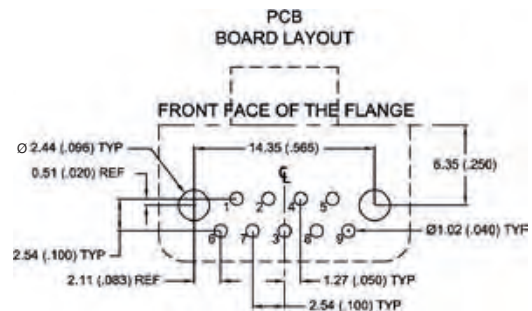
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR CBP TYPE 0.100" PITCH - MALE CONNECTORS

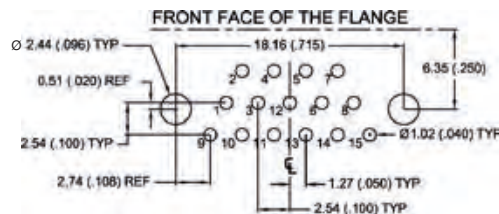
VIEW A



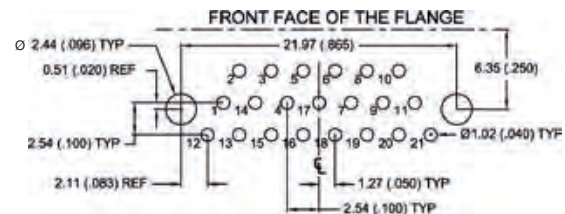
9 CONTACTS - VIEW B



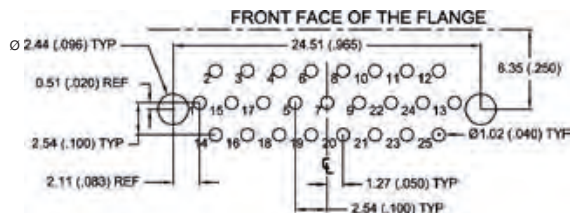
15 CONTACTS - VIEW B



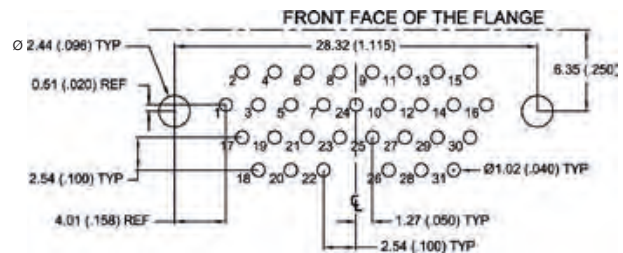
21 CONTACTS - VIEW B



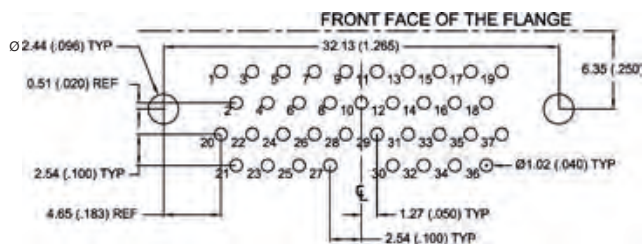
25 CONTACTS - VIEW B



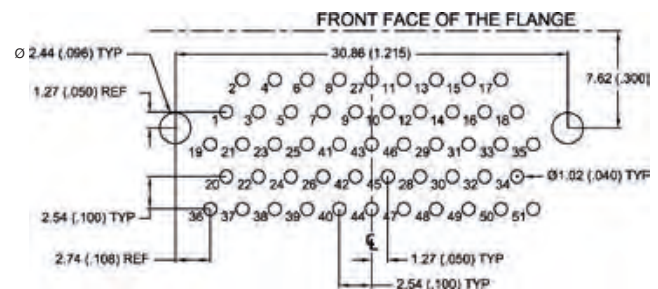
31 CONTACTS - VIEW B



37 CONTACTS - VIEW B

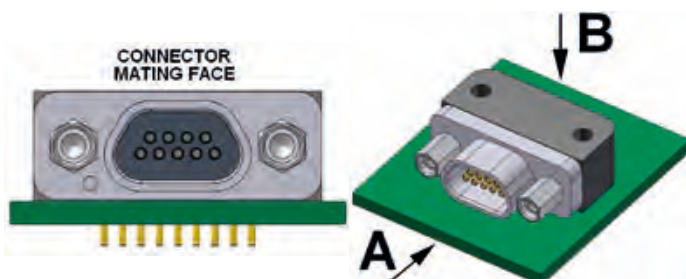


51 CONTACTS - VIEW B

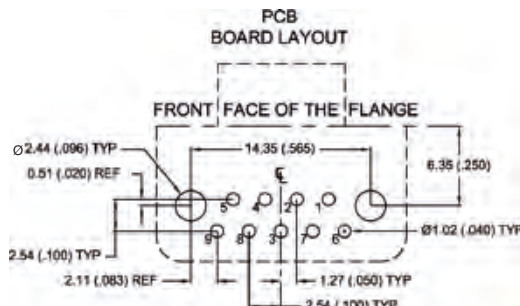


PCB LAYOUT FOR CBP TYPE 0.100" PITCH - FEMALE CONNECTORS

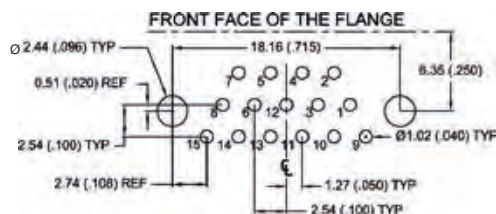
VIEW A



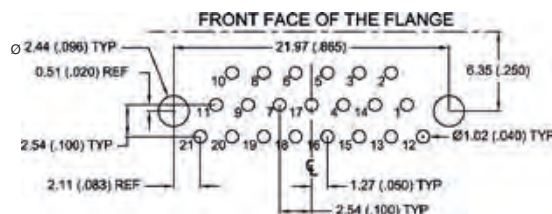
9 CONTACTS - VIEW B



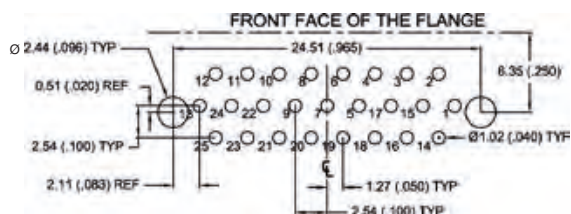
15 CONTACTS - VIEW B



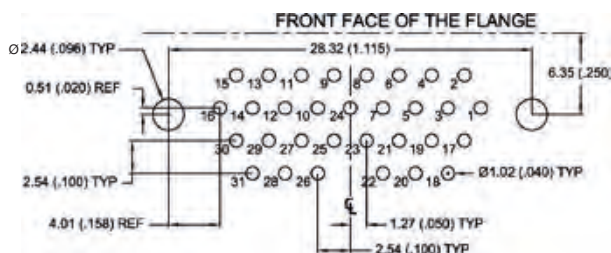
21 CONTACTS - VIEW B



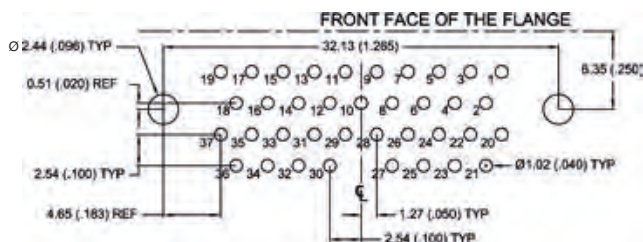
25 CONTACTS - VIEW B



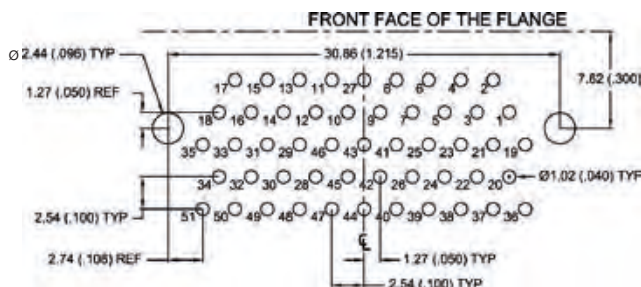
31 CONTACTS - VIEW B

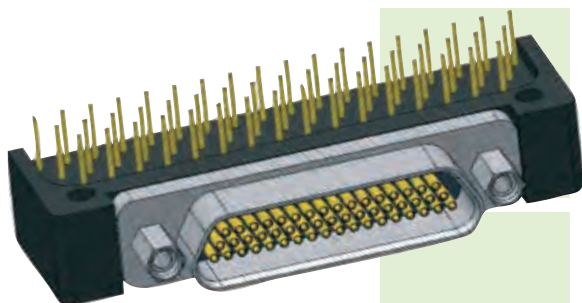


37 CONTACTS - VIEW B



51 CONTACTS - VIEW B





PCB RECTANGULAR CONNECTORS

BR TYPE 0.100" PITCH

METAL SHELL

- Board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

PLEASE CONTACT US FOR CLASS P (PLASTIC) BR CONNECTORS.

IDENTIFICATION CODE

MDA

2

51

S

BR

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

BR: 0.100" Board Right Angle.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

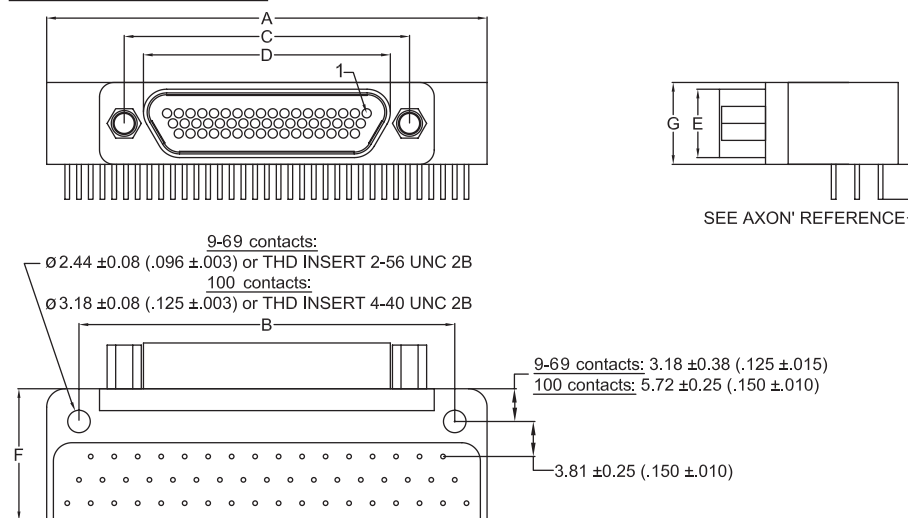
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

DIMENSIONS

Dimensions are in millimetres (inches).

FEMALE connector



SEE CONTACT LAYOUT ON PCB PAGES 94 TO 97

	A max.	B ± 0.18 ($\pm .007$)	C ± 0.13 ($\pm .005$)	D max.		E max.		F max.	G ± 0.25 ($\pm .010$)
				Male	Female	Male	Female		
9 P / 9 S	35.31 1.390	29.21 1.150	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	11.81 .465	7.87 .310
15 P / 15 S	39.12 1.540	33.02 1.300	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	11.81 .465	7.87 .310
21 P / 21 S	42.93 1.690	36.83 1.450	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	11.81 .465	7.87 .310
25 P / 25 S	45.47 1.790	39.37 1.550	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	11.81 .465	7.87 .310
31 P / 31 S	51.82 2.040	45.72 1.800	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	11.81 .465	7.87 .310
37 P / 37 S	59.44 2.340	53.34 2.100	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	11.81 .465	7.87 .310
51DR P / 51DR S	77.30 3.043	71.12 2.800	41.02 1.615	35.15 1.384	36.83 1.450	4.69 .185	6.35 .250	11.81 .465	7.87 .310
51 P / 51 S	47.63 1.875	40.64 1.600	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	14.35 .565	8.76 .345
69 P / 69 S	62.87 2.475	55.88 2.200	38.48 1.515	32.61 1.284	34.29 1.350	5.79 .228	7.44 .293	14.35 .565	8.76 .345
100 P / 100 S	70.61 2.780	63.50 2.500	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	19.43 .765	10.29 .405

SUMMARY OF CHARACTERISTICS

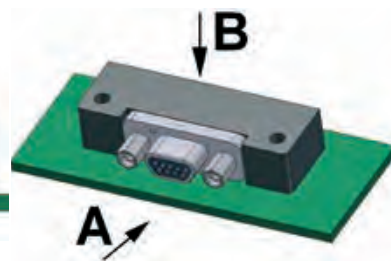
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 m Ω max.
INSULATION RESISTANCE	5000 M Ω min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 VAc Altitude 21 km (70,000 ft): 150 VAc
CONTACT ENGAGING FORCE	170 g max. x number of contacts
CONTACT SEPARATING FORCE	14 g min. x number of contacts
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μ s
SHOCK	50g's – No discontinuity > 1 μ s

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

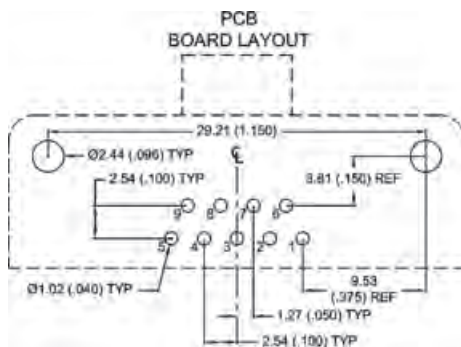
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR BR TYPE 0.100" PITCH - MALE CONNECTORS

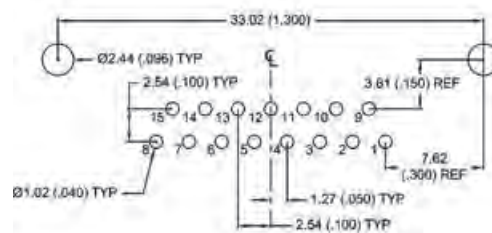
VIEW A



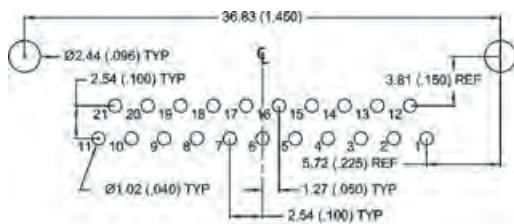
9 CONTACTS - VIEW B



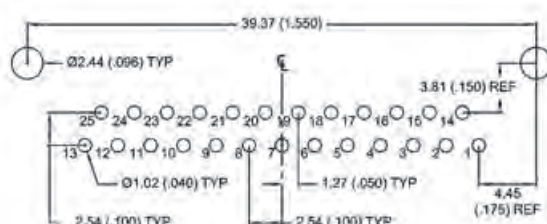
15 CONTACTS - VIEW B



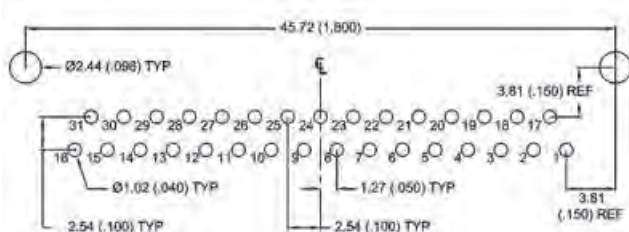
21 CONTACTS - VIEW B



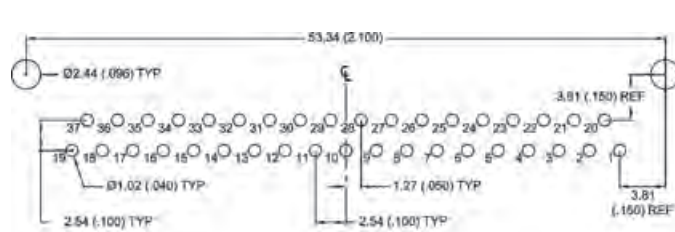
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

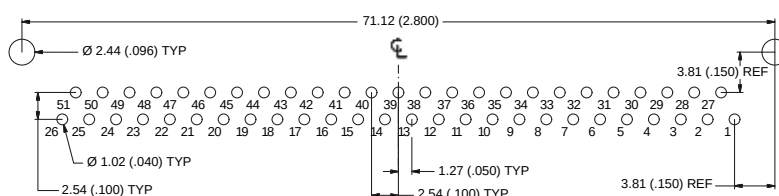


37 CONTACTS - VIEW B

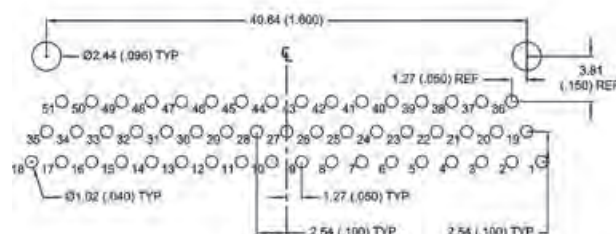


PCB LAYOUT FOR BR TYPE 0.100" PITCH - MALE CONNECTORS

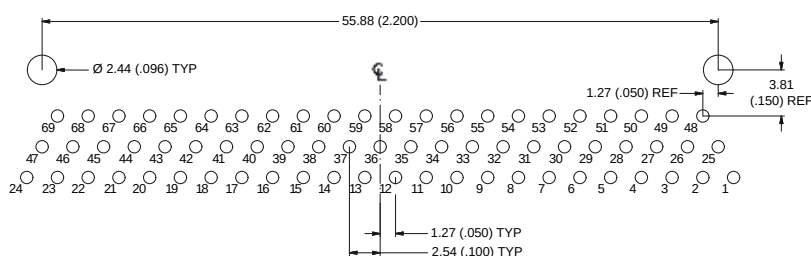
51 CONTACTS (DOUBLE ROW) - VIEW B



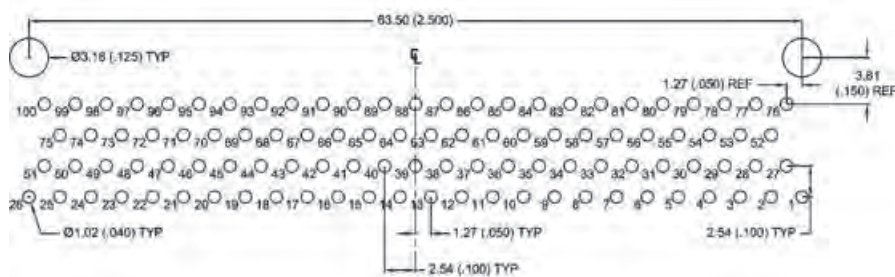
51 CONTACTS - VIEW B



69 CONTACTS - VIEW B

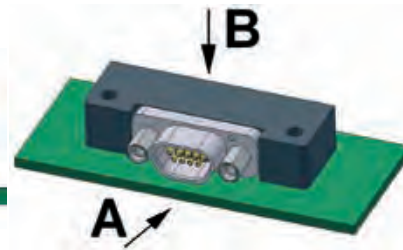


100 CONTACTS - VIEW B

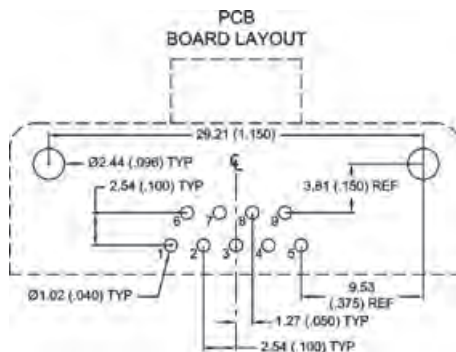


PCB LAYOUT FOR BR TYPE 0.100" PITCH - FEMALE CONNECTORS

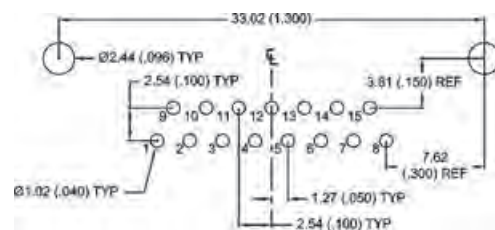
VIEW A



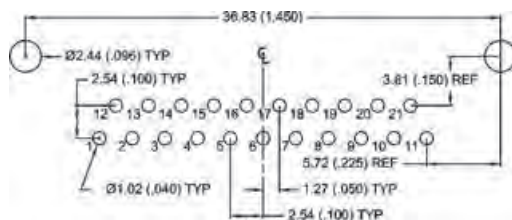
9 CONTACTS - VIEW B



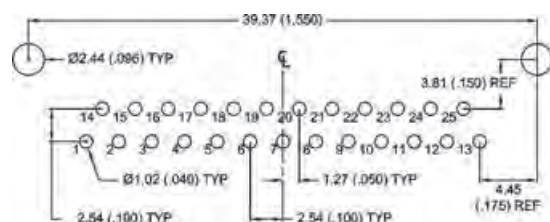
15 CONTACTS - VIEW B



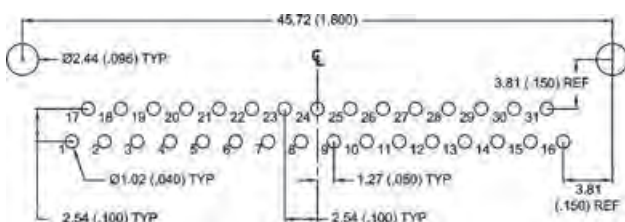
21 CONTACTS - VIEW B



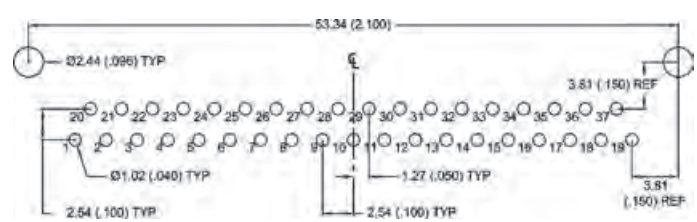
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

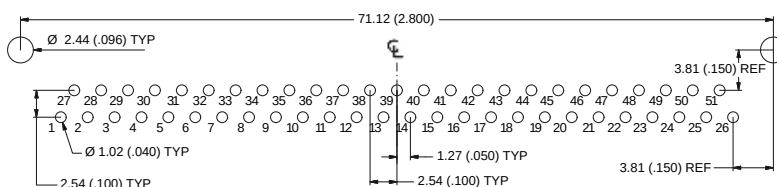


37 CONTACTS - VIEW B

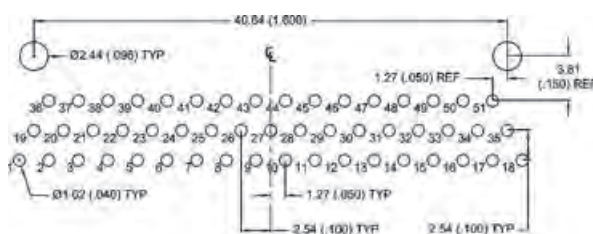


PCB LAYOUT FOR BR TYPE 0.100" PITCH - FEMALE CONNECTORS

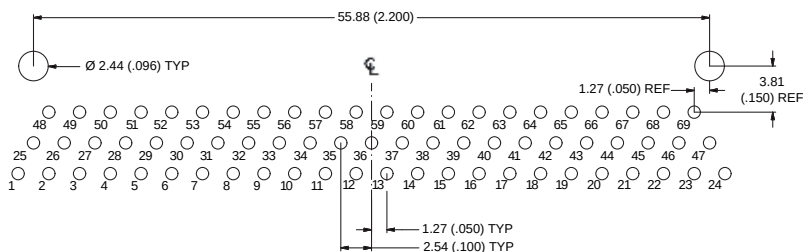
51 CONTACTS (DOUBLE ROW) - VIEW B



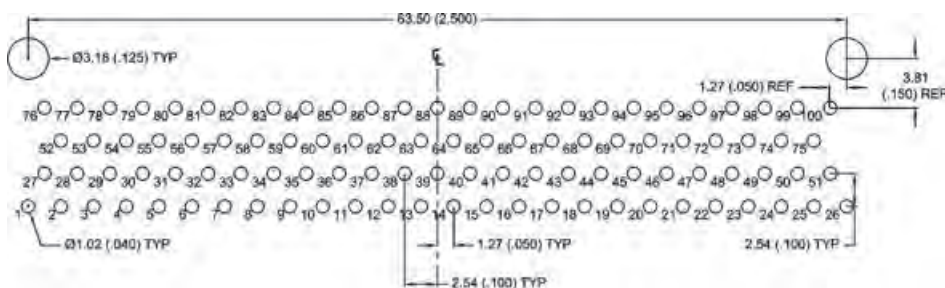
51 CONTACTS - VIEW B



69 CONTACTS - VIEW B



100 CONTACTS - VIEW B





PCB RECTANGULAR CONNECTORS

BS TYPE 0.100" PITCH

METAL SHELL

- Board straight connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

2

51

S

BS

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

BS: 0.100" Board Straight.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

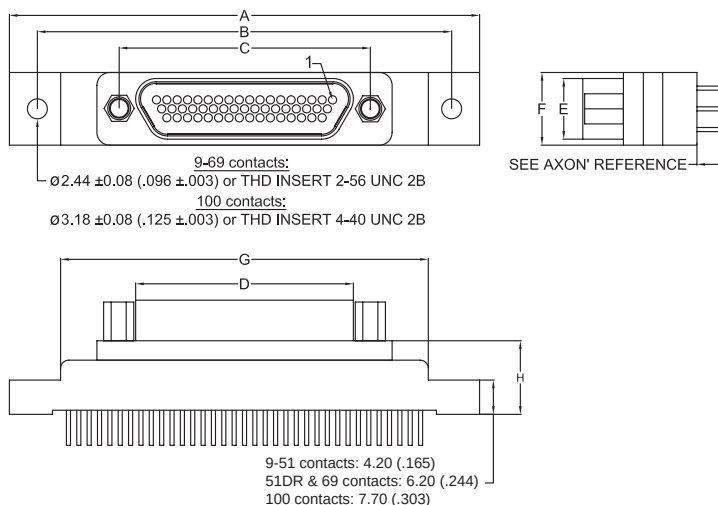
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

DIMENSIONS

Dimensions are in millimetres (inches).

FEMALE connector



SEE CONTACT LAYOUT ON PCB PAGES 102 & 105

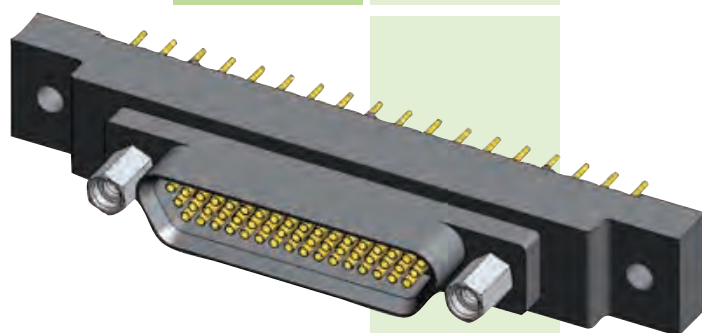
	A max.	B ± 0.18 (±.007)	C ± 0.13 (±.005)	D max.		E max.		F max.	G max.	H max.
				Male	Female	Male	Female			
9 P / 9 S	35.31 1.390	29.21 1.150	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	19.94 .785	9.02 .355
15 P / 15 S	35.31 1.390	29.21 1.150	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	24.00 .945	9.02 .355
21 P / 21 S	42.93 1.690	36.83 1.450	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	7.82 .308	29.72 1.170	9.02 .355
25 P / 25 S	44.20 1.740	38.10 1.500	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	32.39 1.275	9.02 .355
31 P / 31 S	51.82 2.040	45.72 1.800	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	7.82 .308	40.01 1.575	9.02 .355
37 P / 37 S	59.44 2.340	53.34 2.100	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	7.82 .308	47.63 1.875	9.02 .355
51DR P / 51DR S	77.30 3.043	71.12 2.800	41.02 1.615	35.15 1.384	36.83 1.450	4.69 .185	6.35 .250	7.82 .308	65.47 2.578	11.02 .434
51 P / 51 S	57.66 2.270	50.80 2.000	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	8.92 .351	45.09 1.775	9.02 .355
69 P / 69 S	72.90 2.870	66.04 2.600	38.48 1.515	32.61 1.284	34.29 1.350	5.79 .228	7.44 .293	8.92 .351	60.33 2.375	11.02 .434
100 P / 100 S	82.55 3.250	71.12 2.800	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	11.68 .460	65.66 2.585	13.97 .550

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km: 150 V _{AC}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

BS TYPE 0.100" PITCH

PLASTIC SHELL

- Board straight connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

P

51

S

BS

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.

L: LCP shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).

S: Female (socket contacts).

PCB VERSION

BS: 0.100" Board Straight.

HARDWARE

B: No hardware.

P: Jackposts.

Px (x: 1 to 5): Panel mount jackposts.

T: Threaded inserts installed.

W: Jackposts and threaded inserts installed.

Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.

See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

G: Gold plated solid conductor AWG 25.

T: Tin plated solid conductor AWG 24.

See page 29 for conductor types.

TAIL LENGTH

1: 2.80 mm (0.110").

2: 3.80 mm (0.150").

3: 4.80 mm (0.190").

4: 6.35 mm (0.250").

5: 3.25 mm (0.127").

6: 3.56 mm (0.140").

7: 4.37 mm (0.172").

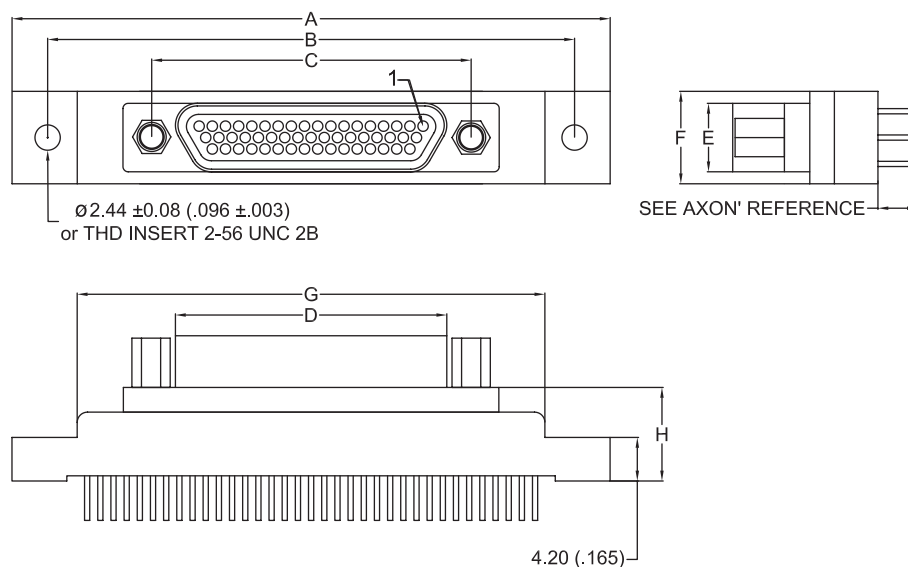
Tolerance: ± 0.38 mm (0.015").

Other lengths available on request.

DIMENSIONS

Dimensions are in millimetres (inches).

FEMALE connector



SEE CONTACT LAYOUT ON PCB PAGES 102 & 105

	A max.	B ± 0.18 (±.007)	C ± 0.13 (±.005)	D max.		E max.		F max.	G max.	H max.
				Male	Female	Male	Female			
9 P / 9 S	35.31 1.390	29.21 1.150	14.35 .565	7.41 .292	9.65 .380	3.40 .134	5.53 .218	7.82 .308	22.48 .885	9.02 .355
15 P / 15 S	35.31 1.390	29.21 1.150	18.16 .715	11.22 .442	13.46 .530	3.40 .134	5.53 .218	7.82 .308	24.00 .945	9.02 .355
21 P / 21 S	42.93 1.690	36.83 1.450	21.97 .865	15.03 .592	17.27 .680	3.40 .134	5.53 .218	7.82 .308	30.10 1.185	9.02 .355
25 P / 25 S	44.20 1.740	38.10 1.500	24.51 .965	17.57 .692	19.81 .780	3.40 .134	5.53 .218	7.82 .308	32.39 1.275	9.02 .355
31 P / 31 S	51.82 2.040	45.72 1.800	28.32 1.115	21.38 .842	23.62 .930	3.40 .134	5.53 .218	7.82 .308	40.01 1.575	9.02 .355
37 P / 37 S	59.44 2.340	53.34 2.100	32.13 1.265	25.19 .992	27.43 1.080	3.40 .134	5.53 .218	7.82 .308	47.63 1.875	9.02 .355
51 P / 51 S	57.66 2.270	50.80 2.000	30.86 1.215	23.92 .942	26.16 1.030	4.50 .177	6.60 .260	8.92 .351	45.09 1.775	9.02 .355

SUMMARY OF CHARACTERISTICS

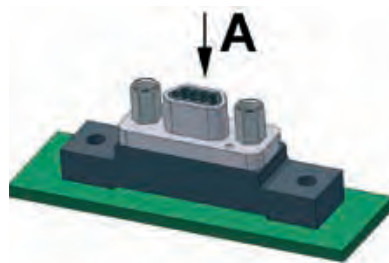
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km (70,000 ft): 150 V _{AC}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, Gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

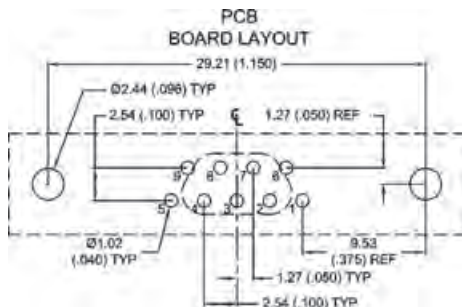
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR BS TYPE 0.100" PITCH - MALE CONNECTORS

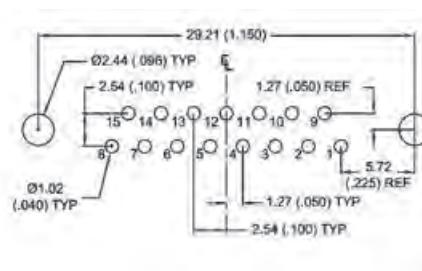
VIEW A



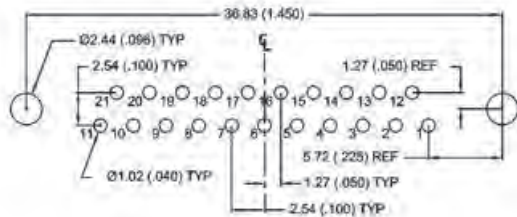
9 CONTACTS - VIEW A



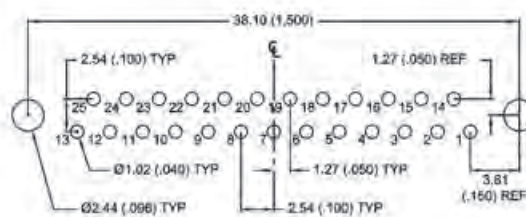
15 CONTACTS - VIEW A



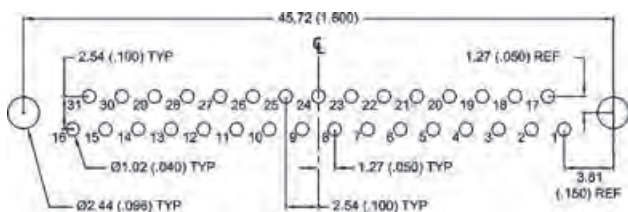
21 CONTACTS - VIEW A



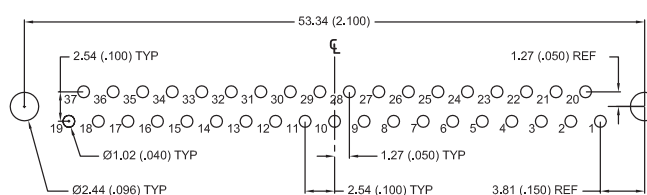
25 CONTACTS - VIEW A



31 CONTACTS - VIEW A

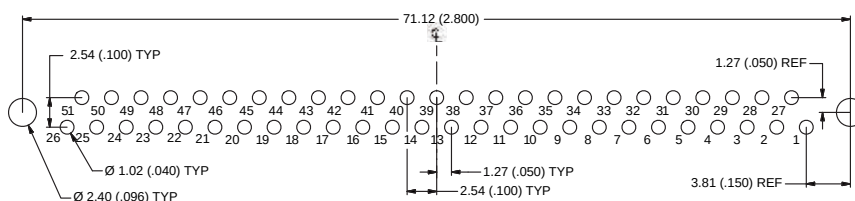


37 CONTACTS - VIEW A

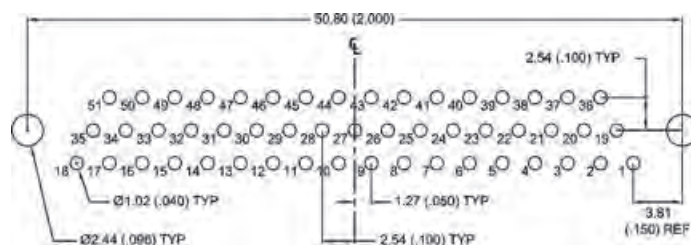


PCB LAYOUT FOR BS TYPE 0.100" PITCH - MALE CONNECTORS

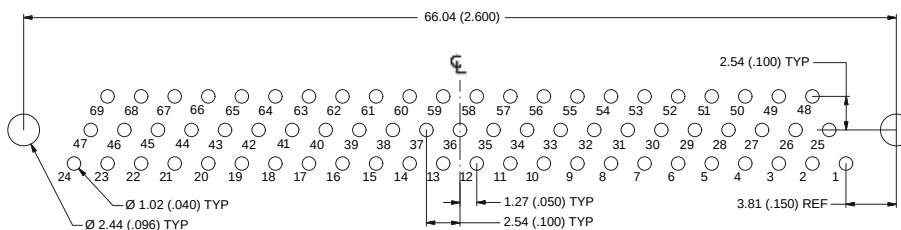
51 CONTACTS (DOUBLE ROW) - VIEW A



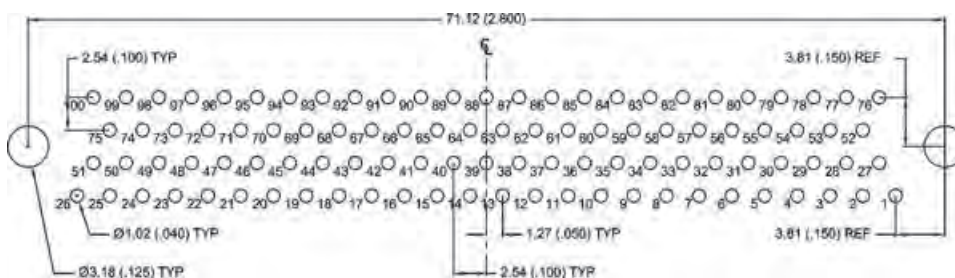
51 CONTACTS - VIEW A



69 CONTACTS - VIEW A

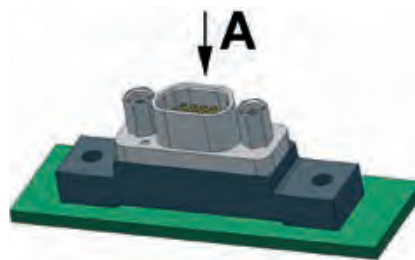


100 CONTACTS - VIEW A

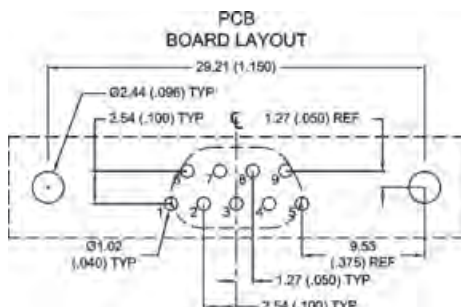


PCB LAYOUT FOR BS TYPE 0.100" PITCH - FEMALE CONNECTORS

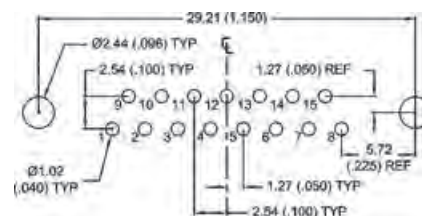
VIEW A



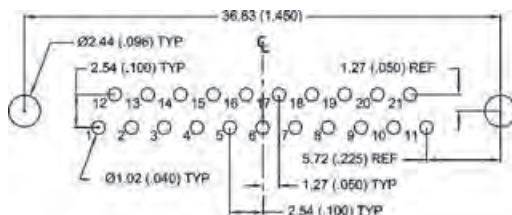
9 CONTACTS - VIEW A



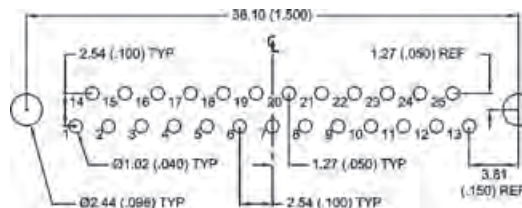
15 CONTACTS - VIEW A



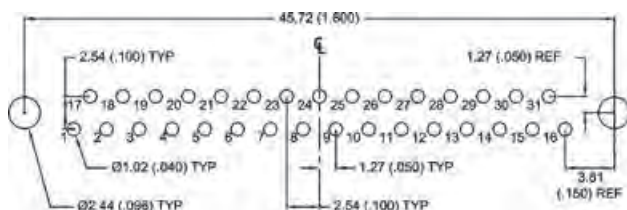
21 CONTACTS - VIEW A



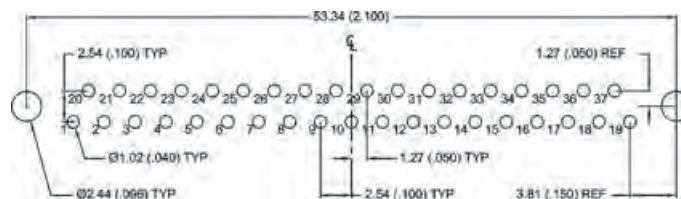
25 CONTACTS - VIEW A



31 CONTACTS - VIEW A

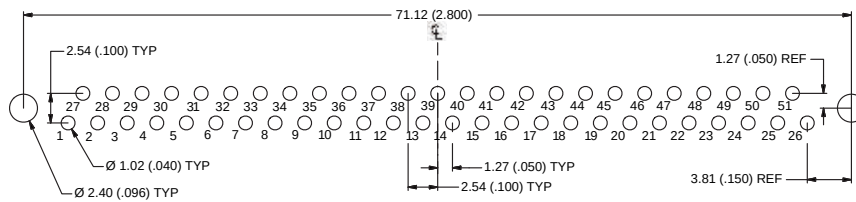


37 CONTACTS - VIEW A

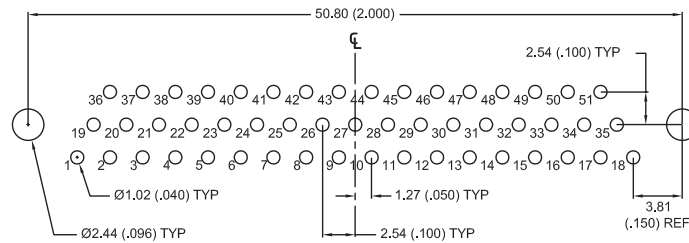


PCB LAYOUT FOR BS TYPE 0.100" PITCH - FEMALE CONNECTORS

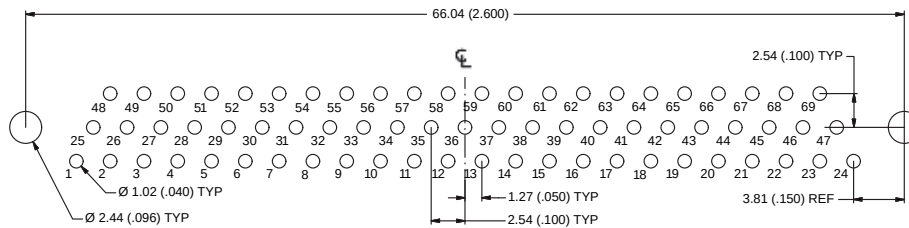
51 CONTACTS (DOUBLE ROW) - VIEW A



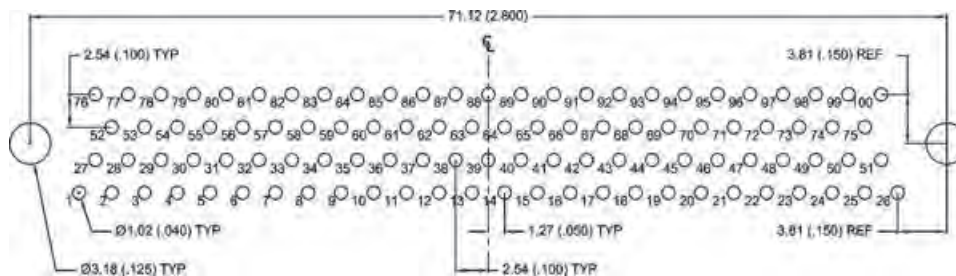
51 CONTACTS - VIEW A

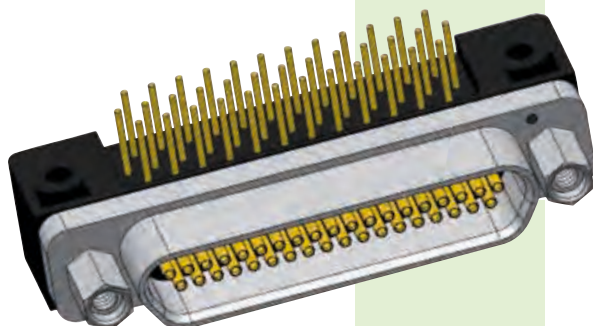


69 CONTACTS - VIEW A



100 CONTACTS - VIEW A





PCB RECTANGULAR CONNECTORS

CBR TYPE 0.075" PITCH

METAL SHELL

- Condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

PLEASE CONTACT US FOR A PLASTIC VERSION
OF 0.075" RIGHT ANGLE CONNECTOR.

IDENTIFICATION CODE

MDA

2

51

S

75RB

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR, 51, 69, 100.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

75RB: 0.075" pitch condensed board right angle specific layout.
Other option available 75RC see page 112.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

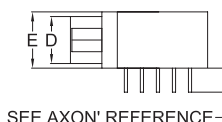
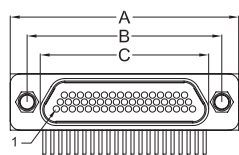
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

DIMENSIONS

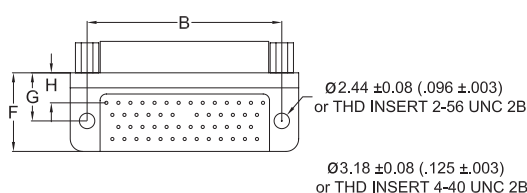
Dimensions are in millimetres (inches).

FEMALE connector

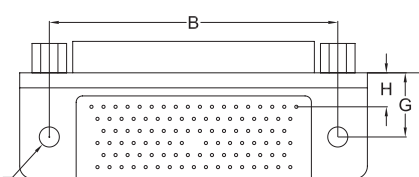


SEE AXON' REFERENCE

9-69 way connectors



100 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 108 TO 111

	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)
			Male	Female	Male	Female				
9 P / 9 S	19.94 .785	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	5.40 .213
15 P / 15 S	23.75 .935	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
21 P / 21 S	27.56 1.085	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
25 P / 25 S	30.10 1.185	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
31 P / 31 S	33.91 1.335	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
37 P / 37 S	37.72 1.485	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
51DR P / 51DR S	46.61 1.835	41.02 1.615	35.15 1.384	36.83 1.450	4.69 .185	6.35 .250	7.82 .308	10.16 .400	6.35 .250	4.45 .175
51 P / 51 S	36.45 1.435	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	8.92 .351	12.45 .490	7.62 .300	4.76 .188
69 P / 69 S	44.07 1.735	38.48 1.515	32.61 1.284	34.29 1.350	5.79 .228	7.44 .293	8.92 .351	12.45 .490	7.62 .300	4.76 .188
100 P / 100 S	55.12 2.170	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	10.01 .394	16.76 .660	10.16 .400	5.40 .213

SUMMARY OF CHARACTERISTICS

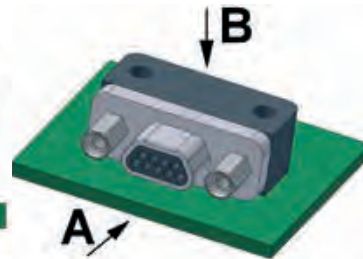
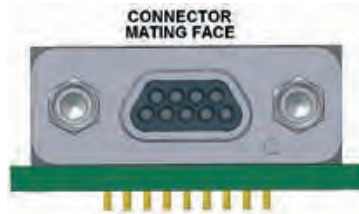
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 Vdc
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 Vac Altitude 21 km (70,000 ft): 150 Vac
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's - No discontinuity > 1 μs
SHOCK	50g's - No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

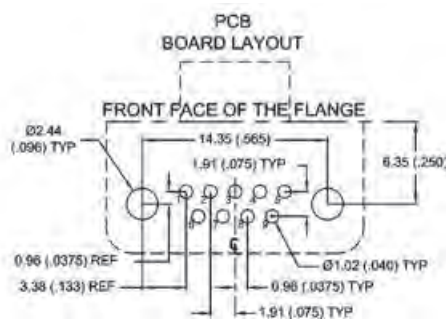
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR CBR TYPE 0.075" PITCH - MALE CONNECTORS

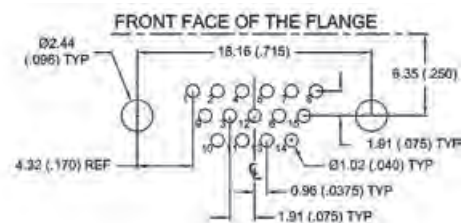
VIEW A



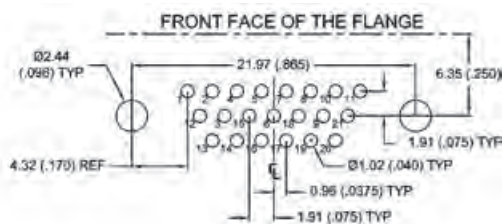
9 CONTACTS - VIEW B



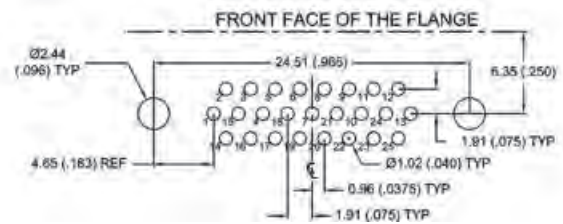
15 CONTACTS - VIEW B



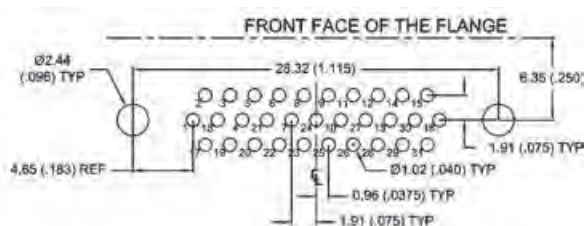
21 CONTACTS - VIEW B



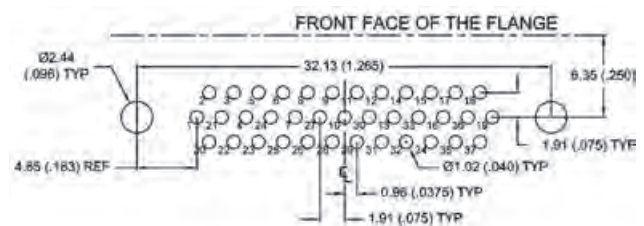
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

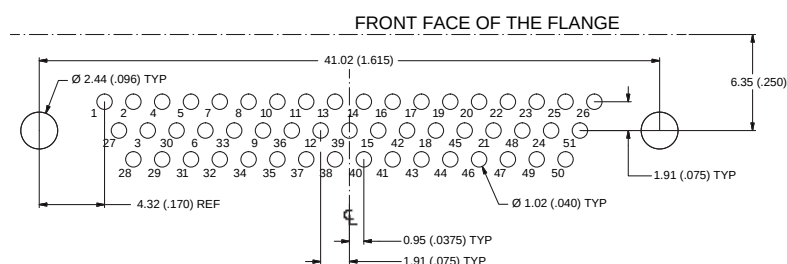


37 CONTACTS - VIEW B

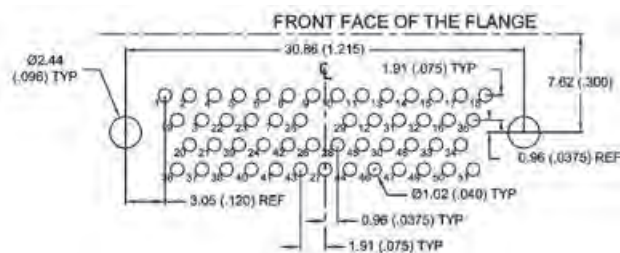


PCB LAYOUT FOR CBR TYPE 0.075" PITCH - MALE CONNECTORS

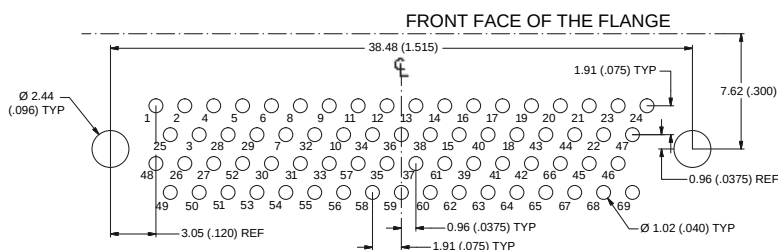
51 CONTACTS (DOUBLE ROW) - VIEW B



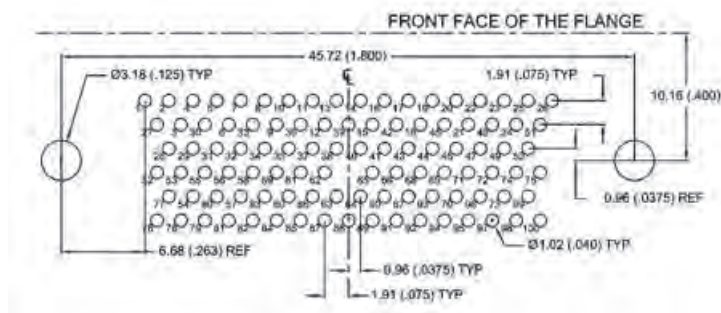
51 CONTACTS - VIEW B



69 CONTACTS - VIEW B

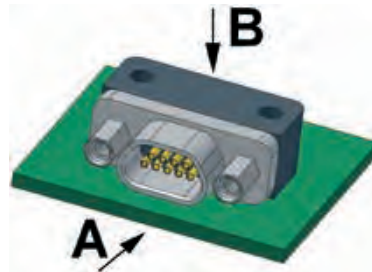


100 CONTACTS - VIEW B

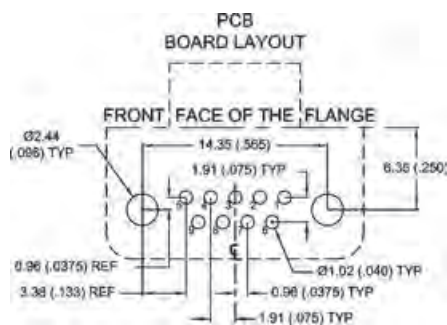


PCB LAYOUT FOR CBR TYPE 0.075" PITCH - FEMALE CONNECTORS

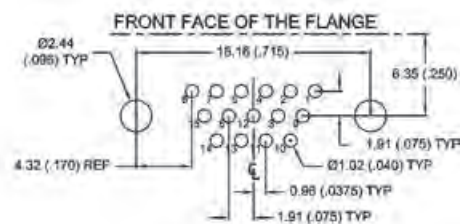
VIEW A



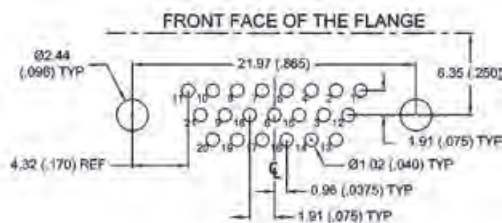
9 CONTACTS - VIEW B



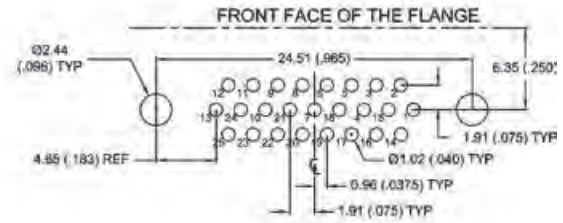
15 CONTACTS - VIEW B



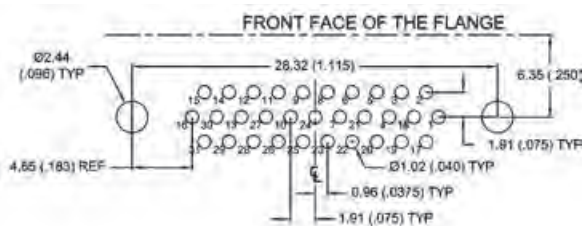
21 CONTACTS - VIEW B



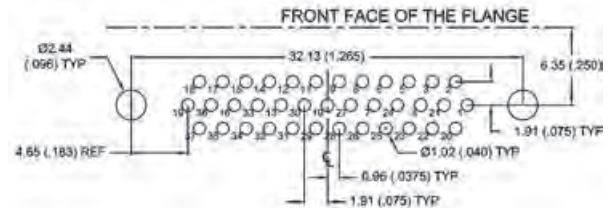
25 CONTACTS - VIEW B



31 CONTACTS - VIEW B

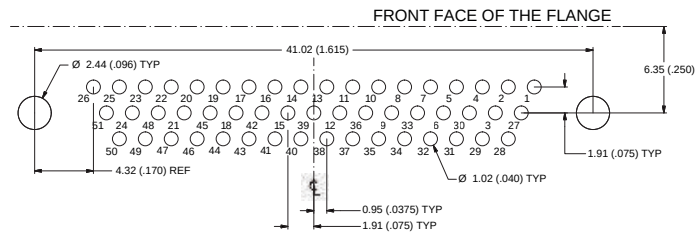


37 CONTACTS - VIEW B

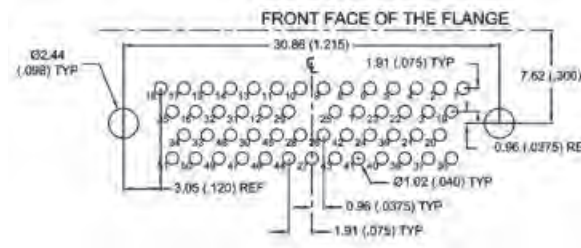


PCB LAYOUT FOR CBR TYPE 0.075" PITCH - FEMALE CONNECTORS

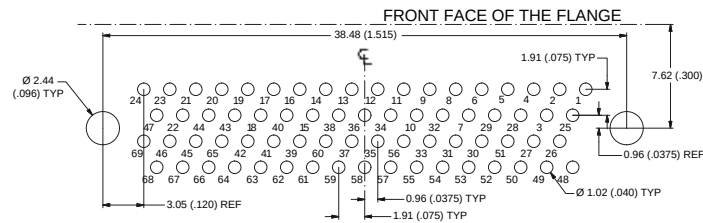
51 CONTACTS (DOUBLE ROW) - VIEW B



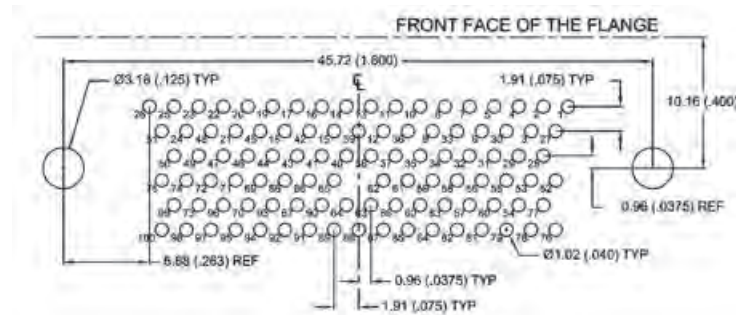
51 CONTACTS - VIEW B

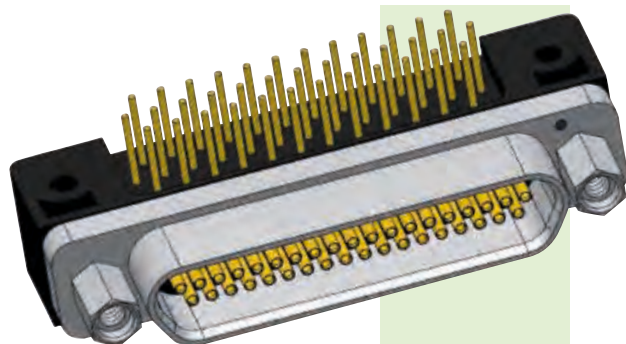


69 CONTACTS - VIEW B



100 CONTACTS - VIEW B





PCB RECTANGULAR CONNECTORS

CBR TYPE 0.075" PITCH

METAL SHELL BASED ON BS MIL STANDARD LAYOUT

- Condensed board right angle connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

PLEASE CONTACT US FOR A PLASTIC VERSION OF 0.075" RIGHT ANGLE CONNECTOR.

IDENTIFICATION CODE

MDA

2

51

S

75RC

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51, 69, 100.
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

75RC: 0.075" pitch condensed board right angle based on BS MIL standard layout.
Other option available 75RB see page 106.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

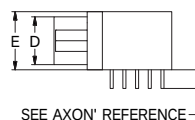
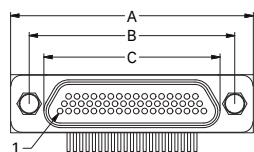
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

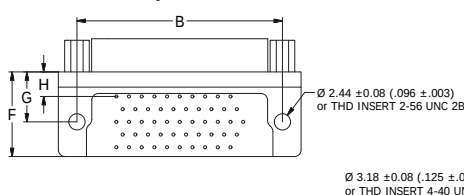
DIMENSIONS

Dimensions are in millimetres (inches).

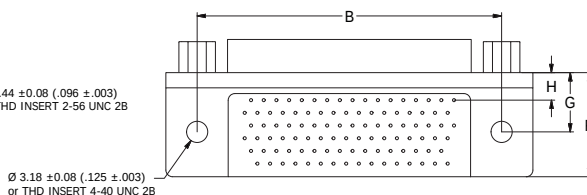
FEMALE connector



9-51 way connectors



100 way connectors



SEE CONTACT LAYOUT ON PCB PAGES 114 TO 115

	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.	G ± 0.25 (±.010)	H ± 0.25 (±.010)
			Male	Female	Male	Female				
9 P / 9 S	19.94 .785	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
15 P / 15 S	23.75 .935	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
21 P / 21 S	27.56 1.085	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
25 P / 25 S	30.10 1.185	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
31 P / 31 S	33.91 1.335	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
37 P / 37 S	37.72 1.485	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	7.82 .308	10.60 .417	6.35 .250	3.49 .138
51 P / 51 S	36.45 1.435	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	8.92 .351	12.90 .508	7.49 .295	3.68 .145
69 P / 69 S	44.07 1.735	38.48 1.515	32.61 1.284	34.29 1.350	5.79 .228	7.44 .293	8.92 .351	12.90 .508	7.49 .295	3.68 .145
100 P / 100 S	55.12 2.170	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	10.01 .394	15.80 .622	8.89 .350	4.13 .163

SUMMARY OF CHARACTERISTICS

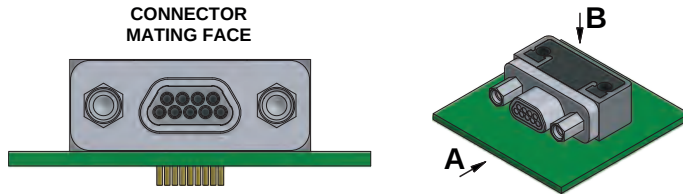
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{dc}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{ac} Altitude 21 km (70,000 ft): 150 V _{ac}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

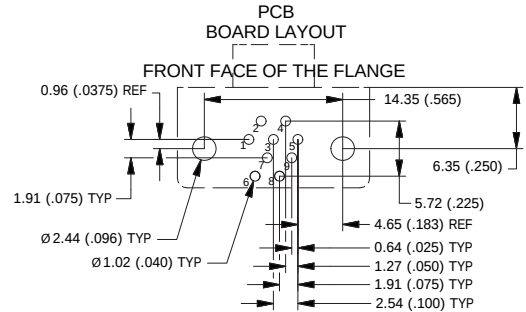
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR CBR TYPE - 0.075" PITCH BASED ON BS MIL STANDARD LAYOUT - MALE CONNECTORS

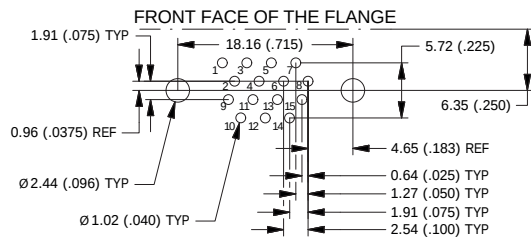
VIEW A



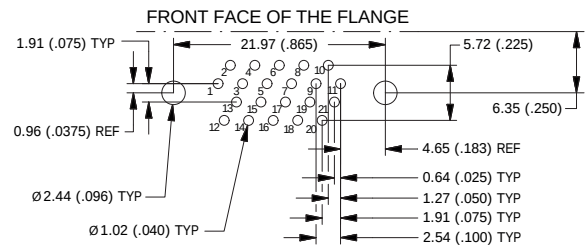
9 CONTACTS - VIEW B



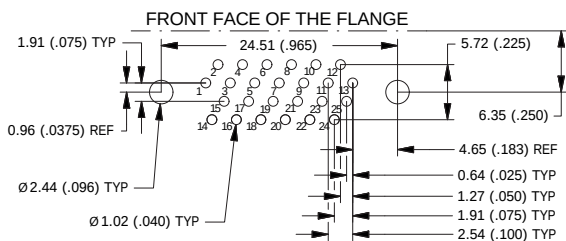
15 CONTACTS - VIEW B



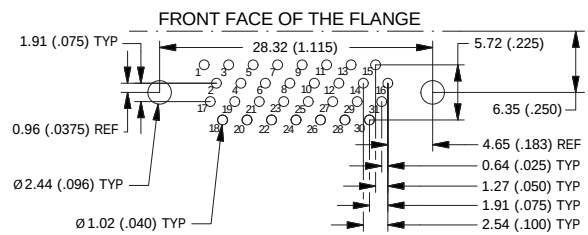
21 CONTACTS - VIEW B



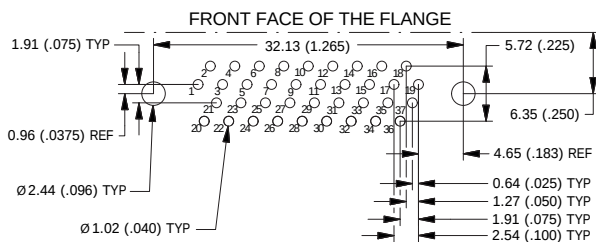
25 CONTACTS - VIEW B



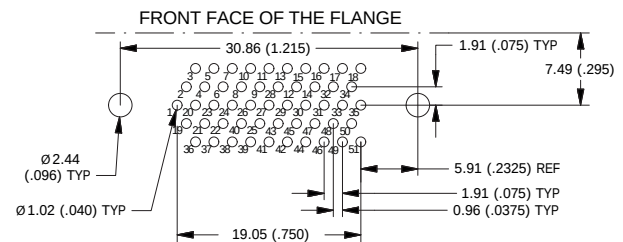
31 CONTACTS - VIEW B



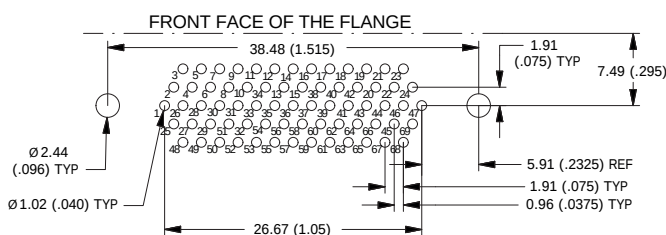
37 CONTACTS - VIEW B



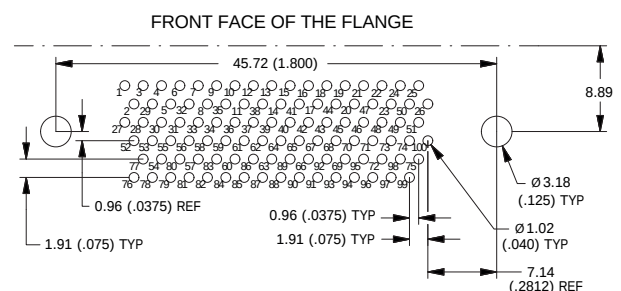
51 CONTACTS - VIEW B



69 CONTACTS - VIEW B

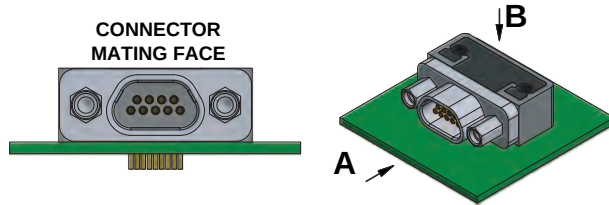


100 CONTACTS - VIEW B

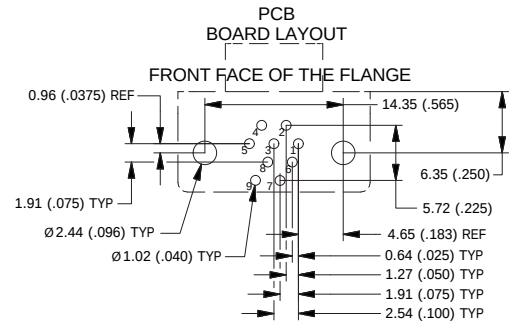


PCB LAYOUT FOR CBR TYPE - 0.075" PITCH BASED ON BS MIL STANDARD LAYOUT - FEMALE CONNECTORS

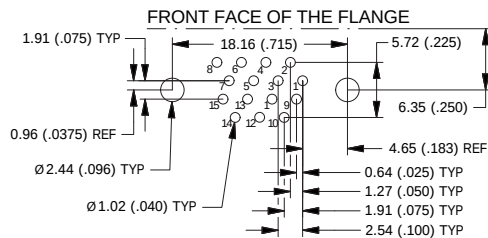
VIEW A



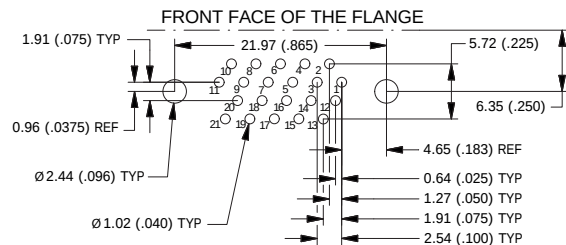
9 CONTACTS - VIEW B



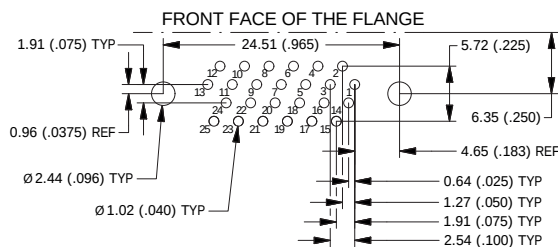
15 CONTACTS - VIEW B



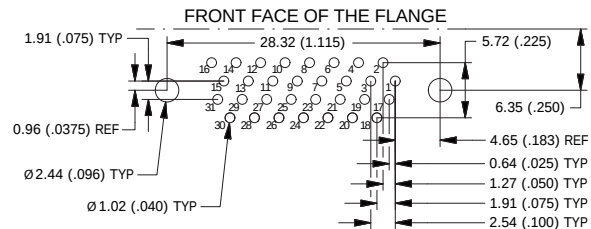
21 CONTACTS - VIEW B



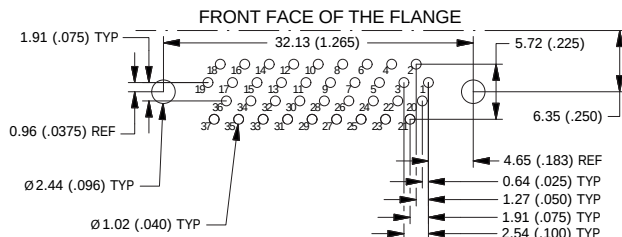
25 CONTACTS - VIEW B



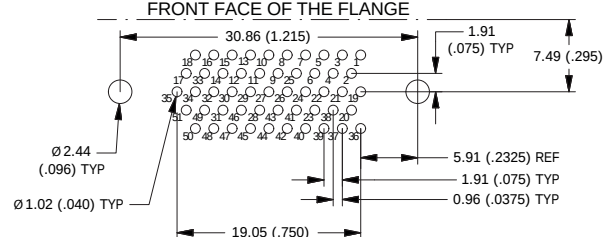
31 CONTACTS - VIEW B



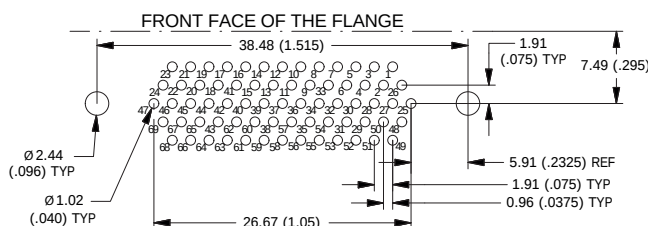
37 CONTACTS - VIEW B



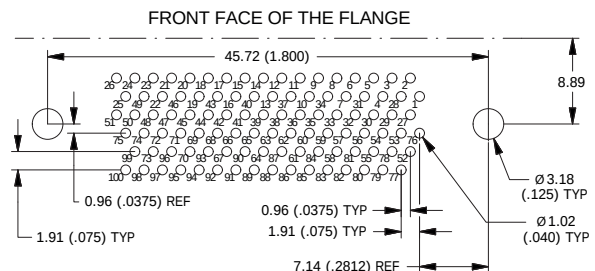
51 CONTACTS - VIEW B

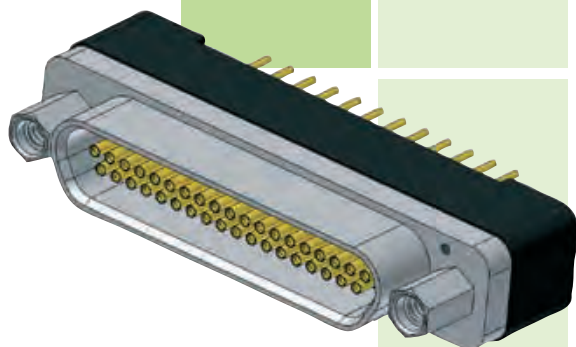


69 CONTACTS - VIEW B



100 CONTACTS - VIEW B





PCB RECTANGULAR CONNECTORS

BS TYPE 0.075" PITCH

METAL SHELL

- Board straight connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

2

37

S

75SB

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR*, 51, 69*, 100.

***: 51DR & 69 ways are available for 75SB PCB version only**
See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

- P:** Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

75SA: 0.075" pitch board straight MIL standard layout.
75SB: 0.075" pitch board straight specific layout.

HARDWARE

- B:** No hardware.
P: Jackposts.
Px (x: 1 to 5): Panel mount jackposts.
T: Threaded inserts installed.
W: Jackposts and threaded inserts installed.
Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.
See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

- G:** Gold plated solid conductor AWG 25.
T: Tin plated solid conductor AWG 24.
See page 29 for conductor types.

TAIL LENGTH

- 1:** 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").
5: 3.25 mm (0.127").
6: 3.56 mm (0.140").
7: 4.37 mm (0.172").

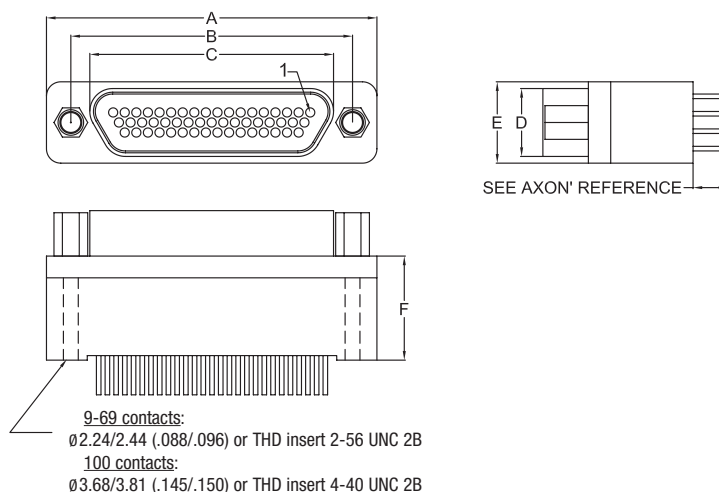
Tolerance: ± 0.38 mm (0.015").
Other lengths available on request.

METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

DIMENSIONS

Dimensions are in millimetres (inches).

FEMALE connector



SEE CONTACT LAYOUT ON PCB PAGES 120 TO 125

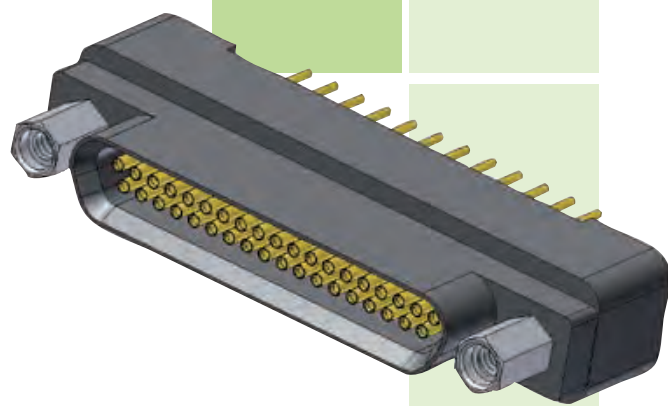
	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.
			Male	Female	Male	Female		
9 P / 9 S	19.94 .785	14.35 .565	8.48 .334	10.16 .400	4.69 .185	6.35 .250	7.87 .310	9.02 .355
15 P / 15 S	23.75 .935	18.16 .715	12.29 .484	14.00 .551	4.69 .185	6.35 .250	7.87 .310	9.02 .355
21 P / 21 S	27.56 1.085	21.97 .865	16.10 .634	17.81 .701	4.69 .185	6.35 .250	7.87 .310	9.02 .355
25 P / 25 S	30.10 1.185	24.51 .965	18.64 .734	20.35 .801	4.69 .185	6.35 .250	7.87 .310	9.02 .355
31 P / 31 S	33.91 1.335	28.32 1.115	22.45 .883	24.16 .951	4.69 .185	6.35 .250	7.87 .310	9.02 .355
37 P / 37 S	37.72 1.485	32.13 1.265	26.26 1.034	27.96 1.101	4.69 .185	6.35 .250	7.87 .310	9.02 .355
51DR P / 51DR S	46.61 1.835	41.02 1.615	35.15 1.384	36.83 1.450	4.69 .185	6.35 .250	7.87 .310	9.02 .355
51 P / 51 S	36.45 1.435	30.86 1.215	24.99 .984	26.70 1.051	5.79 .228	7.44 .293	10.16 .400	9.02 .355
69 P / 69 S	44.07 1.735	38.48 1.515	32.61 1.284	34.29 1.350	5.79 0.228	7.44 .293	10.16 .400	9.02 .355
100 P / 100 S	55.12 2.170	45.72 1.800	35.15 1.384	36.86 1.451	6.88 .271	8.46 .333	12.95 .510	10.92 .430

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km (70,000 ft): 150 V _{AC}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
SHELL	Aluminium alloy 6061 or 300 series stainless steel, see ordering info for plating options
MOULDED INSULATOR	Liquid Crystal Polymer (LCP)
INTERFACIAL SEAL	Fluorosilicone rubber
PIN CONTACT	Copper and beryllium copper, gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

SEE PAGE 24 FOR MORE INFORMATION



PCB RECTANGULAR CONNECTORS

BS TYPE 0.075" PITCH

PLASTIC SHELL

- Board straight connector for flexible and rigid printed circuit boards.
- Operating temperature: 150°C or 200°C.
- Several tail lengths available.

IDENTIFICATION CODE

MDA

P

37

S

75SB

P

G

3

SERIES

MDA: Micro-D AXON' standard series.

SHELL TYPE

P: LCP shell + potting 150°C.
L: LCP shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51.

See pages 26 & 27 for contact arrangements.

CONNECTOR GENDER

P: Male (pin contacts).
S: Female (socket contacts).

PCB VERSION

75SA: 0.075" pitch board straight MIL standard layout.

75SB: 0.075" pitch board straight specific layout.

HARDWARE

B: No hardware.

P: Jackposts.

Px (x: 1 to 5): Panel mount jackposts.

T: Threaded inserts installed.

W: Jackposts and threaded inserts installed.

Wx (x: 1 to 5): Panel mount jackposts and threaded inserts installed.

See pages 190 to 200 for hardware description.

CONDUCTOR TYPE

G: Gold plated solid conductor AWG 25.

T: Tin plated solid conductor AWG 24.

See page 29 for conductor types.

TAIL LENGTH

1: 2.80 mm (0.110").

2: 3.80 mm (0.150").

3: 4.80 mm (0.190").

4: 6.35 mm (0.250").

5: 3.25 mm (0.127").

6: 3.56 mm (0.140").

7: 4.37 mm (0.172").

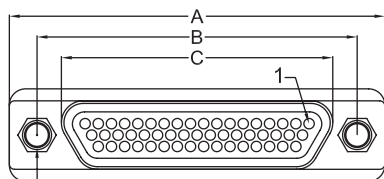
Tolerance: ± 0.38 mm (0.015").

Other lengths available on request.

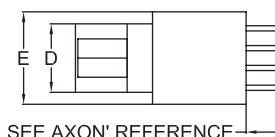
DIMENSIONS

Dimensions are in millimetres (inches).

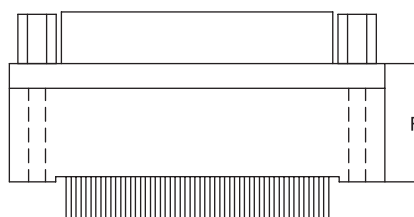
FEMALE connector



9- 51 contacts:
Ø2.24/2.44 (.088/.096) or THD insert 2-56 UNC 2B



SEE AXON' REFERENCE



SEE CONTACT LAYOUT ON PCB PAGES 120 TO 125

	A max.	B ± 0.13 (±.005)	C max.		D max.		E max.	F max.
			Male	Female	Male	Female		
9 P / 9 S	19.94 .785	14.35 .565	7.41 .292	9.65 .380	3.40 .134	5.53 .218	7.87 .310	9.07 .357
15 P / 15 S	23.75 .935	18.16 .715	11.22 .442	13.46 .530	3.40 .134	5.53 .218	7.87 .310	9.07 .357
21 P / 21 S	27.56 1.085	21.97 .865	15.03 .592	17.27 .680	3.40 .134	5.53 .218	7.87 .310	9.07 .357
25 P / 25 S	30.10 1.185	24.51 .965	17.57 .692	19.81 .780	3.40 .134	5.53 .218	7.87 .310	9.07 .357
31 P / 31 S	33.91 1.335	28.32 1.115	21.38 .842	23.62 .930	3.40 .134	5.53 .218	7.87 .310	9.07 .357
37 P / 37 S	37.72 1.485	32.13 1.265	25.19 .992	27.43 1.080	3.40 .134	5.53 .218	7.87 .310	9.07 .357
51 P / 51 S	36.45 1.435	30.86 1.215	23.92 .942	26.16 1.030	4.50 .177	6.60 .260	10.16 .400	9.07 .357

SUMMARY OF CHARACTERISTICS

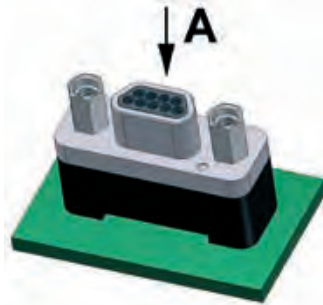
ELECTRICAL & MECHANICAL PERFORMANCE	
CURRENT RATING	3 A max.
CONTACT RESISTANCE	8 mΩ max.
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km (70,000 ft): 150 V _{AC}
CONTACT ENGAGING FORCE	170 g max. (6 oz)
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)
CONTACT RETENTION	2.26 kg (5 lbs)
DURABILITY	500 mating cycles min.
VIBRATION	20g's – No discontinuity > 1 μs
SHOCK	50g's – No discontinuity > 1 μs

MATERIAL & FINISH	
MOULDED SHELL	Liquid Crystal Polymer (LCP)
PIN CONTACT	Copper and beryllium copper, Gold over nickel plating
SOCKET CONTACT	Copper alloy, gold over nickel plating
ENCAPSULANT	Epoxy resin
MOULDED TRAY	Liquid Crystal Polymer (LCP)
PCB TERMINALS	See ordering info for PCB terminals material
HARDWARE	300 series stainless steel, passivated

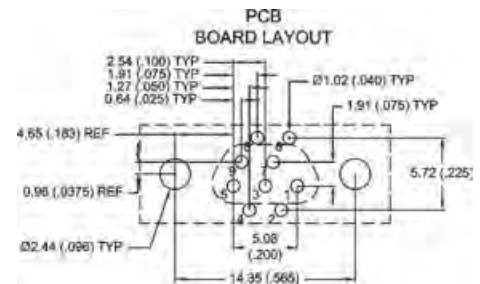
SEE PAGE 24 FOR MORE INFORMATION

PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SA MIL STANDARD LAYOUT - MALE CONNECTORS

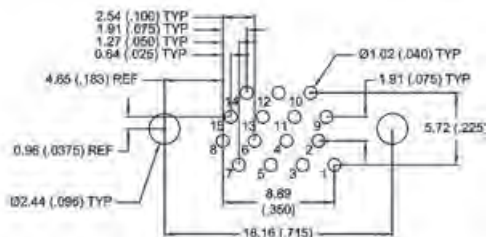
VIEW A



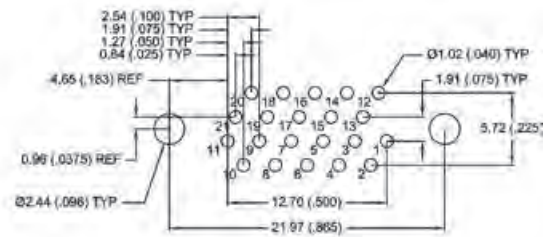
9 CONTACTS - VIEW A



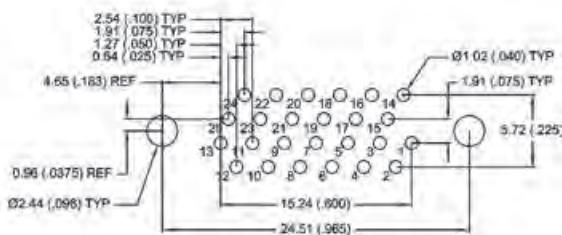
15 CONTACTS - VIEW A



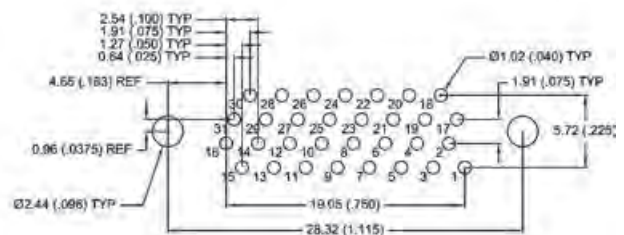
21 CONTACTS - VIEW A



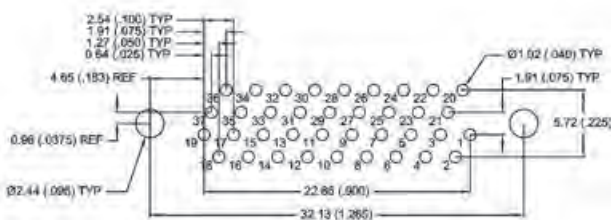
25 CONTACTS - VIEW A



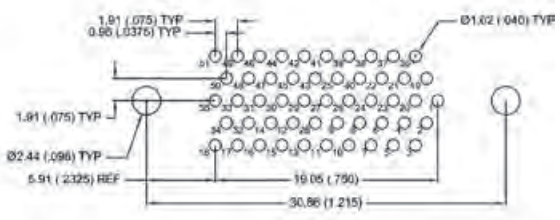
31 CONTACTS - VIEW A



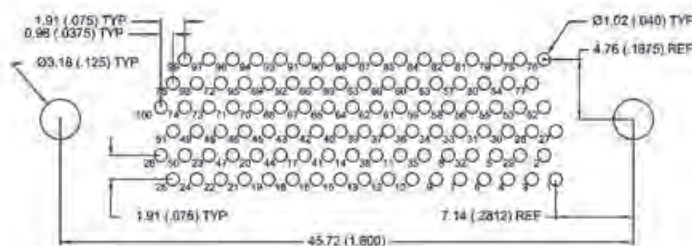
37 CONTACTS - VIEW A



51 CONTACTS - VIEW A

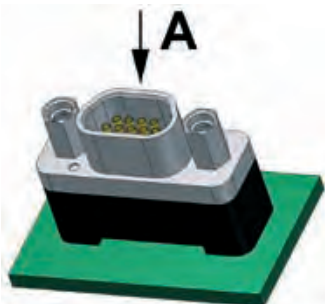


100 CONTACTS - VIEW A

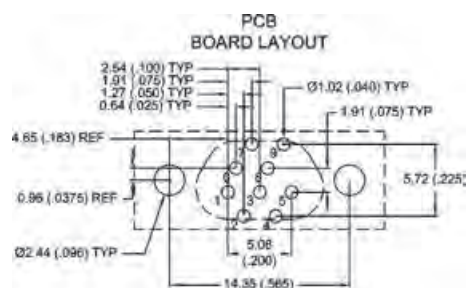


PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SA MIL STANDARD LAYOUT - FEMALE CONNECTORS

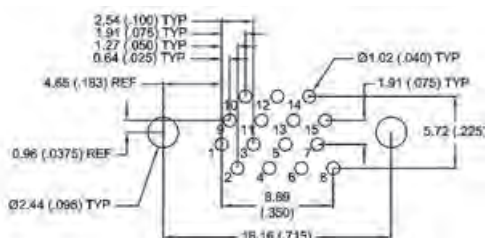
VIEW A



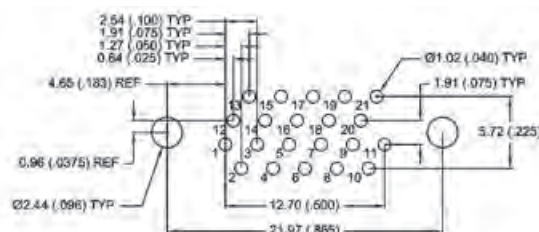
9 CONTACTS - VIEW A



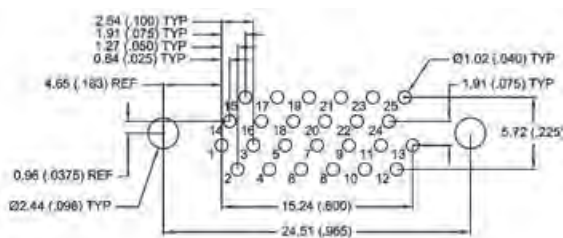
15 CONTACTS - VIEW A



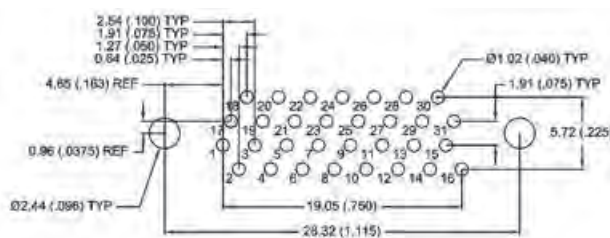
21 CONTACTS - VIEW A



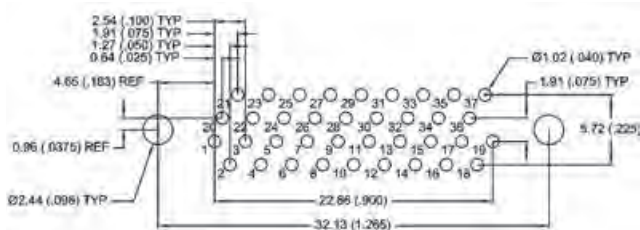
25 CONTACTS - VIEW A



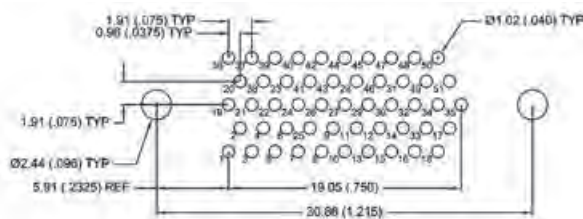
31 CONTACTS - VIEW A



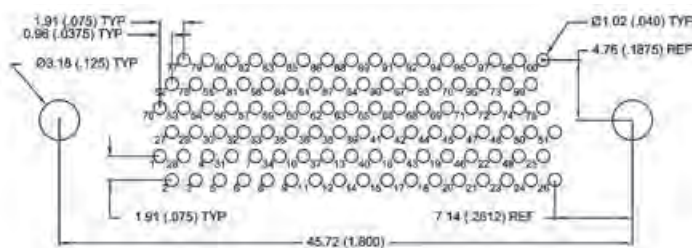
37 CONTACTS - VIEW A



51 CONTACTS - VIEW A

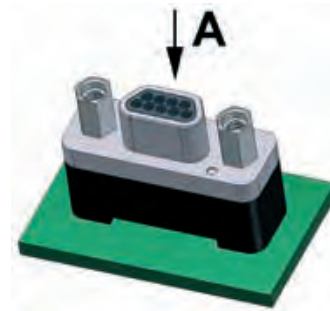


100 CONTACTS - VIEW A

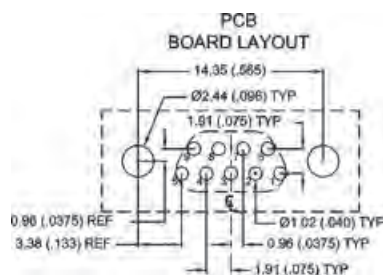


PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SB SPECIFIC LAYOUT - MALE CONNECTORS

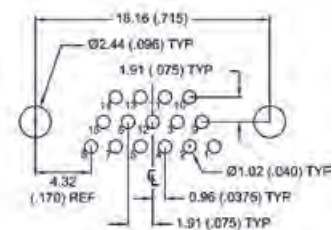
VIEW A



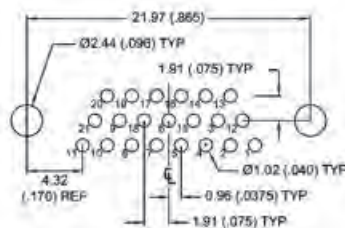
9 CONTACTS - VIEW A



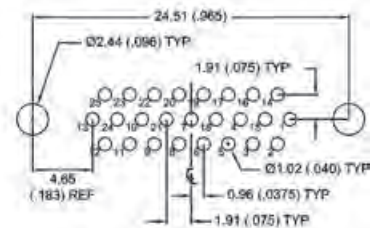
15 CONTACTS - VIEW A



21 CONTACTS - VIEW A



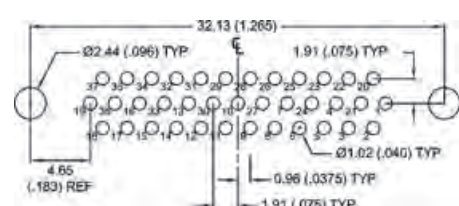
25 CONTACTS - VIEW A



31 CONTACTS - VIEW A

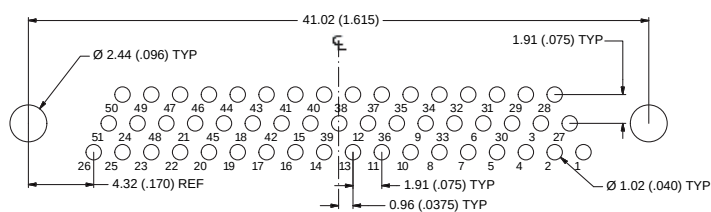


37 CONTACTS - VIEW A

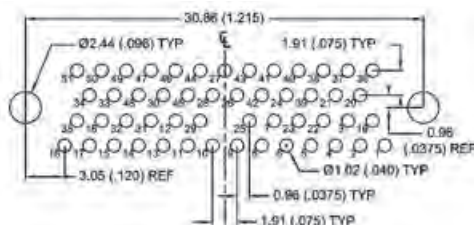


PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SB SPECIFIC LAYOUT - MALE CONNECTORS

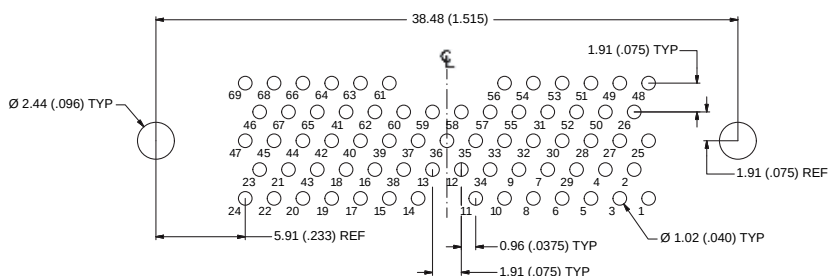
51 CONTACTS (DOUBLE ROW) - VIEW A



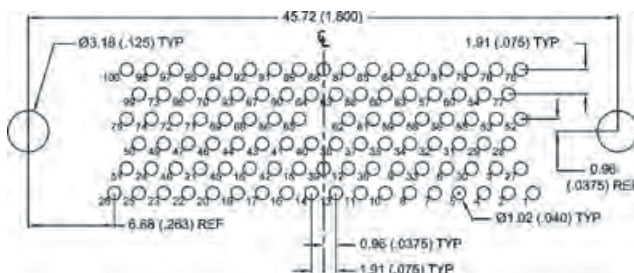
51 CONTACTS - VIEW A



69 CONTACTS - VIEW A

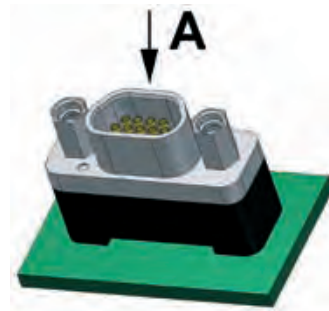


100 CONTACTS - VIEW A

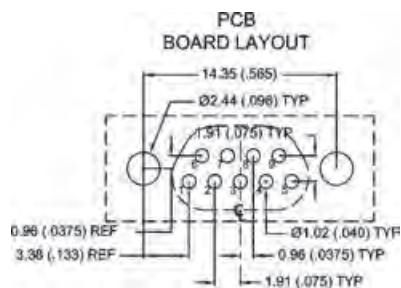


PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SB SPECIFIC LAYOUT - FEMALE CONNECTORS

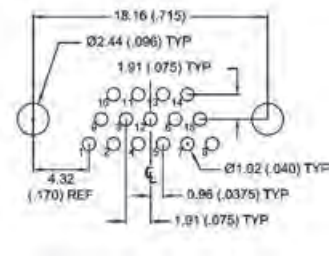
VIEW A



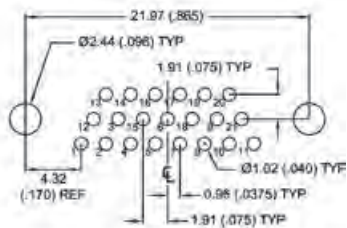
9 CONTACTS - VIEW A



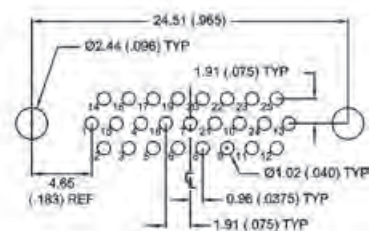
15 CONTACTS - VIEW A



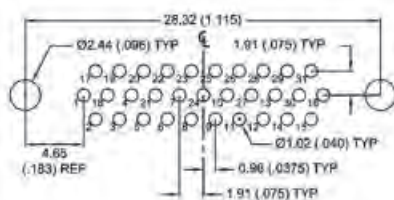
21 CONTACTS - VIEW A



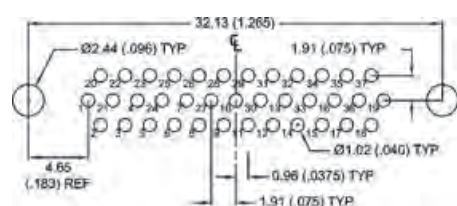
25 CONTACTS - VIEW A



31 CONTACTS - VIEW A

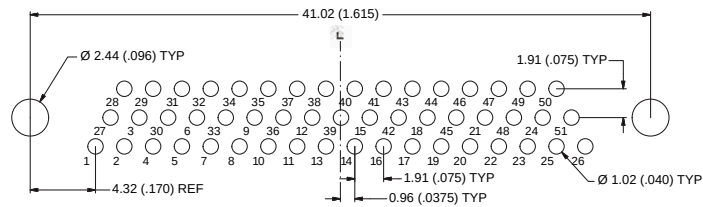


37 CONTACTS - VIEW A

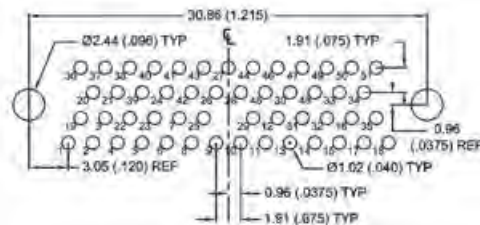


PCB LAYOUT FOR BS TYPE - 0.075" PITCH - 75SB SPECIFIC LAYOUT - FEMALE CONNECTORS

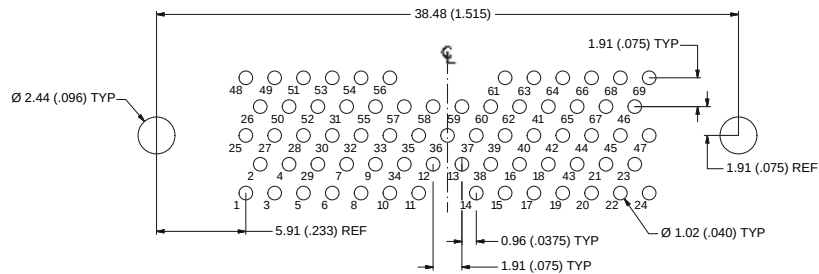
51 CONTACTS (DOUBLE ROW) - VIEW A



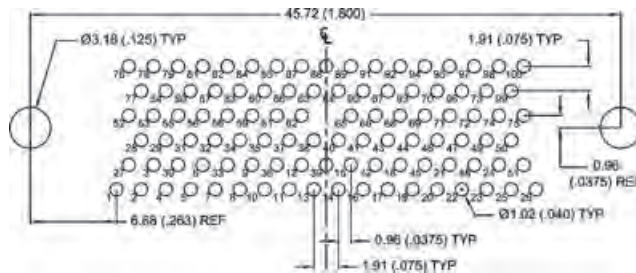
51 CONTACTS - VIEW A

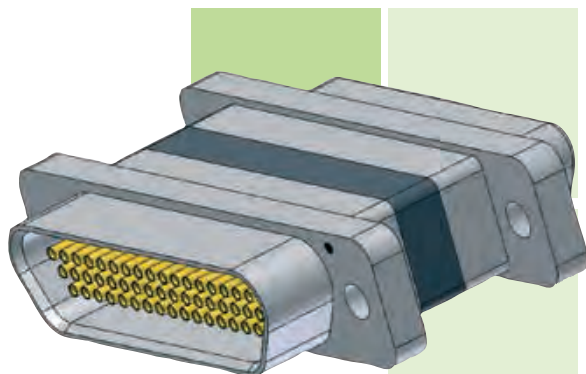


69 CONTACTS - VIEW A

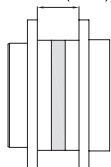


100 CONTACTS - VIEW A





L = 10 (.394)



CONNECTOR SAVERS

CONNECTOR SAVER ONE PIECE DESIGN

METAL OR PLASTIC SHELL

- One piece design version L = 10 mm (.394") between flanges.
- Ideal for applications requiring many mating / demating cycles.
- Reduces wear and tear on systems and test equipment.
- Operating temperature: 150°C or 200°C.

IDENTIFICATION CODE

MDA

2

51

CS

1

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

P: LCP shell + potting 150°C.

L: LCP shell + potting 200°C.

1: Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.

2: Nickel aluminium shell + potting 150°C.

3: Nickel aluminium shell + potting 200°C.

S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR*, 51, 69*, 100*.

*: 51DR, 69 & 100 way only available for 1, Z, 2, 3 & S connector types.

See pages 26 & 27 for contact arrangements.

PRODUCT TYPE

CS: Connector saver (plug to receptacle connector).

ONE PIECE DESIGN ASSEMBLY

1: One piece design assembly.

L = 10 mm (.394").

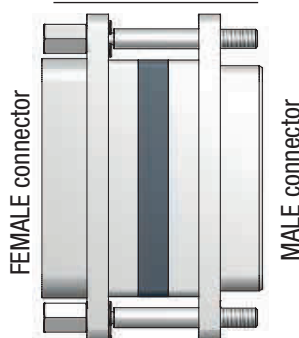
HARDWARE

B: No hardware.

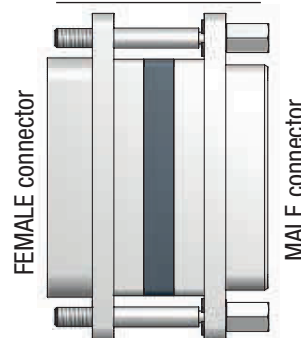
P1: Removable long jackposts on the female connector.

P2: Removable long jackposts on the male connector.

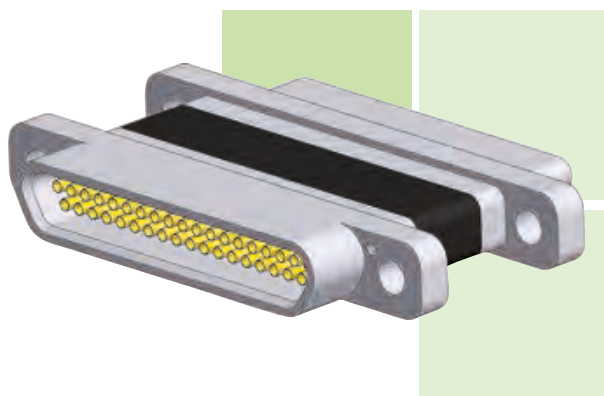
HARDWARE P1 TYPE



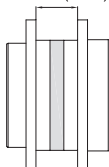
HARDWARE P2 TYPE



METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS



L = 10 (.394)



CONNECTOR SAVERS

CONNECTOR SAVER ONE PIECE DESIGN

LOW PROFILE METAL SHELL

- One piece design version L = 10 mm (.394") between flanges.
- Ideal for applications requiring many mating / demating cycles.
- Reduces wear and tear on systems and test equipment.
- Operating temperature: 150°C or 200°C.

IDENTIFICATION CODE

MDA

2

L51

CS

1

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium al. shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

L09, L15, L21, L25, L31, L37, L51.
 See pages 26 & 27 for contact arrangements.

PRODUCT TYPE

CS: Connector saver (plug to receptacle connector).

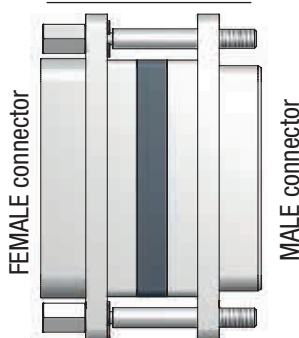
ONE PIECE DESIGN ASSEMBLY

- 1:** One piece design assembly.
 L = 10 mm (.394").

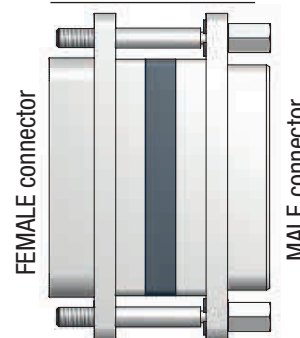
HARDWARE

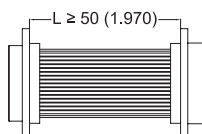
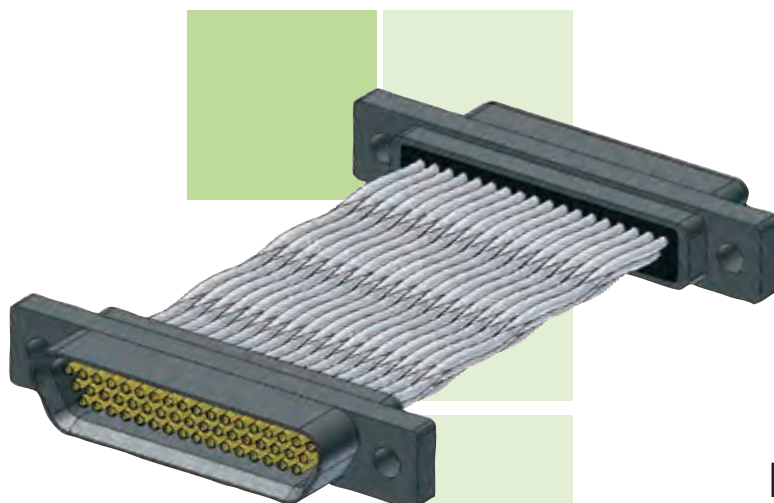
- B:** No hardware
P1: Removable long jackposts on the female connector.
P2: Removable long jackposts on the male connector.

HARDWARE P1 TYPE



HARDWARE P2 TYPE





CONNECTOR SAVERS

CONNECTOR SAVER BACK TO BACK ASSEMBLY

METAL OR PLASTIC SHELL

- Back to back assembly version ($L \geq 50$ mm / 1.970") between flanges
- Ideal for applications requiring many mating / demating cycles.
- Reduces wear and tear on systems and test equipment.
- Operating temperature: 150°C or 200°C.

IDENTIFICATION CODE

MDA

P

51

CS

010

1

L

B

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1: Cadmium aluminium shell / Z: Black zinc nickel aluminium shell + potting 150°C.
P: LCP shell + Potting 150°C. 2: Nickel aluminium shell + Potting 150°C.
L: LCP shell + Potting 200°C. 3: Nickel aluminium shell + Potting 200°C.
S: Passivated stainless steel shell + Potting 200°C.

NUMBER OF CONTACTS

09, 15, 21, 25, 31, 37, 51DR*, 51, 69*, 100*.

*: 51DR, 69 & 100 way only available for 1, Z, 2, 3 & S connector types.
See pages 26 & 27 for contact arrangements.

PRODUCT TYPE

- CS: Connector saver (receptacle to plug connector).
DP: Dual Pin connector (plug to plug connector).
DS: Dual Socket connector (receptacle to receptacle connector).

BACK TO BACK ASSEMBLY - LENGTH (in cm)

Attention! Wire length in centimetres (1 cm = 10 mm = .394").

L	$5 \leq L \leq 10$	$10 < L \leq 100$	$L > 100$
in cm (inches)	$1.97 \leq L \leq 3.940$	$3.940 < L \leq 39.40$	$L > 39.40$
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

WIRE TYPE

- 1: E2607, AWG 26, 7 strands - 600 V. A: E2407, AWG 24, 7 strands - 600 V.
4: E2619, AWG 26, 19 strands - 600 V. C: E 2419, AWG 24, 19 strands - 600 V.
6: E2807, AWG 28, 7 strands - 600 V. E: M22759/33, AWG 26, 19 strands - 600 V.
8: E3007, AWG 30, 7 strands - 600 V. See page 29 for wire types.

COLOUR CODE

F: All yellow - L: all white.

1st CONNECTOR HARDWARE

(for CS 1st connector is the female one).

- B: No hardware.
C: U-clips with low profile hex.socket head jackscrew (removable).
D: U-clips with low profile slot head jackscrew (removable).
M: low profile hex.socket head jackscrews (removable).
N: high profile hex.socket head jackscrews (removable).
P: Jackposts (removable).
Px (x: 1 to 5): Panel mount jackposts.
S: low profile slot head jackscrews (removable).
T: high profile slot head jackscrews (removable).
See pages 190 to 200 for hardware description.

2nd CONNECTOR HARDWARE

(for CS 2nd connector is the male one).

See 1st connector hardware for the list of choices.

Other hardware available on request

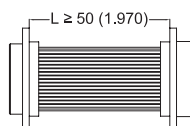
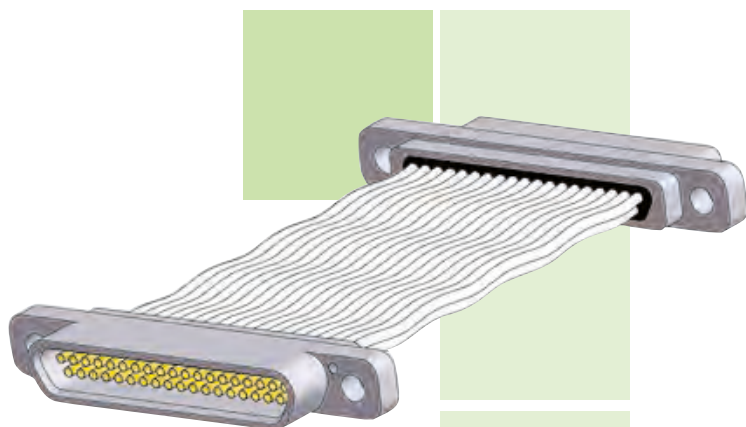
METAL CONNECTORS ARE SUPPLIED WITH ANTI-STATIC PROTECTIVE DUST CAPS

CONNECTOR SAVERS

CONNECTOR SAVER BACK TO BACK ASSEMBLY

LOW PROFILE METAL SHELL

- Back to back assembly version ($L \geq 50$ mm / 1.970") between flanges.
- Ideal for applications requiring many mating / demating cycles.
- Reduces wear and tear on systems and test equipment.
- Operating temperature: 150°C or 200°C.



IDENTIFICATION CODE

MDA

2

L51

CS

010

1

L

B

B

SERIES

MDA: Micro-D AXON' standard series.

CONNECTOR TYPE

- 1:** Cadmium aluminium shell / **Z:** Black zinc nickel aluminium shell + potting 150°C.
2: Nickel aluminium shell + potting 150°C.
3: Nickel aluminium shell + potting 200°C.
S: Passivated stainless steel shell + potting 200°C.

NUMBER OF CONTACTS

L09, L15, L21, L25, L31, L37, L51.

See pages 26 & 27 for contact arrangements.

PRODUCT TYPE

- CS:** Connector Saver (receptable to plug connector).
DP: Dual Pin connector (plug to plug connector).
DS: Dual Socket connector (receptable to receptacle connector).

BACK TO BACK ASSEMBLY - LENGTH (in cm)

Attention! Wire length in centimetres (1cm = 10mm = .394").

L	$5 \leq L \leq 10$	$10 < L \leq 100$	$L > 100$
in cm (inches)	$1.97 \leq L \leq 3.940$	$3.940 < L \leq 39.40$	$L > 39.40$
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

WIRE TYPE

- 1:** E 2607, AWG 26, 7 strands - 600V.
4: E 2619, AWG 26, 19 strands - 600V.
6: E 2807, AWG 28, 7 strands - 600V.
8: E 3007, AWG 30, 7 strands - 600V.
A: E 2407, AWG 24, 7 strands - 600V.
C: E 2419, AWG 24, 19 strands - 600V.
E: M22759/33, AWG 26, 19 strands - 600V.

See page 29 for wire types.

COLOUR CODE

F: All yellow. - **L:** All white.

1st CONNECTOR HARDWARE

(For CS 1st connector is the female one).

B: No hardware.

C: U-clips with low profile hex socket head jackscrews (removable).

D: U-clips with low profile slot head jackscrews (removable).

M: Low profile hex socket head jackscrews (removable).

N: High profile hex socket head jackscrews (removable).

P: Jackposts (removable).

Px (x: 1 to 5): Panel mount jackposts.

S: Low profile slot head jackscrews (removable).

T: High profile slot head jackscrews (removable).

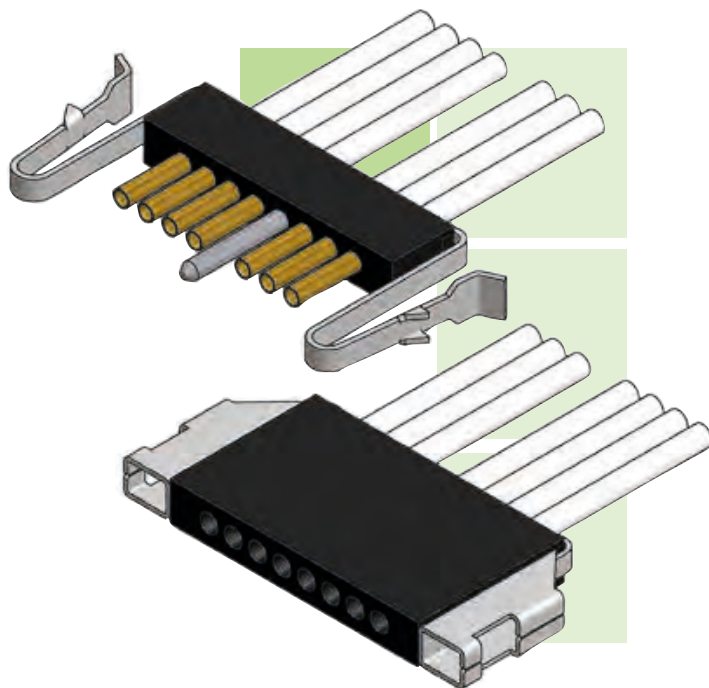
See pages 190 to 200 for hardware description.

2nd CONNECTOR HARDWARE

(For CS 1st connector is the female one).

See 1st connector hardware for the list of choices.

Other hardware available on request



MICROSTRIP CONNECTORS

PIGTAIL & SOLDER CUP ASSEMBLIES

1.27 mm (0.050") PITCH

- Single row plastic connector for space and weight saving applications.
- Guide pin(s) or latch(es) available on female connector (blank cavity(ies) or latch box(es) on male connector).

IDENTIFICATION CODE

MSA P 1 07 S B 4 L 050 G06 L2E

SERIES

MSA: Micro Strip AXON® standard series.

STRIP TYPE

P: LCP shell + potting 150°C.
L: LCP shell + potting 200°C.

NUMBER OF ROWS: 1.

NUMBER OF ELECTRICAL CAVITIES: 02 TO 40.

Mechanical cavities are used for polarization, must not be counted here but can reduce the maximum number of available electrical cavities (see page 134).

CONNECTOR GENDER

P: Male (pin contacts).
S: Female (socket contacts).

MOUNTING HOLE OPTION

A: With mounting holes.
B: No mounting holes.

TERMINATION / WIRE TYPE

For colour code V only

3: M22759/11, AWG26.
19 strands, 600V.

F: E2607, AWG26, 7 strands, 600V.

Solid uninsulated wires

G: AWG 25 gold plated.

T: AWG 24 tin plated.

FS: solder cup.

See page 29 for wire types.

COLOUR CODE

F: All yellow.

L: All white.

V: MIL-STD-681 striped (for wire types 3 and F only).

Blank: If wire type is G, T or FS.

W: 10 colour repeat.

See page 30 for colour code.

WIRE LENGTH (in cm)

BLANK: if wire type is FS.

Attention! Wire length in centimetres (1cm = 10 mm = .394").

POLARIZATION

Blank: None.

G2E: Guide pin / guide hole both ends.

GCE: Guide pin / guide hole centered.

GXX: Guide pin / guide hole in xx position.

L2E: Latch spring / latch box both ends.

LCE: Latch spring / latch box centered.

LXX: Latch spring / latch box in xx position.

L	5 ≤ L ≤ 10	10 < L ≤ 100	L > 100
in cm (inches)	1.97 ≤ L ≤ 3.940	3.940 < L ≤ 39.40	L > 39.40
TOLERANCE	-0 / +0.5	-0 / +3	-0 / +5
in cm (inches)	-0 / +0.200	-0 / +1.180	-0 / +1.970

IF NEEDED, YOU CAN COMBINE SEVERAL HARDWARE OPTIONS

EXAMPLES:

- 2 GUIDE-PINS OR LATCH-SPRINGS AT 2 PARTICULAR POSITIONS: MSAP109SB4L025 **G02 G08** (OR **L02 L08**)
- 1 GUIDE-HOLE CENTERED + 1 LATCH-BOX AT A PARTICULAR POSITION: MSAP112PAR2T3 **GCE L07**
- 1 GUIDE-PIN CENTERED + LATCH-SPRINGS BOTH ENDS: MSAL117SACF012 **GCE L2E**

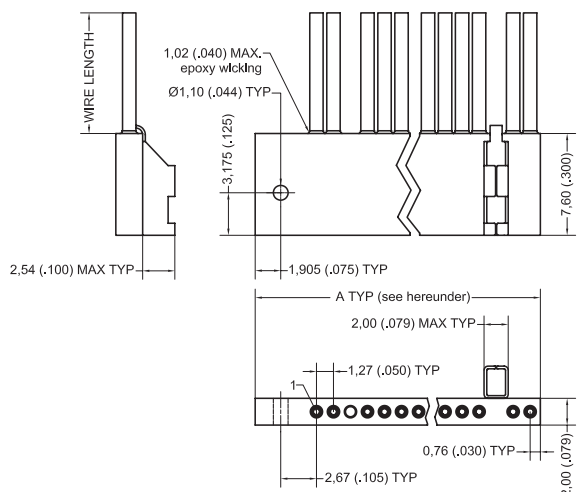
ONLY 2 RULES TO BUILD YOUR P/N:

- DEFINE ALL GUIDE PIN CODES FIRST, FOLLOWED BY LATCH CODES
- DEFINE STANDARD CODES (G2E / GCE / L2E / LCE) FIRST, FOLLOWED BY SPECIFIC POSITION CODES (GXX / LXX) AFTERWARDS

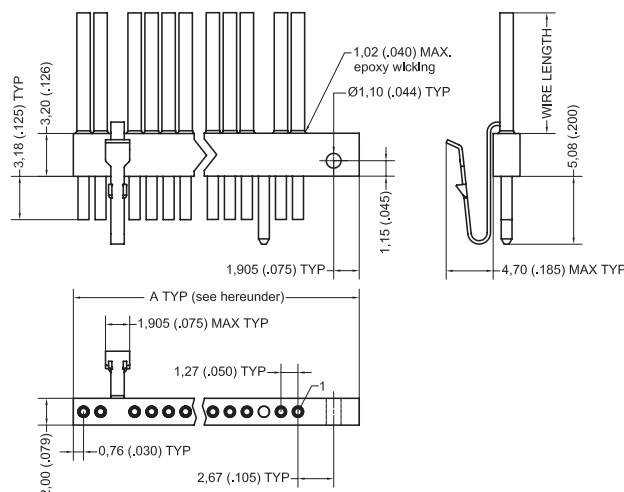
DIMENSIONS

Dimensions are in millimetres (inches).

MALE MICRO STRIP CONNECTOR



FEMALE MICRO STRIP CONNECTOR



TO DETERMINE CONNECTOR WIDTH A ± 0.3 mm (.012")

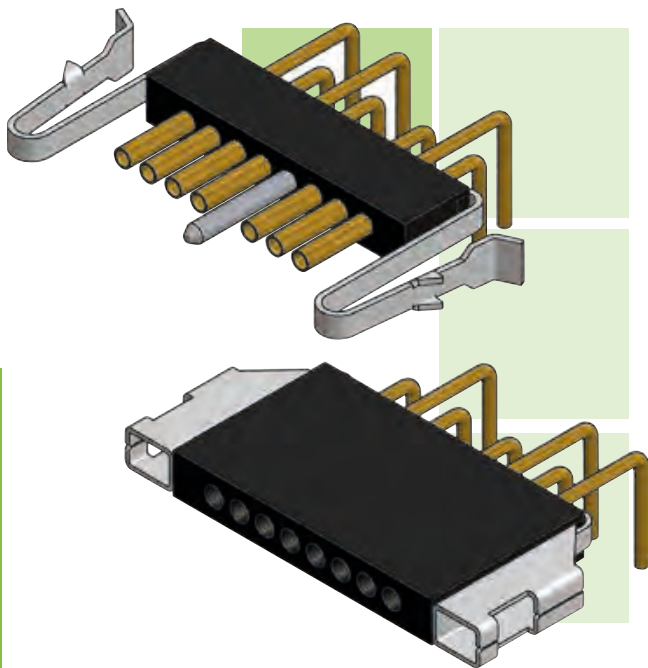
	EXAMPLE: 11 CAVITY STRIP WITH MOUNTING HOLES
MULTIPLY the number of mechanical cavities in one row by 1.27 mm (.050")	11 x 1.27 = 13.97
ADD 0.25 mm (.010")	+ 0.25 = 14.22
ADD 7.62 mm (.300") if mounting hole option is selected	+ 7.62 = 21.84

- For detailed information concerning microstrip connectors, see pages 134 to 136.

SUMMARY OF CHARACTERISTICS

ELECTRICAL & MECHANICAL PERFORMANCE		MATERIAL & FINISH	
CURRENT RATING	3 A max.	SHELL	Liquid Crystal Polymer (LCP)
CONTACT RESISTANCE	8 mΩ max.	PIN CONTACT	Copper and Beryllium copper, gold over nickel plating
INSULATION RESISTANCE	5000 MΩ min. @ 500 V _{DC}	SOCKET CONTACT	Copper alloy, gold over nickel plating
DIELECTRIC WITHSTANDING VOLTAGE	Sea level: 600 V _{AC} Altitude 21 km (70,000 ft): 150 V _{AC}	ENCAPSULANT	Epoxy resin
CONTACT ENGAGING FORCE	170 g max. (6 oz)	GUIDE PIN	300 series stainless steel, passivated
CONTACT SEPARATING FORCE	14 g min. (0.5 oz)	LATCH	Beryllium copper, nickel plating
CONTACT RETENTION	2.26 kg (5 lbs)		
DURABILITY	500 mating cycles min.		

SEE PAGE 24 FOR MORE INFORMATION



MICROSTRIP CONNECTORS

PCB CONNECTOR

1.27 mm (0.050") PITCH

- Single row plastic connector for space and weight saving applications.
- Guide pin(s) or latch(es) available on female connector (blank cavity(ies) or latch box(es) on male connector).

IDENTIFICATION CODE

MSA P 1 07 S B R3 G 2 G06 L2E

SERIES

MSA: Micro Strip AXON® standard series.

STRIP TYPE

P: LCP shell + potting 150°C.
L: LCP shell + potting 200°C.

NUMBER OF ROWS: 1.

NUMBER OF ELECTRICAL CAVITIES: 02 TO 40.

Mechanical cavities are used for polarization, must not be counted here but can reduce the maximum number of available electrical cavities (see page 134).

CONNECTOR GENDER

P: Male (pin contacts).
S: Female (socket contacts).

MOUNTING HOLE OPTION

A: with mounting holes.
B: No mounting holes.

VERSION TYPE

S1: Straight.
S2: Straight, 2.54 mm (0.100") offset.
R1: Right-angle in line.
R2: Right-angle, 1.27 mm (0.050") offset.
R3: Right-angle, 2.54 mm (0.100") offset.

CONDUCTOR TYPE

G: Solid conductor 25 AWG, gold plated.
T: Solid conductor 24 AWG, tin plated.
See page 29 for wire types.

TAIL LENGTH

1: 2.80 mm (0.110").
2: 3.80 mm (0.150").
3: 4.80 mm (0.190").
4: 6.35 mm (0.250").

Tolerance: ± 0.38 mm (0.015").
Other lengths upon request.

POLARIZATION

BLANK: NONE.
G2E: GUIDE PIN / GUIDE HOLE BOTH ENDS.
GCE: GUIDE PIN / GUIDE HOLE CENTERED.
GXX: GUIDE PIN / GUIDE HOLE IN XX POSITION.
L2E: LATCH SPRING / LATCH BOX BOTH ENDS.
LCE: LATCH SPRING / LATCH BOX CENTERED.
LXX: LATCH SPRING / LATCH BOX IN XX POSITION.

IF NEEDED, YOU CAN COMBINE SEVERAL HARDWARE OPTIONS

EXAMPLES:

- 2 GUIDE-PINS OR LATCH-SPRINGS AT 2 PARTICULAR POSITIONS: MSAP109SB4L025 **G02 G08** (OR **L02 L08**)
- 1 GUIDE-HOLE CENTERED + 1 LATCH-BOX AT A PARTICULAR POSITION: MSAP112PAR2T3 **GCE L07**
- 1 GUIDE-PIN CENTERED + LATCH-SPRINGS BOTH ENDS: MSAL117SACF012 **GCE L2E**

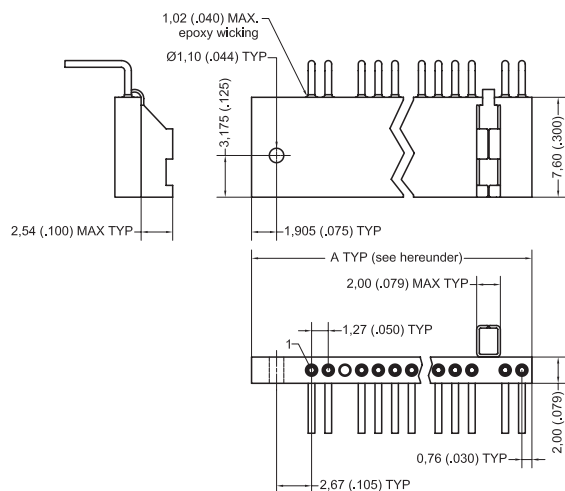
ONLY 2 RULES TO BUILD YOUR P/N:

- DEFINE ALL GUIDE PIN CODES FIRST, FOLLOWED BY LATCH CODES
- DEFINE STANDARD CODES (G2E / GCE / L2E / LCE) FIRST, FOLLOWED BY SPECIFIC POSITION CODES (GXX / LXX) AFTERWARDS

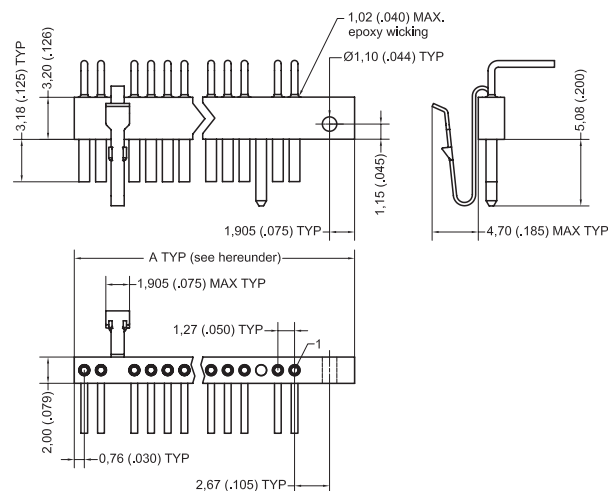
DIMENSIONS

Dimensions are in millimetres (inches).

MALE MICRO STRIP CONNECTOR



FEMALE MICRO STRIP CONNECTOR



SEE CONTACT LAYOUT ON PCB PAGES 137 / 138 / 139.

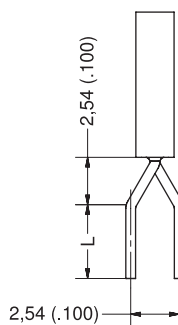
TO DETERMINE CONNECTOR WIDTH A ± 0.3 mm (.012")

	EXAMPLE: 11 CAVITY STRIP WITH MOUNTING HOLES
MULTIPLY the number of mechanical cavities in one row by 1.27 mm (.050")	11 x 1.27 = 13.97
ADD 0.25 mm (.010")	+ 0.25 = 14.22
ADD 7.62 mm (.300") if mounting hole option is selected	+ 7.62 = 21.84

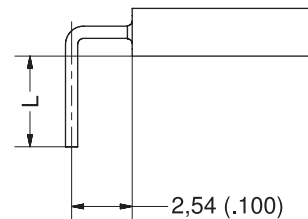
► For detailed information concerning microstrip connectors, see pages 134 to 136.



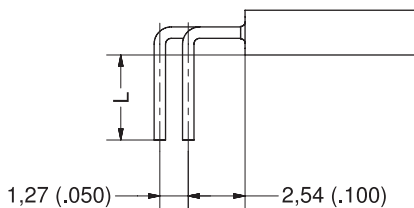
VERSION S1
STRAIGHT



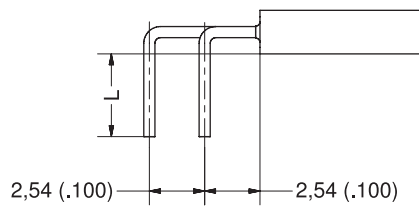
VERSION S2
STRAIGHT, .100" OFFSET



VERSION R1
RIGHT ANGLE, IN LINE



VERSION R2
RIGHT ANGLE, .050" OFFSET



VERSION R3
RIGHT ANGLE, .100" OFFSET

MICROSTRIP GENERAL INFORMATION

► All cavities used, whether for electrical (pin or socket) contacts or for hardware options, (guide pin or latch) are considered as mechanical positions.

- G2E & L2E: 2 mechanical positions to count.
- GCE & LCE: 1 mechanical position to count.
- Gxx & Lxx: 1 mechanical position to count for each occurrence.

NB: If G2E or L2E are chosen, first and last cavities cannot be used for another polarization option (ex: if L2E is chosen, guide pin in position 1 is not possible)

► When specifying the number of ways, only electrical positions (cavities containing pin or socket contacts) are counted.

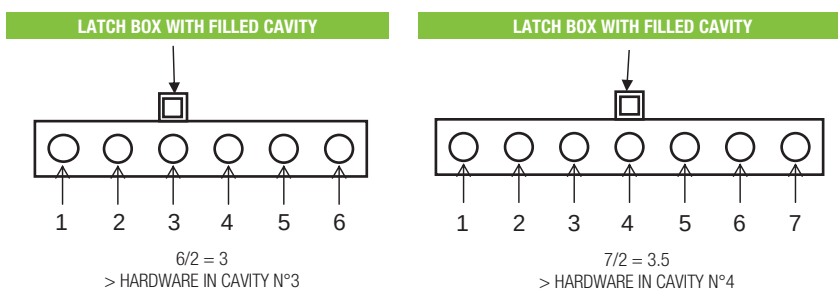
Example: a 7 way strip with 2 latches at the end and a guide pin would have 10 mechanical positions, but would still be called a 7 way connector.

TO DETERMINE CONNECTOR WIDTH $A \pm 0.3 \text{ mm } (.012")$

	EXAMPLE: 11 CAVITY STRIP WITH MOUNTING HOLES
MULTIPLY the number of mechanical cavities in one row by 1.27 mm (.050")	$11 \times 1.27 = 13.97$
ADD 0.25 mm (.010")	$+ 0.25 = 14.22$
ADD 7.62 mm (.300") if mounting hole option is selected	$+ 7.62 = 21.84$

► To determine hardware location number for centered hardware (GCE / LCE):

- Divide the total number of mechanical cavities by two.
- Round to the next whole number if result is a fraction.



► Hardware options

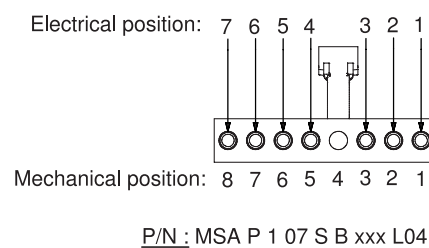
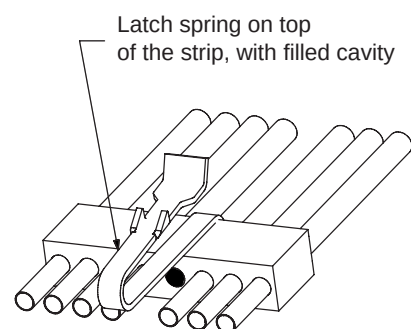
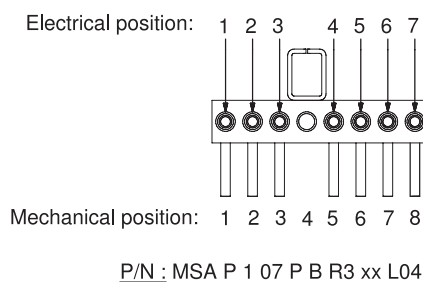
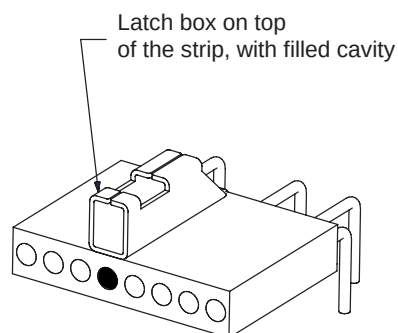
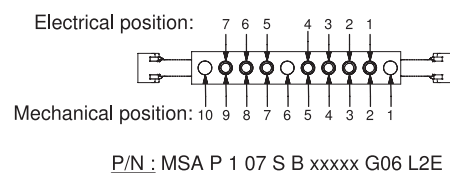
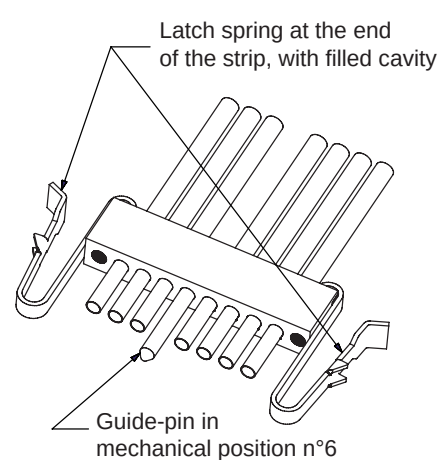
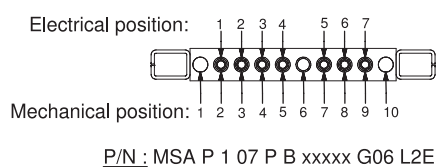
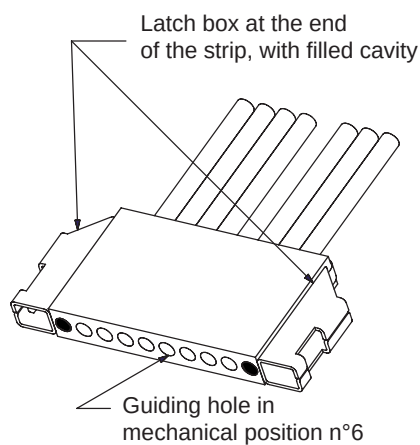
POLARIZATION BY GUIDE PIN

The guide pin is inserted into the female connector, and there is a guide hole in the opposite cavity in the male connector.

LATCHED RETENTION

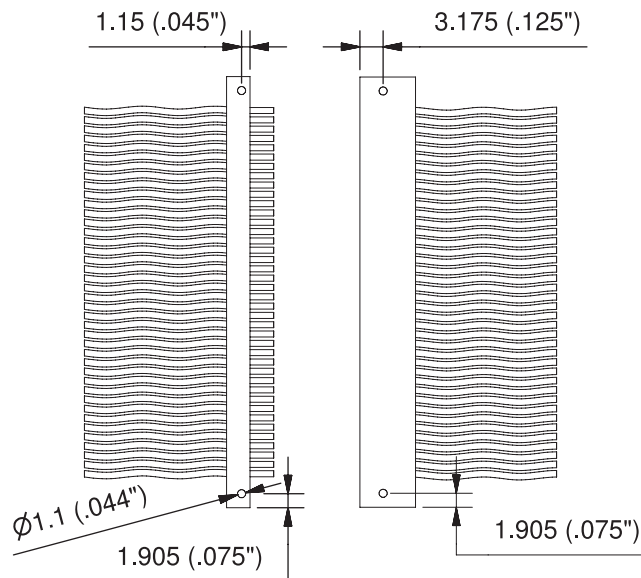
The latch spring is mounted on the female connector, with the corresponding latch box installed on the male connector. When the first and/or last mechanical positions are chosen for the latches they will be mounted on the connector edges, making the connector wider but not longer. For all other positions the latches will be mounted on top of the connector, directly above the corresponding mechanical position. Wherever a latch is fitted the corresponding cavity will be filled, and therefore mechanical only in function.

EXAMPLES



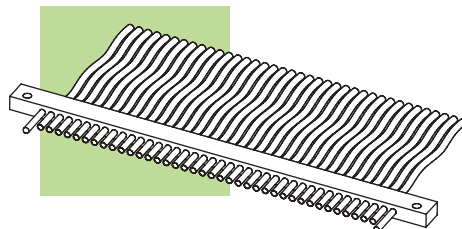
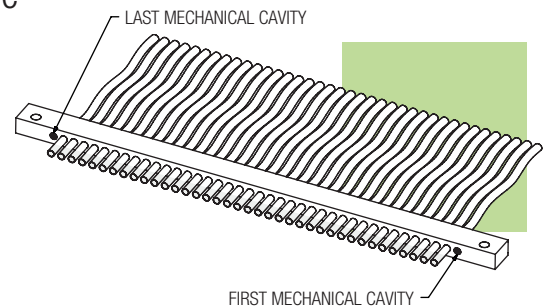
MOUNTING HOLES OPTION

Position of holes



Special case: mounting holes + hardware

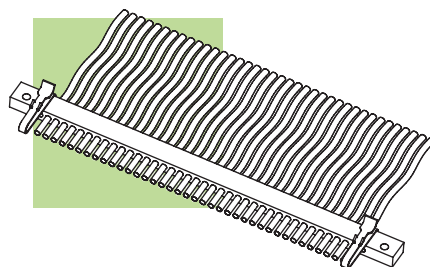
When mounting holes are selected, first and last mechanical cavities are "after the holes area".



EXAMPLE WITH GUIDE PIN

Hardware code G2E

Guide pin / guide holes to be in first and last mechanical cavities.



EXAMPLE WITH LATCHING

Hardware code L2E

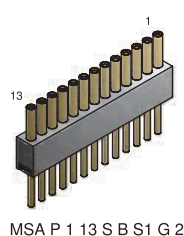
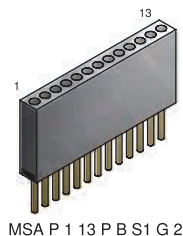
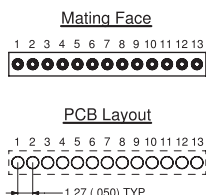
Latch spring / latch box to be above first and last mechanical cavities, not on the edges of the strip.

PCB LAYOUT FOR MICROSTRIP CONNECTORS

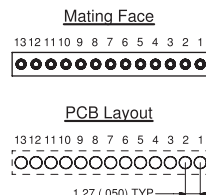
VERSION S1: STRAIGHT

EXAMPLE OF A 13 WAY CONNECTOR

MALE MICROSTRIP CONNECTOR

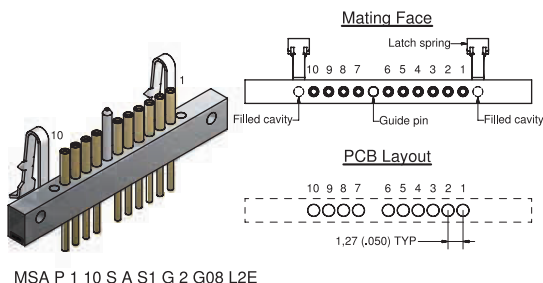
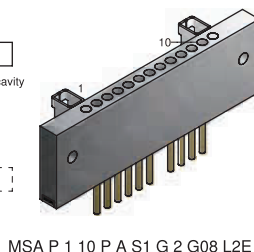
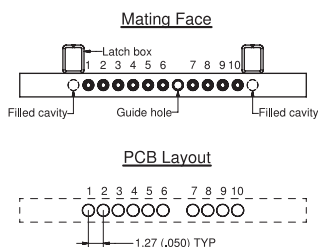


FEMALE MICROSTRIP CONNECTOR



EXAMPLE OF A 10 WAY CONNECTOR WITH GUIDE-PIN, LATCHES AND MOUNTING HOLES

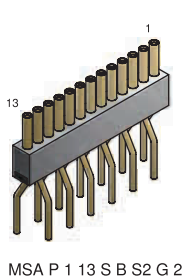
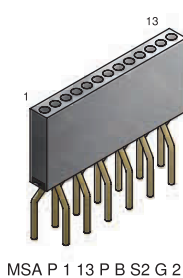
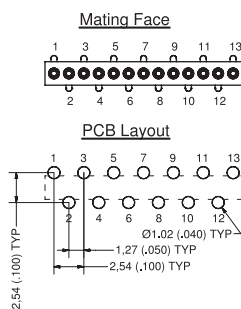
MALE MICROSTRIP CONNECTOR



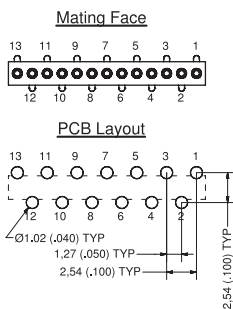
VERSION S2: STRAIGHT - .100" OFFSET

EXAMPLE OF A 13 WAY CONNECTOR

MALE MICROSTRIP CONNECTOR

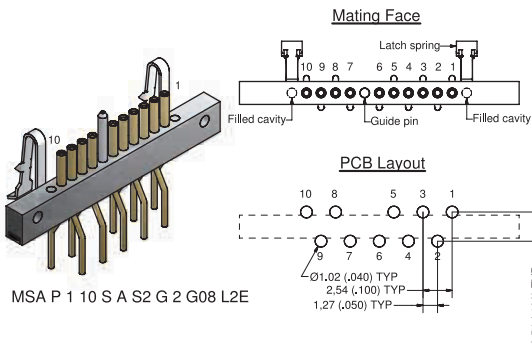
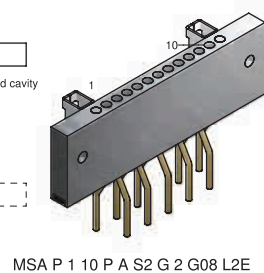
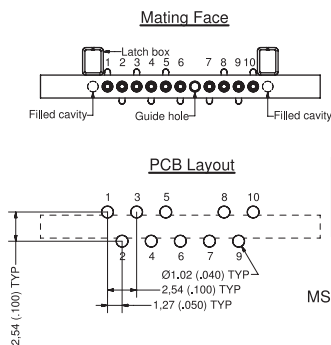


FEMALE MICROSTRIP CONNECTOR



EXAMPLE OF A 10 WAY CONNECTOR WITH GUIDE-PIN, LATCHES AND MOUNTING HOLES

MALE MICROSTRIP CONNECTOR

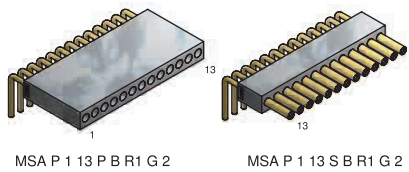
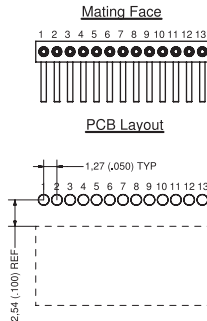


PCB LAYOUT FOR MICROSTRIP CONNECTORS

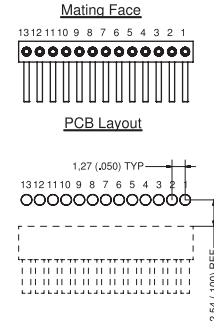
VERSION R1: RIGHT ANGLE IN LINE

EXAMPLE OF A 13 WAY CONNECTOR

MALE MICROSTRIP CONNECTOR

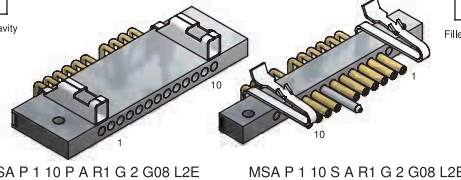
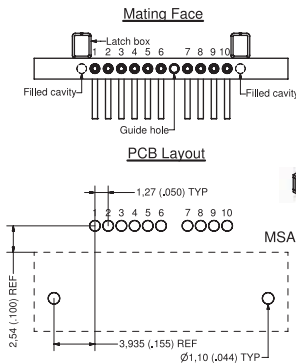


FEMALE MICROSTRIP CONNECTOR

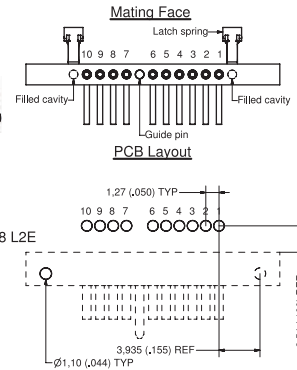


EXAMPLE OF A 10 WAY CONNECTOR WITH GUIDE-PIN, LATCHES AND MOUNTING HOLES

MALE MICROSTRIP CONNECTOR



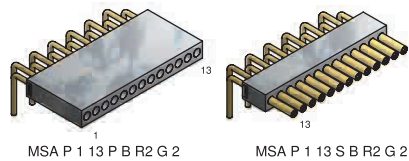
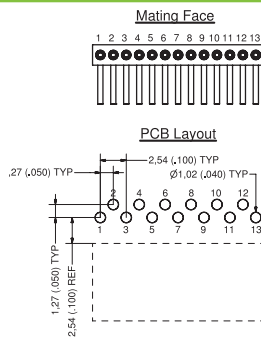
FEMALE MICROSTRIP CONNECTOR



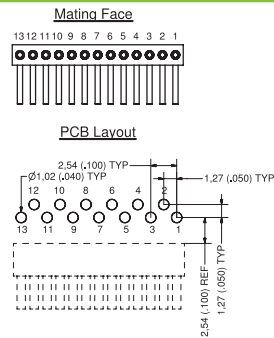
VERSION R2: RIGHT ANGLE, .050" OFFSET

EXAMPLE OF A 13 WAY CONNECTOR

MALE MICROSTRIP CONNECTOR

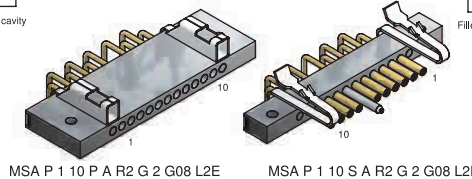
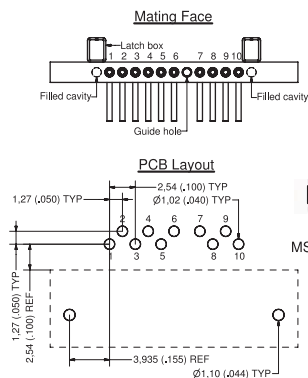


FEMALE MICROSTRIP CONNECTOR

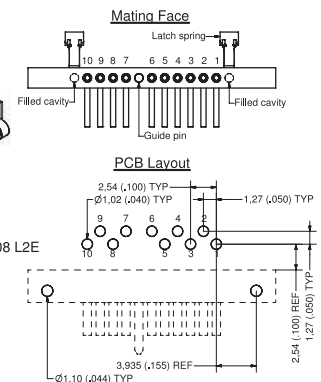


EXAMPLE OF A 10 WAY CONNECTOR WITH GUIDE-PIN, LATCHES AND MOUNTING HOLES

MALE MICROSTRIP CONNECTOR



FEMALE MICROSTRIP CONNECTOR

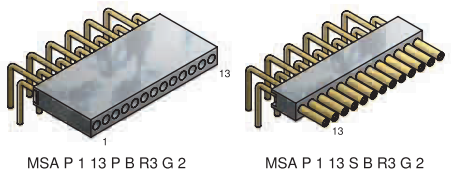
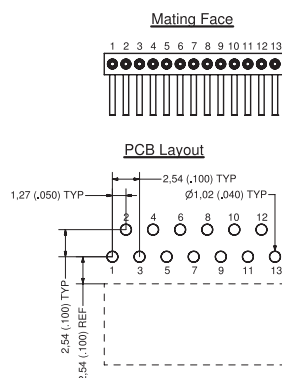


PCB LAYOUT FOR MICROSTRIP CONNECTORS

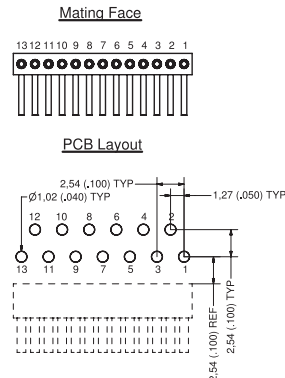
VERSION R3: RIGHT ANGLE .100" OFFSET

EXAMPLE OF A 13 WAY CONNECTOR

MALE MICROSTRIP CONNECTOR

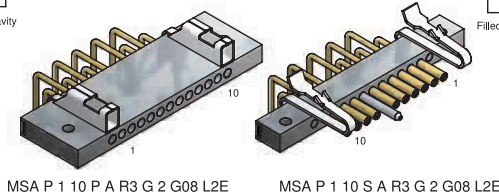
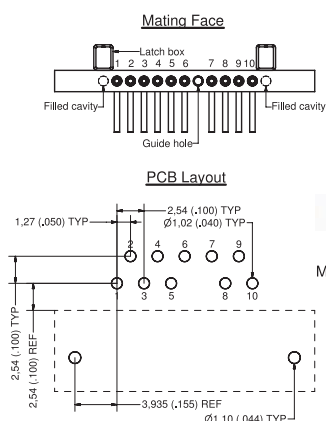


FEMALE MICROSTRIP CONNECTOR

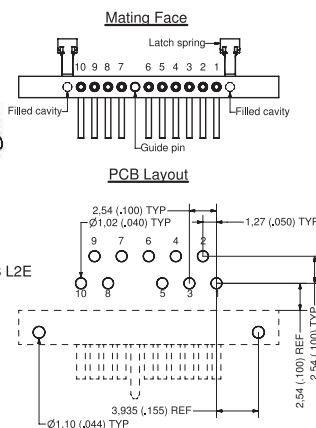


EXAMPLE OF A 10 WAY CONNECTOR WITH GUIDE-PIN, LATCHES AND MOUNTING HOLES

MALE MICROSTRIP CONNECTOR



FEMALE MICROSTRIP CONNECTOR



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TEL.: +1 847 230 7800
FAX: +1 847 230 7849
e-mail: sales@axoncable.com

30.86 (1.215)

0.17 (.007)

REF

1.3 (.05) TYP

3 (.118) TYP

4 (.096) TYP

1.09 (.043)

REF

6.37 (.250)

TYP

1.02 (.040) TYP

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