CONNECTORS, ELECTRICAL, RECTANGULAR, MICROMINIATURE, WITH NON-REMOVABLE POWER CONTACTS

BASED ON TYPE MMCS

ESCC Detail Specification No. 3401/092

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DCR No.	CHANGE DESCRIPTION

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1 GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for Electrical, Rectangular, Microminiature Connectors with Non-Removable Power Contacts, based on type MMCS.

It shall be read in conjunction with:

- ESCC Generic Specification No. 3401, Connectors, Electrical, Rectangular and Circular.
- ESCC Detail Specification No. 3401/093, Connectors, Electrical, Rectangular, Microminiature, (for Removable Power Contacts), based on type MMCSA.
- ESCC Detail Specification No. 3401/094, Contacts, Electrical, Power, Crimp and Accessories (for 3401/093 Connectors) based on type MMCSA
- ESCC Detail Specification No. 3401/032, Accessories for Connectors, Microminiature 3401/029, 3401/077 and Connector Savers 3401/041.

the requirements of which are supplemented herein.

1.2 COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

The component type variants and range of components applicable to this specification are as given in Table 1(a).

1.3 MAXIMUM RATINGS

The maximum ratings, which shall not be exceeded at any time during use or storage, applicable to the components specified herein, are given in Table 1(b).

1.4 PARAMETER DERATING INFORMATION

The derating information applicable to the components specified herein is shown in Figure 1.

1.5 PHYSICAL DIMENSIONS

The physical characteristics of the components specified herein are shown in Figure 2.

1.6 CONTACT ARRANGEMENTS

Contact arrangements are shown in Figure 3.

TABLE 1(a) – COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

Variant Number	Description (Note 1)	Mateable Connectors (ESCC Component Number) (Notes 2, 3)	Weight Max (g) (Note 4)
01	MMCS, Right-Angle PCB Connector without hardware: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109205B 340109302B	9 (4 Way) 15.6 (8 Way)
02	MMCS, Right-Angle PCB Connector with D-Click Latch Posts: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109303B	10.3 (4 Way) 16.9 (8 Way)
03	MMCS, Straight PCB Connector without hardware: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109205B 340109302B	6.9 (4 Way) 12.5 (8 Way)
04	MMCS, Straight PCB Connector with D-Click Latch Posts: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109303B	8.3 (4 Way) 13.9 (8 Way)
05	MMCS, Pigtail Connector without hardware: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109201B 340109203B 340109205B 340109302B	8.5 (4 Way) 18 (8 Way)
06	MMCS, Pigtail Connector with D-Click Latch Posts: Plug with Non-removable Female Power Contacts or Receptacle with Non-removable Male Power Contacts, 4 & 8 Way	340109303B	9.9 (4 Way) 19.4 (8 Way)

NOTES:

1. The available configurations of each of the above Variants also include various termination types, and various mounting and locking types; see Figure 2 and Para. 4.5.2.1 for details.
2. The full ESCC Component Numbers of the mateable connectors will also include all the appropriate characteristic codes for each referenced Variant.
3. In accordance with this specification or ESCC Detail Specification No. 3401/093.
4. The specified maximum weight applies only to the connector with contacts, and the included hardware where applicable, without termination wires (for Variants 05, 06). The weight of the termination wires for Variants 05, 06 is as specified in the applicable ESCC Detail Specification (see Para. 4.5.2.1(c)).

TABLE 1(b) - MAXIMUM RATINGS

No.	Characteristic	Symbol	Maximum Rating	Unit	Remarks
1	Working Voltage	U_R	250	Vrms	Notes 1, 2
2	Rated Current (per contact)	I_R	40	A	$T_{amb} \leq 80°C$ Notes 2, 3
3	Operating Temperature Range	T_{op}	-55 to +150	°C	-
4	Storage Temperature Range	T_{stg}	-55 to +150	°C	-
5	Soldering Temperature	T_{sol}	+316	°C	Note 4

NOTES:

1. Between each contact, and contacts and shell.
2. See Figure 1.
3. Current may be limited by the termination wire derating or the PCB, as applicable.
4. 10s maximum. For Variants 01 to 04 only.

FIGURE 1 - PARAMETER DERATING INFORMATION

FIGURE 1(a) – WORKING VOLTAGE VERSUS ALTITUDE

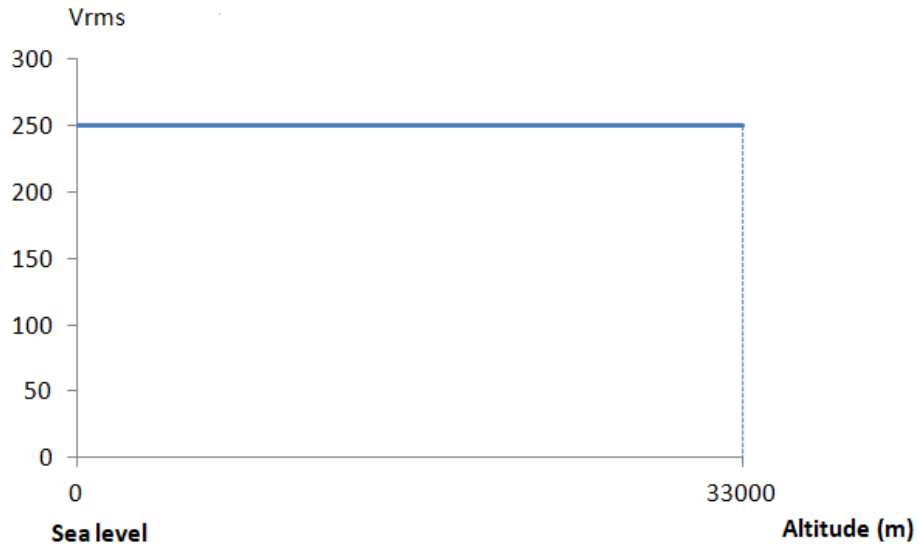


FIGURE 1(b) – RATED CURRENT VERSUS OPERATING TEMPERATURE

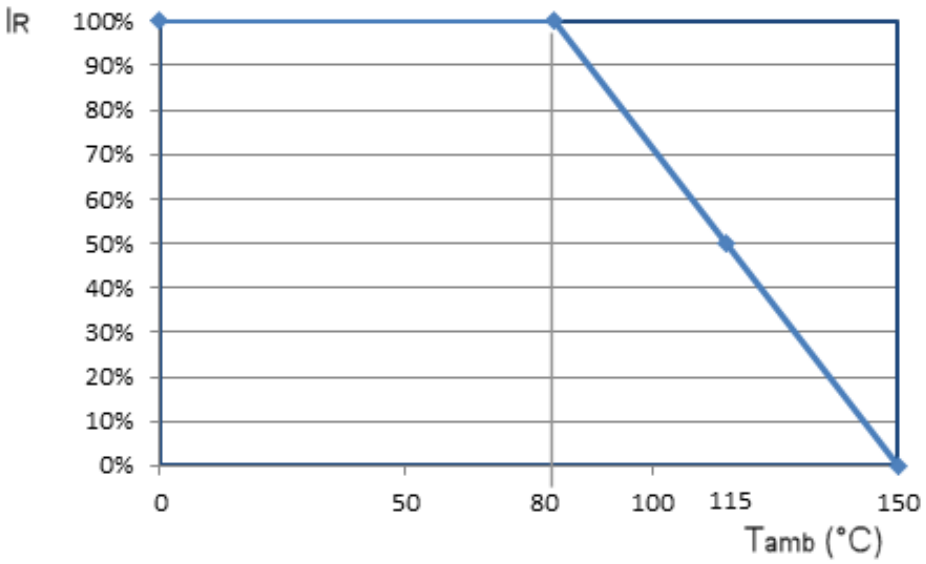
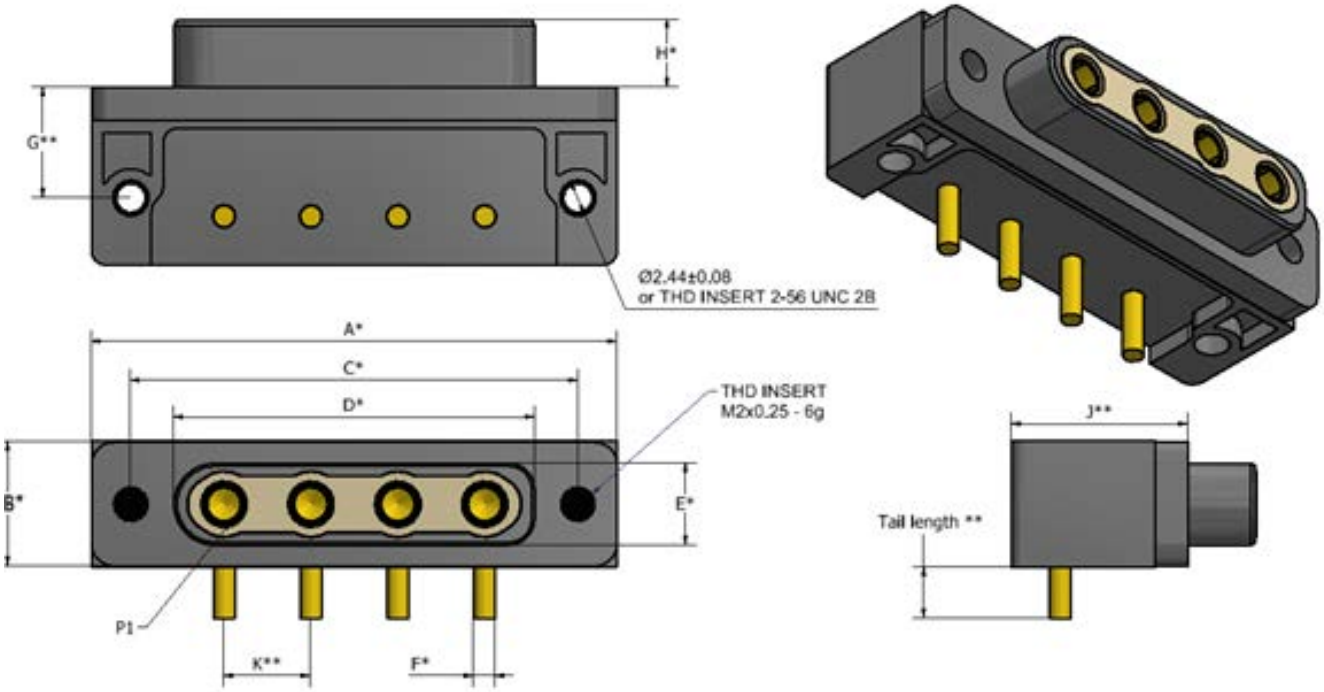


FIGURE 2 - PHYSICAL DIMENSIONS

FIGURE 2.1.1 – VARIANT 01 - MMCS, RIGHT-ANGLE PCB CONNECTOR WITHOUT HARDWARE, PLUG WITH NON-REMOVABLE FEMALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



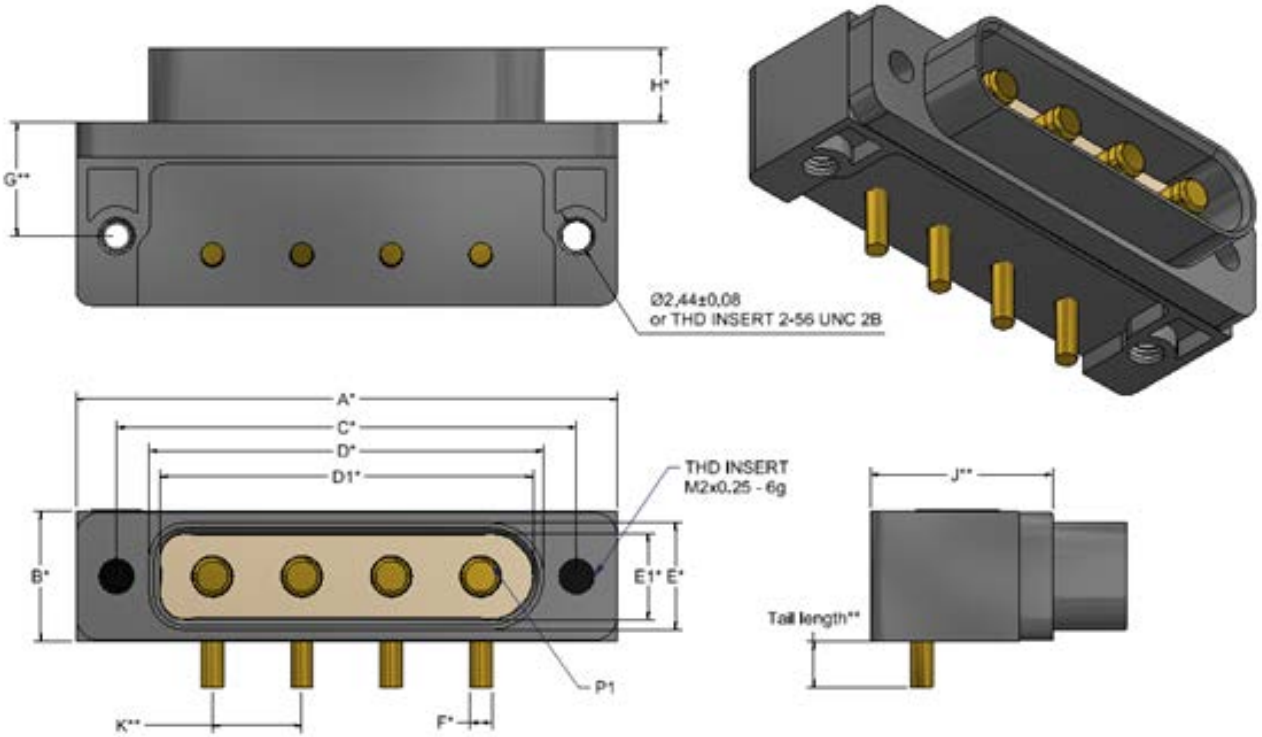
Ways	Dimensions (mm)												
	A	B	C		D	E	F		G		H	J	K
	Max	Max	Min	Max	Max	Max	Min	Max	Min	Max	Max	Max	BSC
4	36.5	8.85	30.81	30.91	24.96	5.72	1.45	1.55	7.43	7.79	4.72	12.43	6
8	60.5	8.85	54.81	54.91	48.96	5.72	1.45	1.55	7.43	7.79	4.72	12.43	6

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. Torque:
   - For locking threaded insert: 0.44 to 0.48Nm
   - For PCB mounting with threaded insert option: 0.1 to 0.14Nm
4. For the contacts' position in the shell, see Figure 2.8.
5. For PCB layout: see Figure 2.9. This connector shall be mounted on the edge of the PCB.
6. For PCB termination tail length, see Figure 2.10.
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.1.2 – VARIANT 01 - MMCS, RIGHT-ANGLE PCB CONNECTOR WITHOUT HARDWARE, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



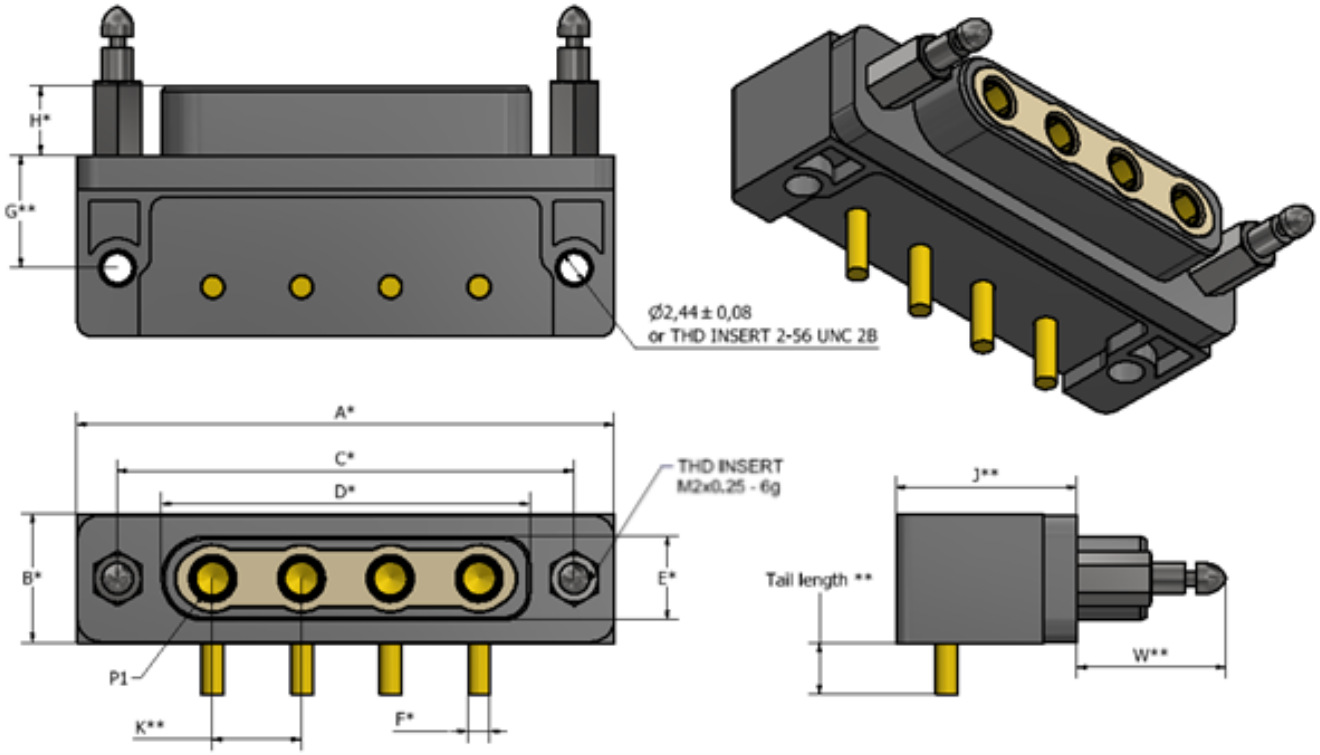
Ways	Dimensions (mm)														
	A	B	C		D	D1	E	E1	F		G		H	J	K
	Max	Max	Min	Max	Max	Min	Max	Min	Min	Max	Min	Max	Max	Max	BSC
4	36.5	8.85	30.81	30.91	26.51	25.04	7.22	5.75	1.45	1.55	7.43	7.79	5.05	12.43	6
8	60.5	8.85	54.81	54.91	50.51	49.04	7.22	5.75	1.45	1.55	7.43	7.79	5.05	12.43	6

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. Torque:
   - For locking threaded insert: 0.44 to 0.48Nm
   - For PCB mounting with threaded insert option: 0.1 to 0.14Nm
4. For PCB layout: see Figure 2.9. This connector shall be mounted on the edge of the PCB.
5. For PCB termination tail length, see Figure 2.10.
6. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.2.1 – VARIANT 02 - MMCS, RIGHT-ANGLE PCB CONNECTOR WITH D-CLICK LATCH POSTS, PLUG WITH NON-REMOVABLE FEMALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



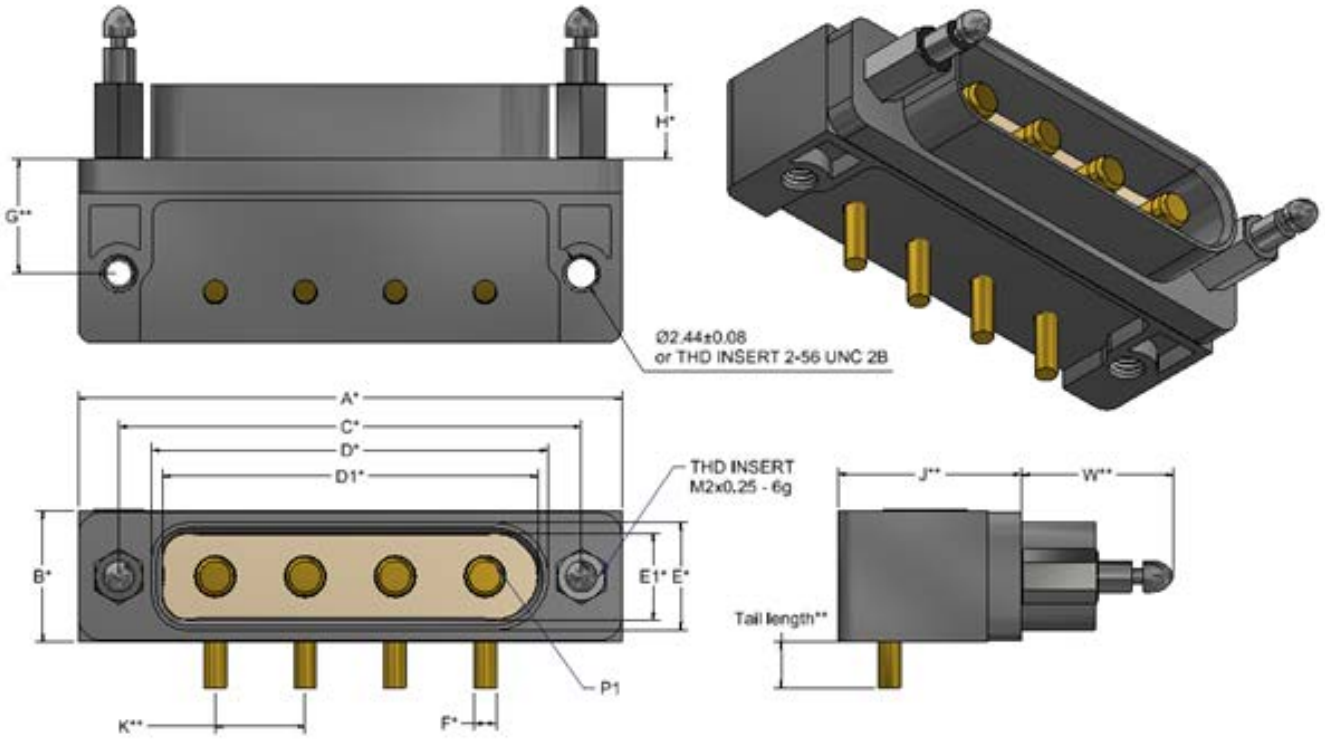
Ways	Dimensions (mm)													
	A	B	C		D	E	F		G		H	J	K	W
	Max	Max	Min	Max	Max	Max	Min	Max	Min	Max	Max	Max	BSC	Max
4	36.5	8.85	30.81	30.91	24.96	5.72	1.45	1.55	7.43	7.79	4.72	12.43	6	10.33
8	60.5	8.85	54.81	54.91	48.96	5.72	1.45	1.55	7.43	7.79	4.72	12.43	6	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque:
   - For D-Click latch post/locking threaded insert: 0.34 to 0.44Nm
   - For PCB mounting with threaded insert option: 0.1 to 0.14Nm
3. For the contacts' position in the shell, see Figure 2.8.
4. For PCB layout: see Figure 2.9. This connector shall be mounted on the edge of the PCB.
5. For PCB termination tail length, see Figure 2.10.
6. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), codes G, H). See Figure 2.13 for alternative D-Click latch post for rear panel mounting (see Para. 4.5.2.1(d), codes G1 to G5, H1 to H5).
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.2.2 – VARIANT 02 - MMCS, RIGHT-ANGLE PCB CONNECTOR WITH D-CLICK LATCH POSTS, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



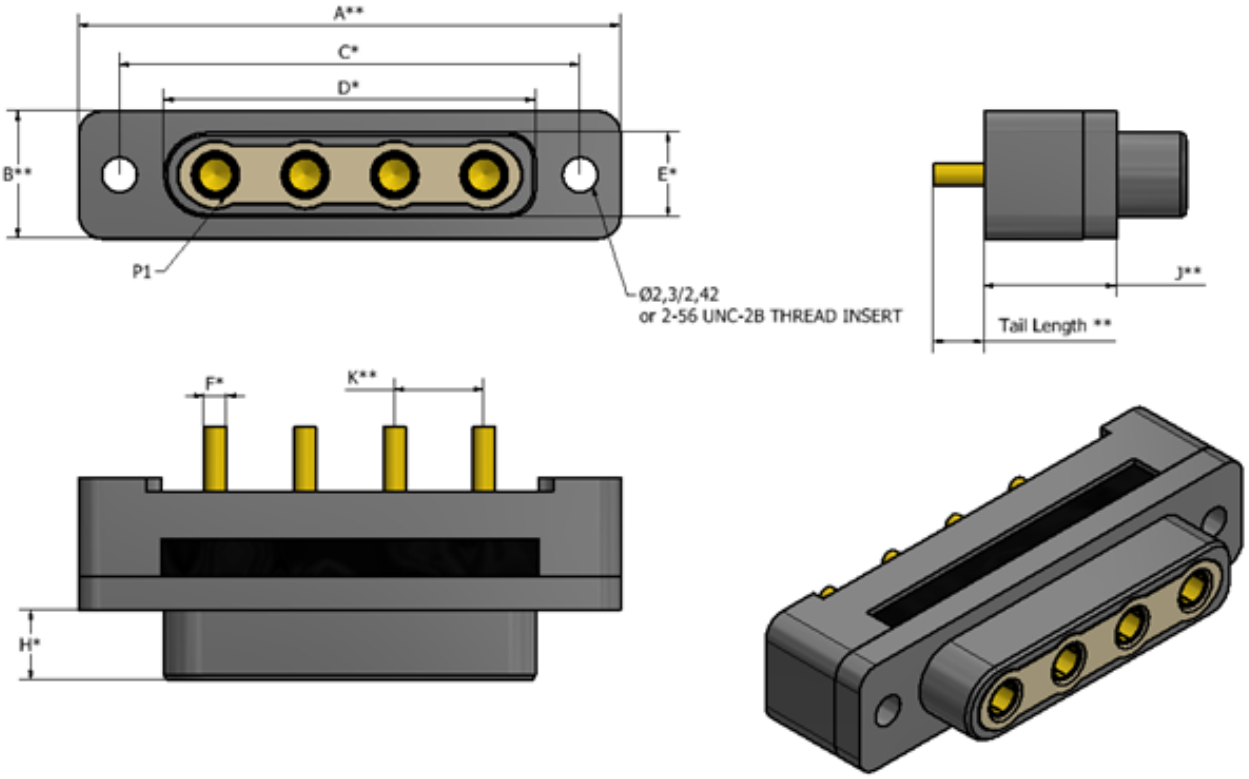
Ways	Dimensions (mm)															
	A	B	C		D	D1	E	E1	F		G		H	J	K	W
	Max	Max	Min	Max	Max	Min	Max	Min	Min	Max	Min	Max	Max	Max	BSC	Max
4	36.5	8.85	30.81	30.91	26.51	25.04	7.22	5.75	1.45	1.55	7.43	7.79	5.05	12.43	6	10.33
8	60.5	8.85	54.81	54.91	50.51	49.04	7.22	5.75	1.45	1.55	7.43	7.79	5.05	12.43	6	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque:
   - For D-Click latch post/locking threaded insert: 0.34 to 0.44Nm
   - For PCB mounting with threaded insert option: 0.1 to 0.14Nm
3. For the contacts' position in the shell, see Figure 2.8.
4. For PCB layout: see Figure 2.9. This connector shall be mounted on the edge of the PCB.
5. For PCB termination tail length, see Figure 2.10.
6. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), codes G, H). See Figure 2.13 for alternative D-Click latch posts for rear panel mounting options (see Para. 4.5.2.1(d), codes G1 to G5, H1 to H5).
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.3.1 – VARIANT 03 - MMCS, STRAIGHT PCB CONNECTOR WITHOUT HARDWARE, PLUG WITH NON REMOVABLE FEMALE POWER CONTACTS 4 & 8 WAY

EXAMPLE: 4 WAY



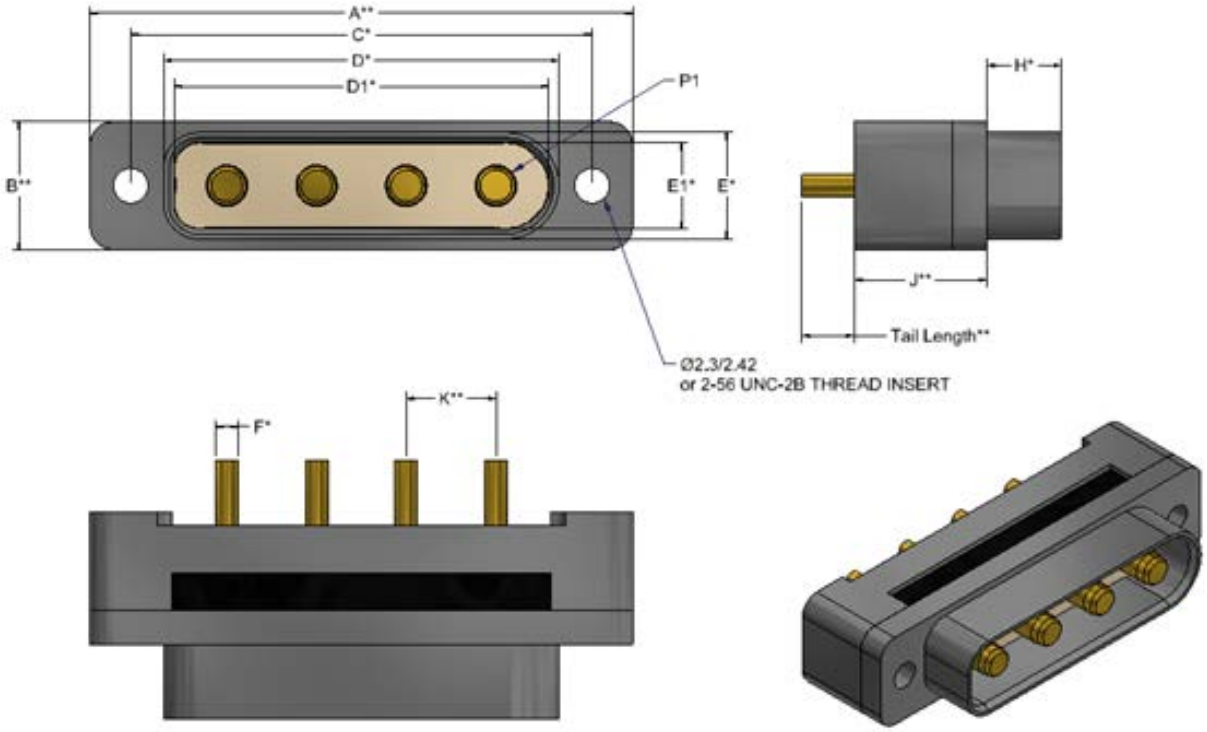
Ways	Dimensions (mm)										
	A	B	C		D	E	F		H	J	K
	Max	Max	Min	Max	Max	Max	Min	Max	Max	Max	BSC
4	36.5	8.75	30.81	30.91	24.96	5.72	1.45	1.55	4.72	9.03	6
8	60.5	8.75	54.81	54.91	48.96	5.72	1.45	1.55	4.72	9.03	6

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. Torque: For locking/PCB mounting with threaded insert option: 0.1 to 0.14Nm
4. For the contacts' position in the shell, see Figure 2.8.
5. For PCB layout: see Figure 2.9.
6. For PCB termination tail length, see Figure 2.10.
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.3.2 – VARIANT 03 - MMCS, STRAIGHT PCB CONNECTOR WITHOUT HARDWARE, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



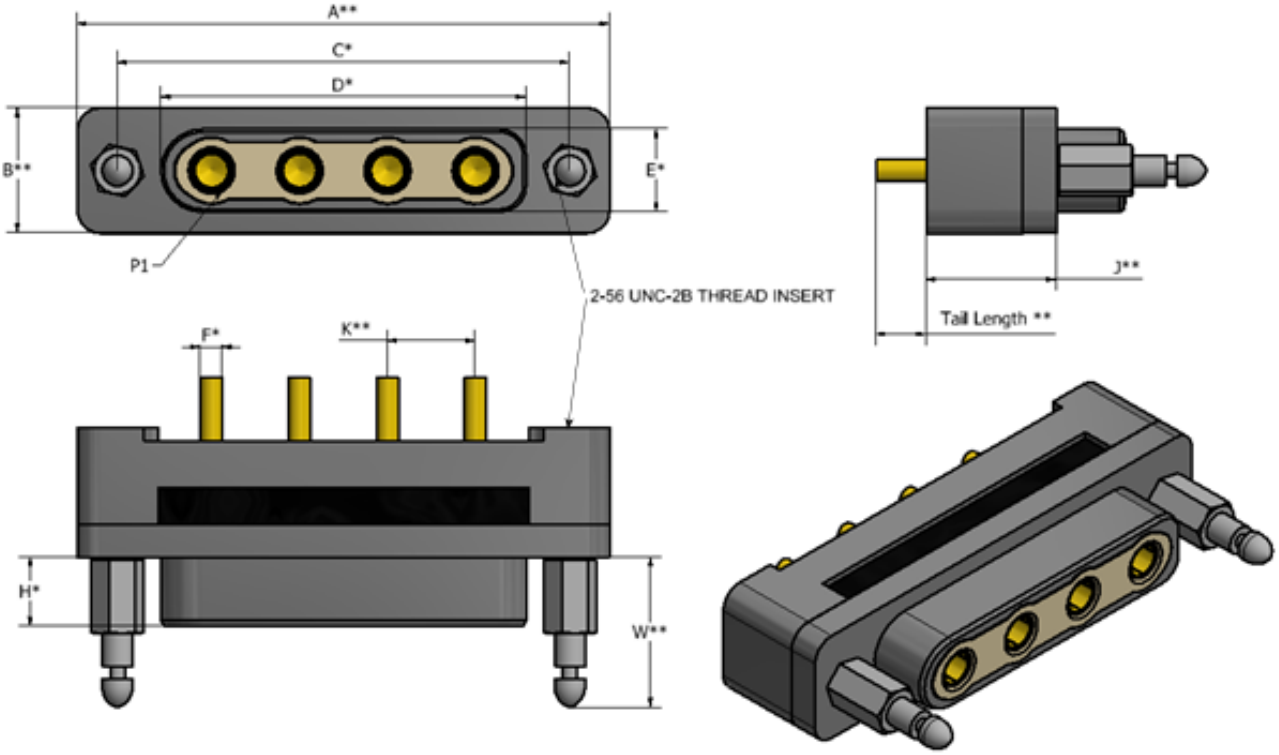
Ways	Dimensions (mm)												
	A	B	C		D	D1	E	E1	F		H	J	K
	Max	Max	Min	Max	Max	Min	Max	Min	Min	Max	Max	Max	BSC
4	36.5	8.75	30.81	30.91	26.51	25.04	7.22	5.75	1.45	1.55	5.05	9.03	6
8	60.5	8.75	54.81	54.91	50.51	49.04	7.22	5.75	1.45	1.55	5.05	9.03	6

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. Torque: For locking/PCB mounting with threaded insert option: 0.1 to 0.14Nm
4. For the contacts' position in the shell, see Figure 2.8.
5. For PCB layout: see Figure 2.9.
6. For PCB termination tail length, see Figure 2.10.
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.4.1 – VARIANT 04 - MMCS, STRAIGHT PCB CONNECTOR WITH D-CLICK LATCH POSTS, PLUG WITH NON REMOVABLE FEMALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



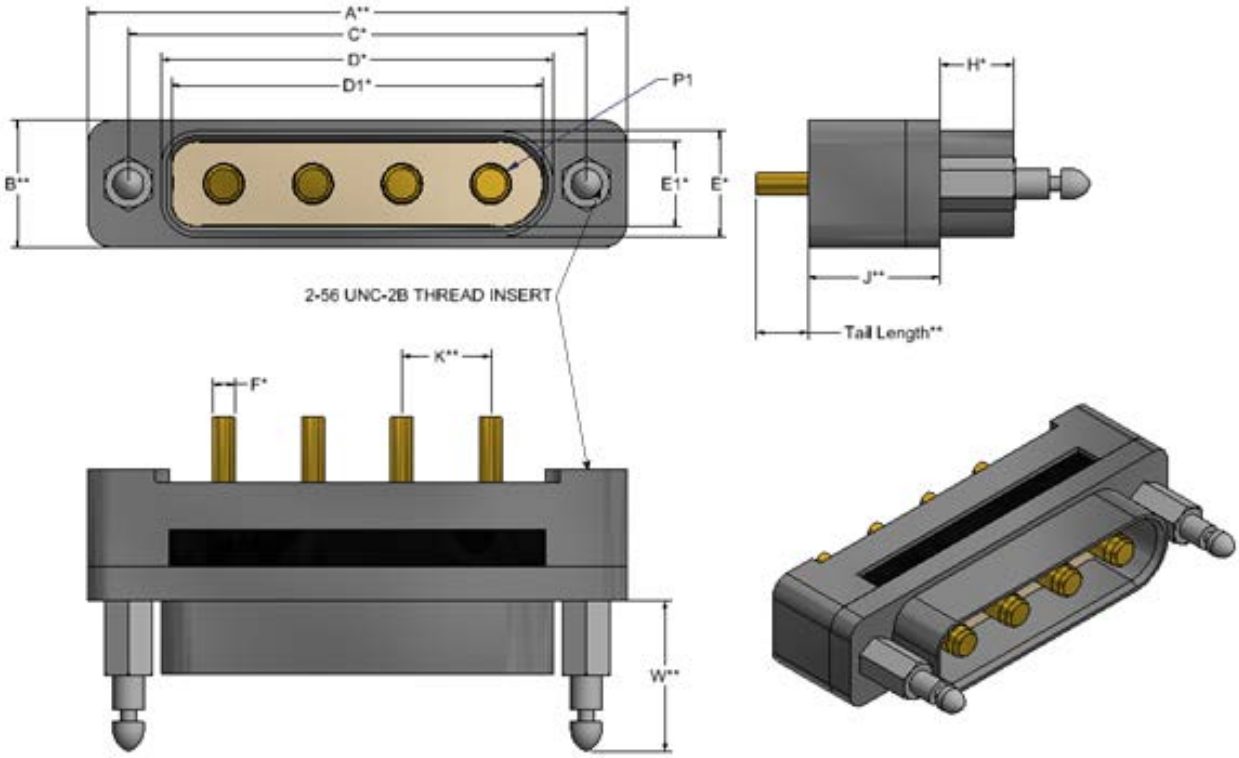
Ways	Dimensions (mm)											
	A	B	C		D	E	F		H	J	K	W
	Max	Max	Min	Max	Max	Max	Min	Max	Max	Max	BSC	Max
4	36.5	8.75	30.81	30.91	24.96	5.72	1.45	1.55	4.72	9.03	6	10.33
8	60.5	8.75	54.81	54.91	48.96	5.72	1.45	1.55	4.72	9.03	6	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque:
   - For D-Click latch post/locking threaded insert: 0.34 to 0.44Nm
   - For PCB mounting with threaded insert: 0.1 to 0.14Nm
3. For the contacts' position in the shell, see Figure 2.8.
4. For PCB layout: see Figure 2.9.
5. For PCB termination tail length, see Figure 2.10.
6. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), code H). See Figure 2.13 for alternative D-Click latch posts for rear panel mounting options (see Para. 4.5.2.1(d), codes H1 to H5).
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.4.2 – VARIANT 04 - MMCS, STRAIGHT PCB CONNECTOR WITH D-CLICK LATCH POSTS, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



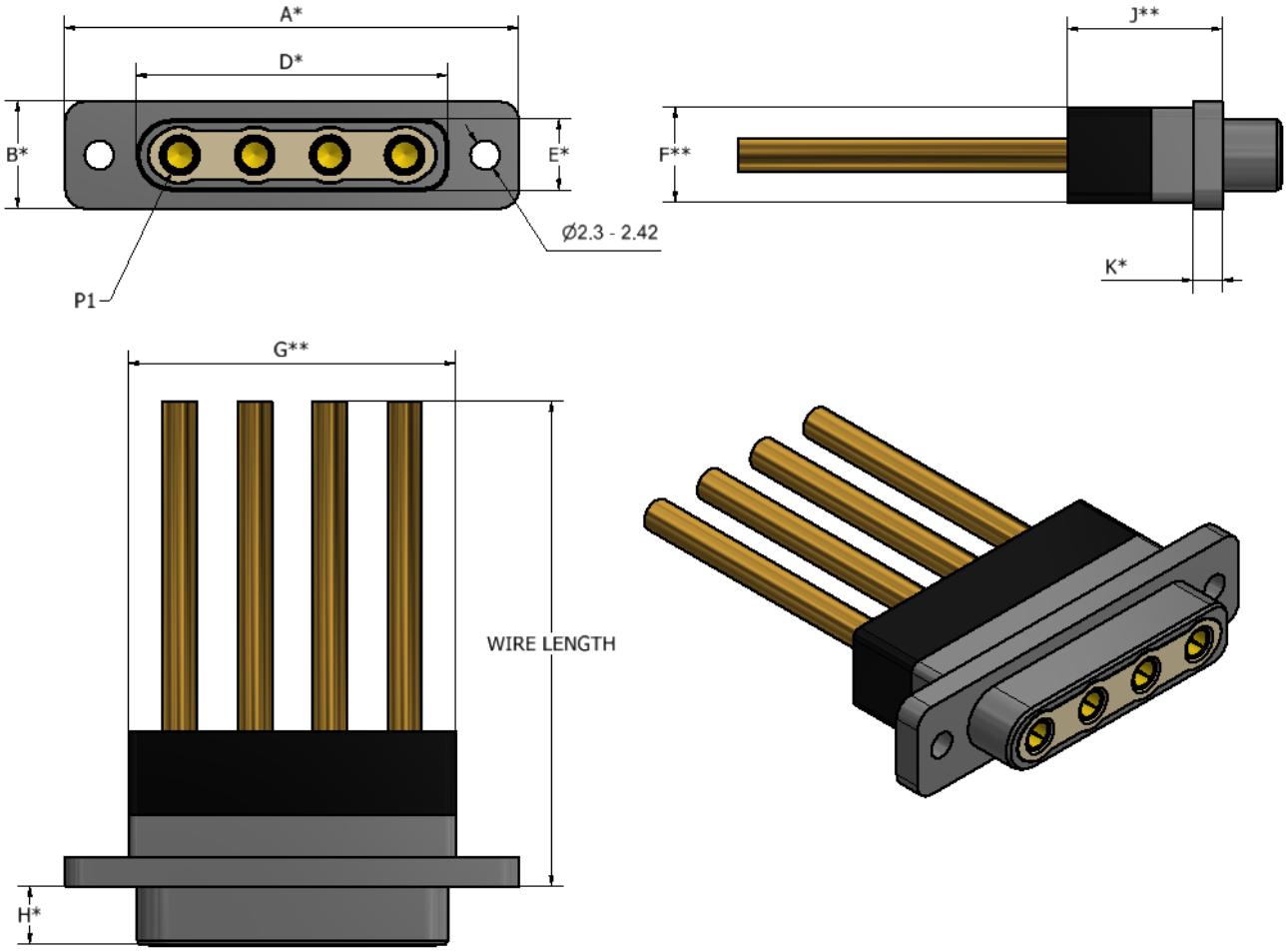
Ways	Dimensions (mm)													
	A	B	C		D	D1	E	E1	F		H	J	K	W
	Max	Max	Min	Max	Max	Min	Max	Min	Min	Max	Max	Max	BSC	Max
4	36.5	8.75	30.81	30.91	26.51	25.04	7.22	5.75	1.45	1.55	5.05	9.03	6	10.33
8	60.5	8.75	54.81	54.91	50.51	49.04	7.22	5.75	1.45	1.55	5.05	9.03	6	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque:
   - For D-Click latch post/locking threaded insert: 0.34 to 0.44Nm
   - For PCB mounting with threaded insert: 0.1 to 0.14Nm
3. For the contacts' position in the shell, see Figure 2.8.
4. For PCB layout: see Figure 2.9.
5. For PCB termination tail length, see Figure 2.10.
6. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), code H). See Figure 2.13 for alternative D-Click latch posts for rear panel mounting options (see Para. 4.5.2.1(d), codes H1 to H5).
7. For rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.5.1 – VARIANT 05 - MMCS, PIGTAIL CONNECTOR WITHOUT HARDWARE, PLUG WITH NON-REMOVABLE FEMALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



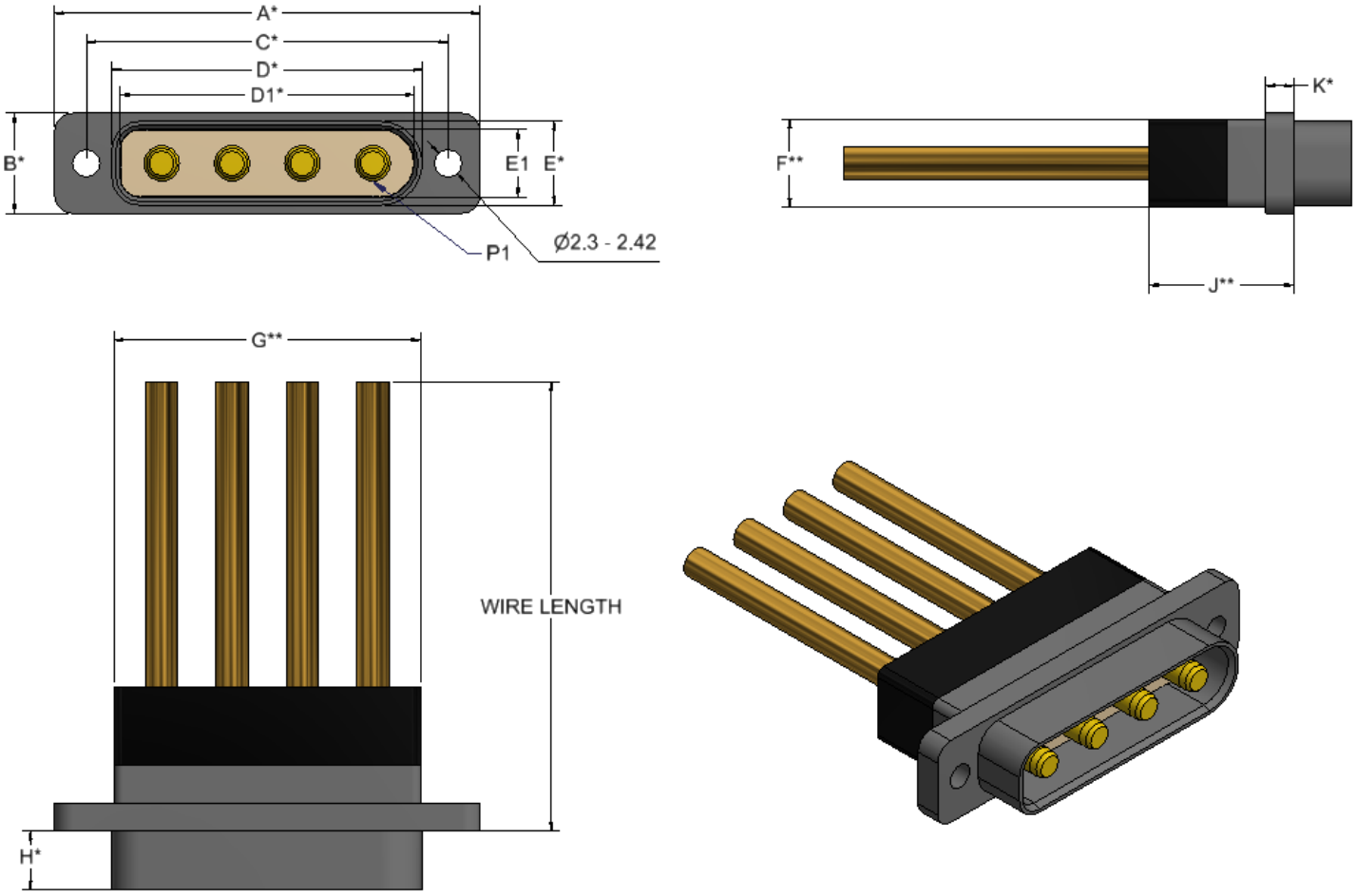
Ways	Dimensions (mm)										
	A	B	C		D	E	F	G	H	J	K
	Max	Max	Min	Max	Max	Max	Max	Max	Max	Max	Max
4	36.39	8.63	30.81	30.91	24.96	5.72	7.8	26.4	4.72	12.7	2.49
8	60.39	8.63	54.81	54.91	48.96	5.72	7.8	50.4	4.72	12.7	2.49

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. For the contacts' position in the shell, see Figure 2.8.
4. For pigtail termination wire length, see Figure 2.11. For other termination wire dimensions, see the applicable ESCC Detail Specification (see Para. 4.5.2.1(c)). For available wire types, see Para. 4.5.2.1(c).
5. For front and rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.5.2 – VARIANT 05 - MMCS, PIGTAIL CONNECTOR WITHOUT HARDWARE, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



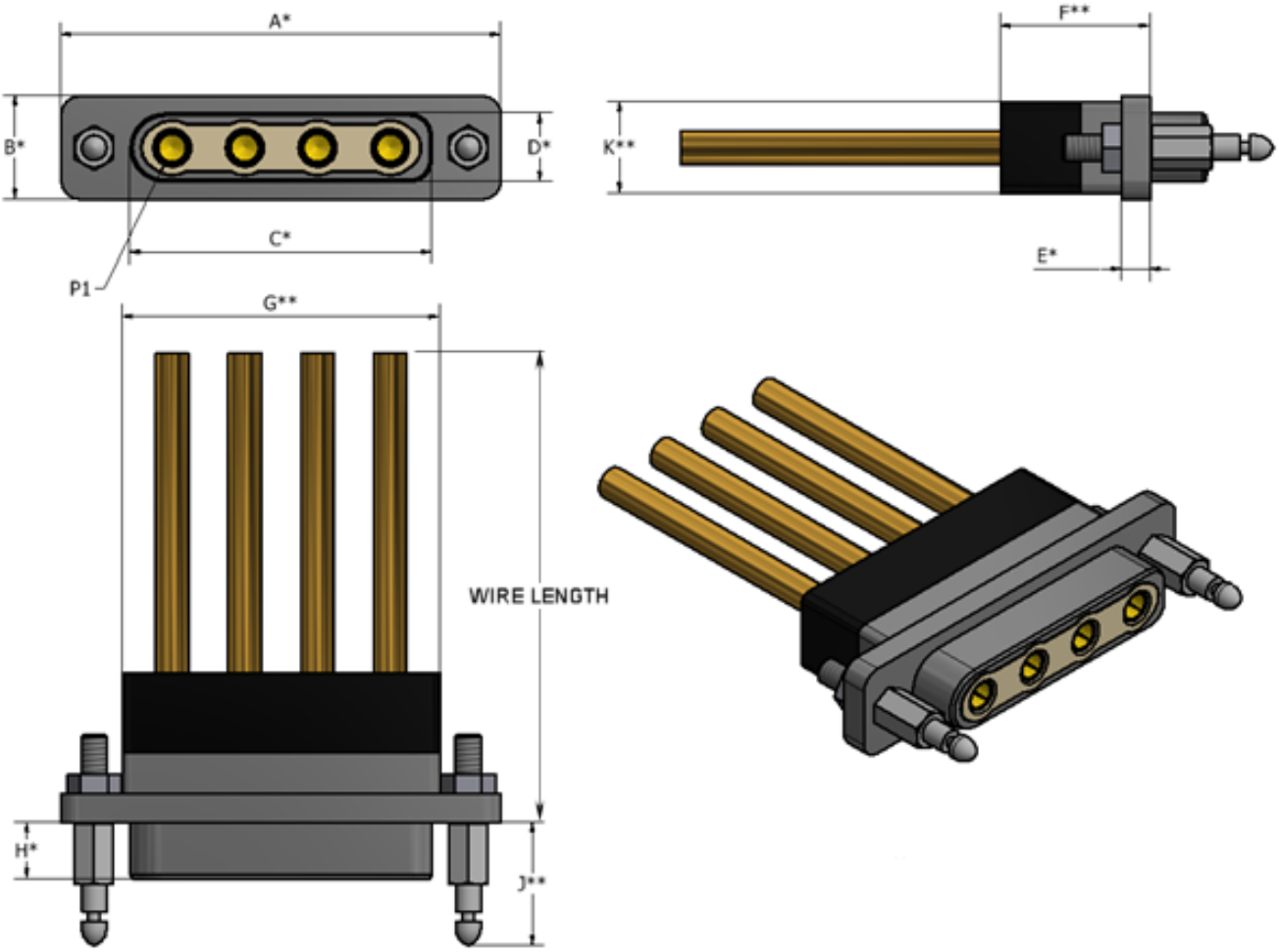
Ways	Dimensions (mm)											
	A	B	C		D	D1	E	E1	F	G	H	J	K
	Max	Max	Min	Max	Max	Min	Max	Min	Max	Max	Max	Max	Max
4	36.39	8.63	30.81	30.91	26.51	25.04	7.22	5.75	7.8	26.4	5.05	12.7	2.49
8	60.39	8.63	54.81	54.91	50.51	49.04	7.22	5.75	7.8	50.4	5.05	12.7	2.49

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Locking hardware to be selected from ESCC Detail Specification No. 3401/032.
3. For the contacts' position in the shell, see Figure 2.8.
4. For pigtail termination wire length, see Figure 2.11. For other termination wire dimensions, see the applicable ESCC Detail Specification (see Para. 4.5.2.1(c)). For available wire types, see Para. 4.5.2.1(c).
5. For front and rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.6.1 – VARIANT 06 - MMCS, PIGTAIL CONNECTOR WITH D-CLICK LATCH POSTS, PLUG WITH NON-REMOVABLE FEMALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



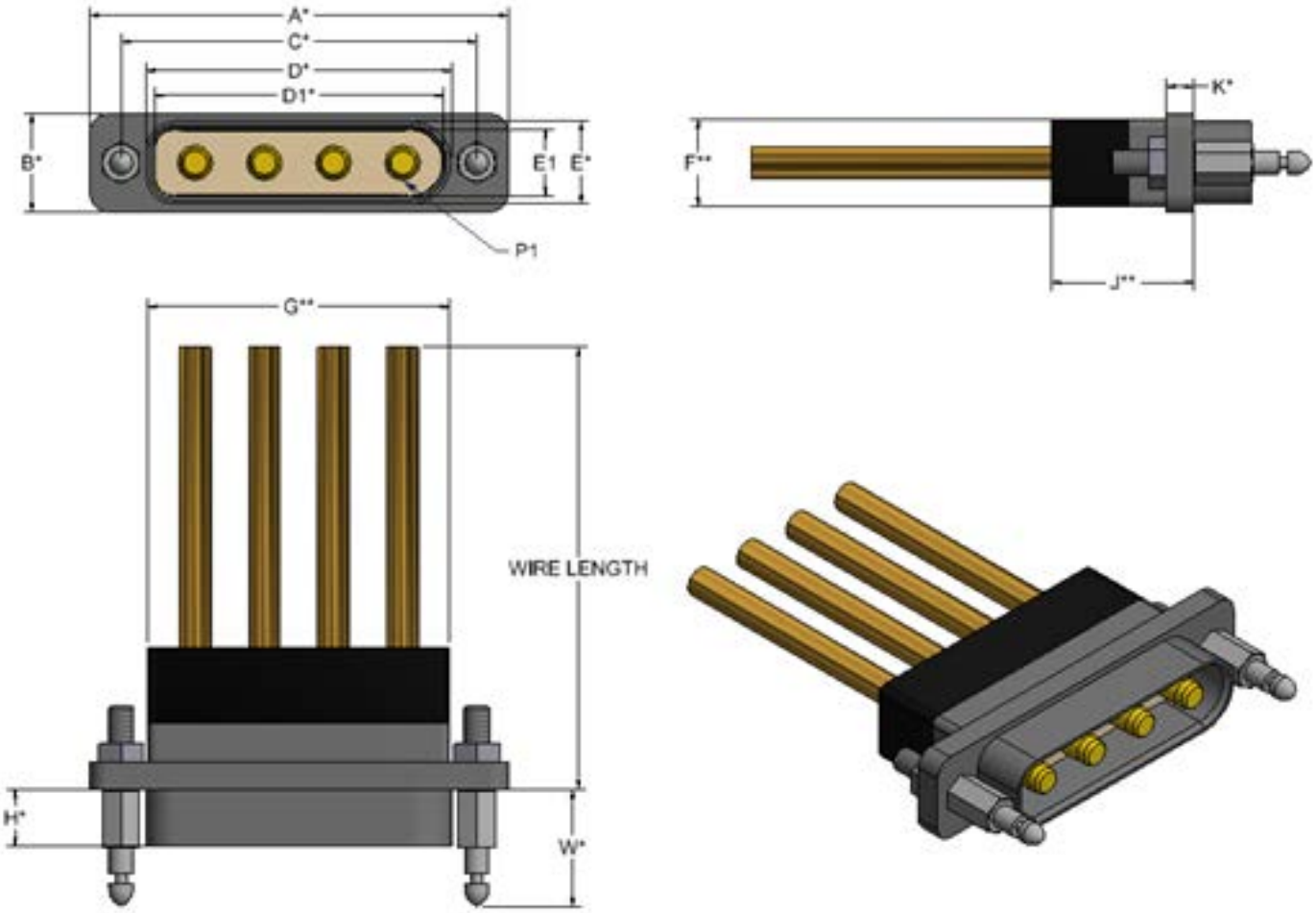
Ways	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
	Max	Max	Min	Max	Max	Max	Max	Max	Max
4	36.39	8.63	24.96	5.72	2.49	12.7	26.4	4.72	10.33
8	60.39	8.63	48.96	5.72	2.49	12.7	50.4	4.72	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque for D-Click latch posts: 0.34 to 0.44Nm.
3. For the contacts' position in the shell, see Figure 2.8.
4. For pigtail termination wire length, see Figure 2.11. For other termination wire dimensions, see the applicable ESCC Detail Specification (see Para. 4.5.2.1(c)). For available wire types, see Para. 4.5.2.1(c).
5. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), code G) which are also suitable for front panel mounting (with maximum panel thickness 2.5mm). See Figure 2.13 for alternative D-Click latch posts for rear panel mounting options (see Para. 4.5.2.1(d), codes G1 to G5).
6. For front and rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.6.2 – VARIANT 06 - MMCS, PIGTAIL CONNECTOR WITH D-CLICK LATCH POSTS, RECEPTACLE WITH NON-REMOVABLE MALE POWER CONTACTS, 4 & 8 WAY

EXAMPLE: 4 WAY



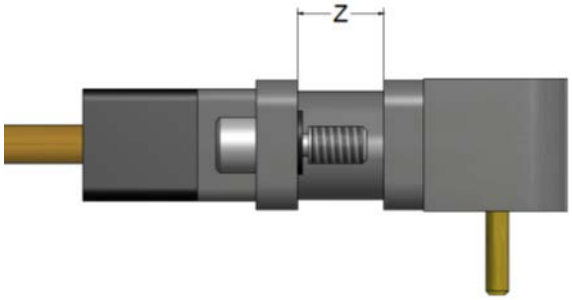
Ways	Dimensions (mm)													
	A	B	C		D	D1	E	E1	F	G	H	J	K	W
	Max	Max	Min	Max	Max	Min	Max	Min	Max	Max	Max	Max	Max	Max
4	36.39	8.63	30.81	30.91	26.51	25.04	7.22	5.75	7.8	26.4	5.05	12.7	2.49	10.33
8	60.39	8.63	54.81	54.91	50.51	49.04	7.22	5.75	7.8	50.4	5.05	12.7	2.49	10.33

NOTES:

1. Dimensions with a single asterisk (*) may be checked during the Manufacturer's internal processing. Dimensions with a double asterisk (**) shall be checked after assembly of the connector.
2. Torque for D-Click latch posts: 0.34 to 0.44Nm.
3. For the contacts' position in the shell, see Figure 2.8.
4. For pigtail termination wire length, see Figure 2.11. For other termination wire dimensions, see the applicable ESCC Detail Specification (see Para. 4.5.2.1(c)). For available wire types, see Para. 4.5.2.1(c).
5. Standard D-Click latch posts are shown above (see Para. 4.5.2.1(d), code G) which are also suitable for front panel mounting (with maximum panel thickness 2.5mm). See Figure 2.13 for alternative D-Click latch posts for rear panel mounting options (see Para. 4.5.2.1(d), codes G1 to G5).
6. For front and rear panel mounting, see Figure 2.12 for the panel cut-outs.

FIGURE 2.7 – MATED CONNECTOR DIMENSIONS

EXAMPLE



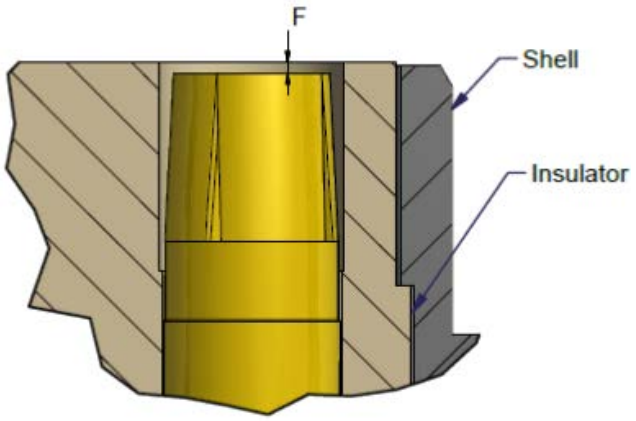
Symbol	Dimensions (mm)	Remarks
	Max	
Z	5.49	When mating Variants 01, 03, 05 using hardware per ESCC No. 3401/032, or when mating Variants 02, 04, 06 using D-Click latch posts (Note 1)

NOTES:

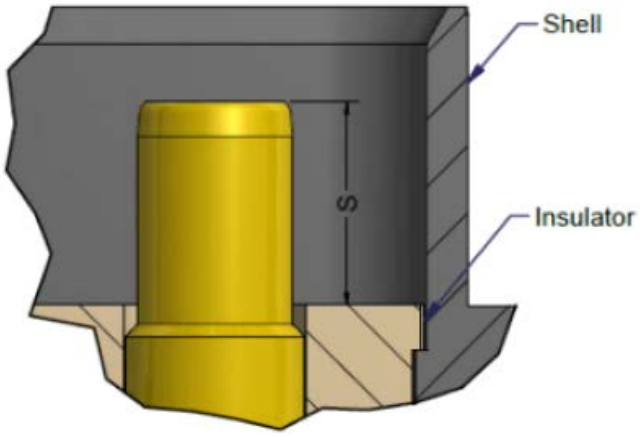
1. The connector with the D-Click latch post shall be mated with its mating half until a click is heard from each latch spring of the other connector.

FIGURE 2.8 – CONTACT POSITION

Female Power Contact



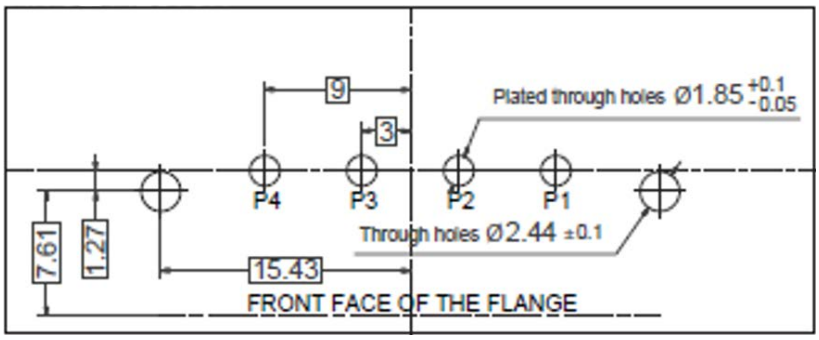
Male Power Contact



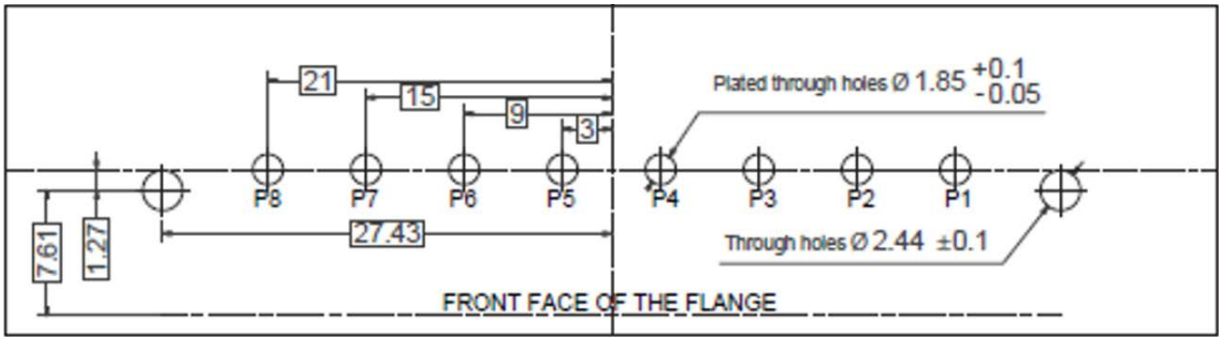
Symbol	Dimensions (mm)		Remarks
	Min	Max	
F	0.1	0.3	Female Power Contact
S	4.1	4.4	Male Power Contact

FIGURE 2.9 – PCB LAYOUT (FOR VARIANTS 01, 02, 03, 04)

4WAY



8 WAY

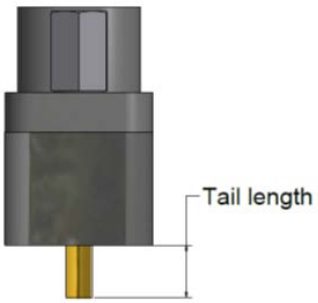


NOTES:

1. All dimensions in mm.
2. General tolerance: ±0.1mm.

FIGURE 2.10 – PCB TERMINATION TAIL LENGTH (FOR VARIANTS 01, 02, 03, 04)

EXAMPLE



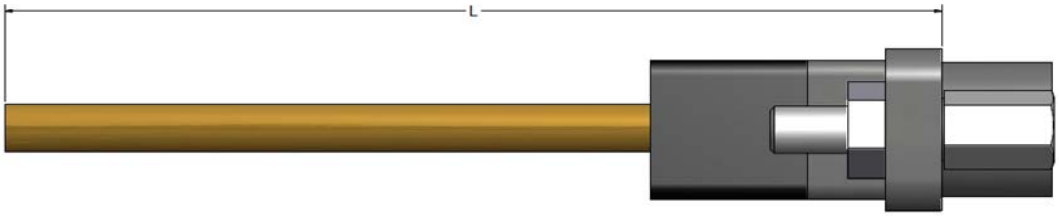
Tail Length (mm)			Length Code (Note 1)	Remarks
Min	Nominal	Max		
2.32	2.7	3.08	01	For PCB thickness: 0.8 to 1.6mm
3.12	3.5	3.88	02	For PCB thickness: 1.6 to 2.4mm
3.62	4.3	4.68	03	For PCB thickness: 2.4 to 3.2mm

NOTES:

1. See Para. 4.5.2.1(c).

FIGURE 2.11 - PIGTAIL TERMINATION WIRE LENGTH (FOR VARIANTS 05, 06)

EXAMPLE



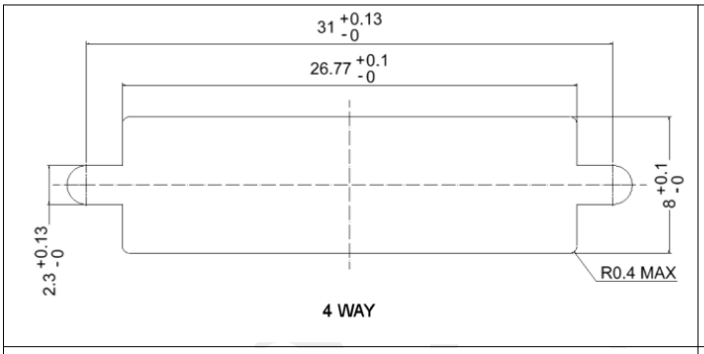
Symbol	Available Nominal Dimension Range (cm)	Tolerance (cm)
L (Note 1)	≥ 10, ≤ 100	(-0, +3)
	> 100, ≤ 400	(-0, +5)
	> 400, ≤ 999	(-0, +10)

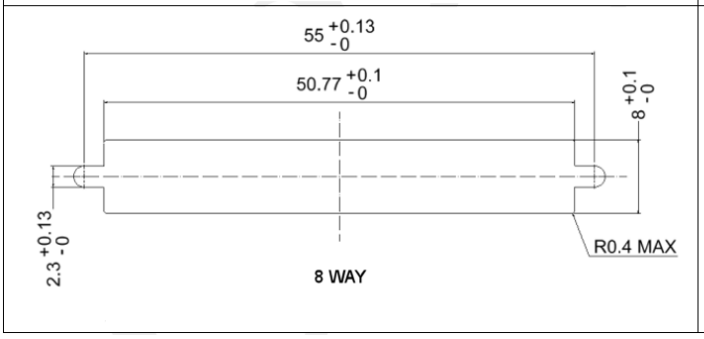
NOTES:

1. The nominal length of the pigtail termination wire, L, shall be specified from the end of the wire to the front face of the connector flange.

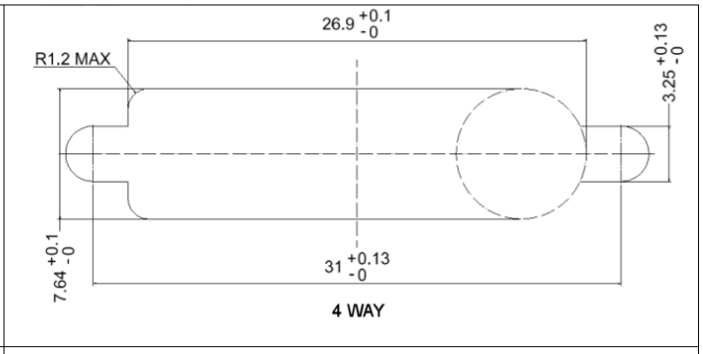
FIGURE 2.12 - PANEL CUT-OUT

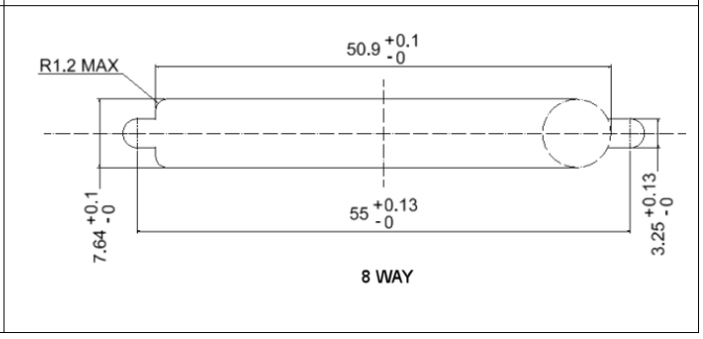
For Front Panel Mounting





For Rear Panel Mounting



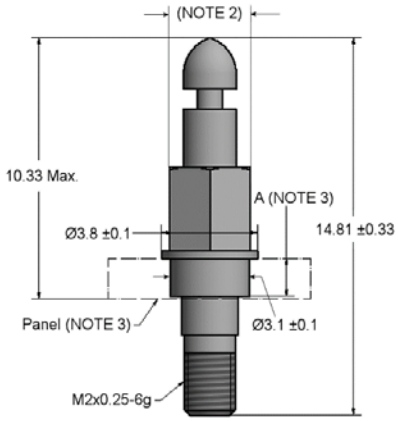


NOTES:

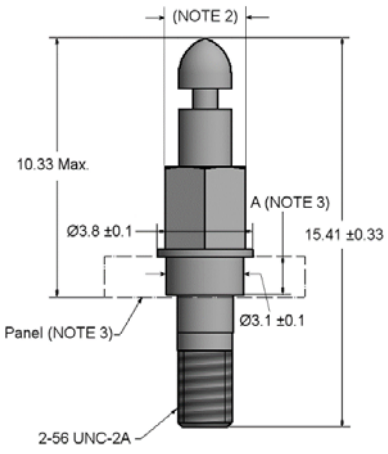
1. All dimensions in mm.
2. Rear panel mounting is suitable for Variants 01 to 06. Maximum rear panel thickness:
   - o For Variants 01, 03, 05: 1.6mm
   - o For Variants 02, 04, 06: 0.8mm to 2.6mm (see Figure 2.13).
3. Front panel mounting is only suitable for Variants 05, 06 (Pigtail connectors). Maximum front panel thickness: 2.5mm.
4. See Figure 2.14 for recommended spacing between panel mounted connectors with D-Click latch posts (Variants 02, 04, 06).

FIGURE 2.13 - D-CLICK LATCH POSTS FOR REAR PANEL MOUNTING

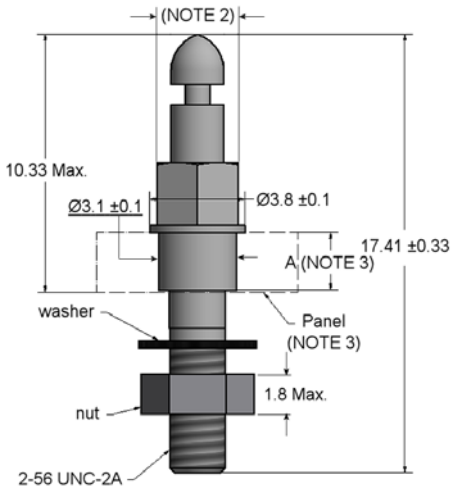
FOR VARIANT 02



FOR VARIANT 04



FOR VARIANT 06



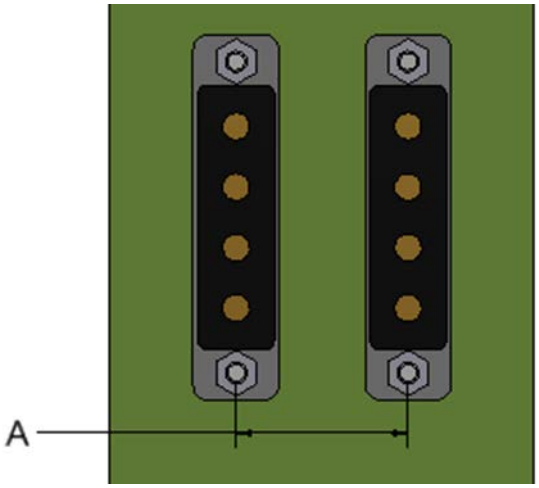
NOTES:

1. All dimensions in mm.
2. Hex 3.2mm
3. 5 rear panel thickness options are available, see Para. 4.5.2.1(d), codes G1 to G5, H1 to H5. Dimension A is dependent on rear panel thickness T as follows:

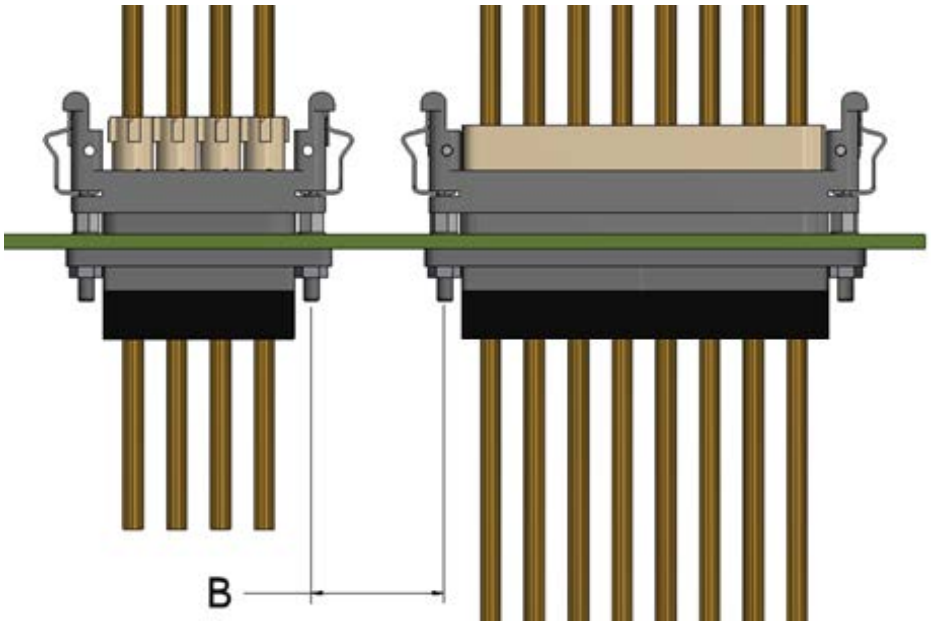
Symbol	Dimensions (mm)									
	Nominal Rear Panel Thickness T (-0, +0.2)									
	T = 0.8		T = 1.2		T = 1.6		T = 2		T = 2.4	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
A	0.65	0.75	1.05	1.15	1.45	1.55	1.85	1.95	2.25	2.35

FIGURE 2.14 – VERTICAL AND HORIZONTAL RECOMMENDED SPACING FOR CONNECTORS WITH D-CLICK LATCH POSTS (VARIANTS 02, 04, 06)

VERTICAL SPACING



HORIZONTAL SPACING

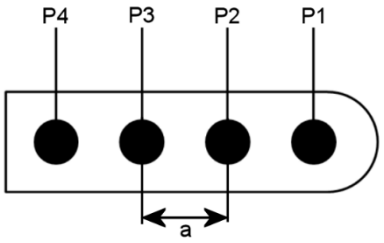


Symbol	Dimensions (mm)	Remarks
	BSC	
A	12.5 minimum	when latch spring securing pieces are not used
	15.5 minimum	when latch spring securing pieces are used; see ESCC Detail Specification No. 3401/093
B	18 minimum	when using the specific de-mating tool
	27 minimum	when not using the specific de-mating tool

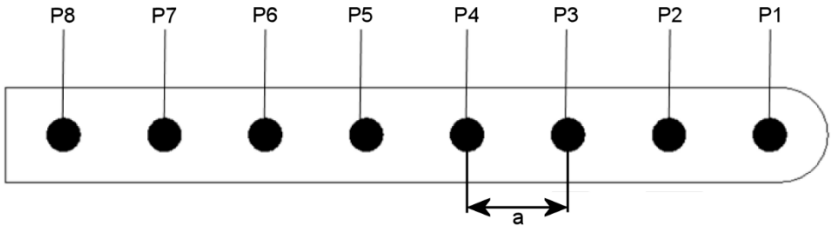
FIGURE 3 - CONTACT ARRANGEMENTS

FRONT VIEW OF CONNECTOR

4 WAY



8 WAY



NOTES:

1. Contact position shall be referenced relative to the shape of the connector shell; see also Figure 2.
2. Contact spacing (all contacts): a = 6mm BSC.

2 APPLICABLE DOCUMENTS

The following documents form part of this specification and shall be read in conjunction with it:

(a) ESCC Generic Specification No. 3401, Connectors, Electrical, Circular and Rectangular.

(b) ESCC Detail Specification No. 3401/093, Connectors, Electrical, Rectangular, Microminiature, (for Removable Power Contacts), based on type MMCSA.

(c) ESCC Detail Specification No. 3401/094, Contacts, Electrical, Power, Crimp and Accessories (for 3401/093 Connectors) based on type MMCSA

(d) ESCC Detail Specification No. 3401/032, Accessories for Connectors, Microminiature 3401/029, 3401/077 and Connector Savers 3401/041.

(e) ESCC Detail Specification No. 3901/001, Polyimide Insulated Wires and Cables, Low Frequency, 600V, -100 to +200°C.

(f) ESCC Detail Specification No. 3901/012, Extruded, Cross-Linked Fluoropolymer Insulated Wires and Cables on Silver-Plated Copper Conductor, Low Frequency, 600V, -100 to +200°C.

(g) ESCC Detail Specification No. 3901/013, PTFE Insulated Wires and Cables, Low Frequency, 600V, -100 to +200°C.

(h) ESCC Detail Specification No. 3901/019, Polyimide Insulated Wires and Cables, Low Frequency, 600V, -100 to +200°C.

(i) ECSS-Q-ST-70-26, Crimping of high-reliability electrical connections (replaces PSS-01-726).

3 TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. 21300 shall apply.

4 REQUIREMENTS

4.1 GENERAL

The complete requirements for procurement of the connectors specified herein are stated in this specification and ESCC Generic Specification No. 3401. Deviations from the Generic Specification, applicable to this specification only, are listed in Para. 4.2.

Deviations from the applicable Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirements and do not affect the components' reliability, are listed in the appendices attached to this specification.

4.2 DEVIATIONS FROM GENERIC SPECIFICATION

4.2.1 Deviations from Special In-Process Controls

(a) Para. 5.2.5, Solderability: Not applicable.

4.2.2 Deviations from Final Production Tests - Chart II(b)

(a) Para. 9.5, Magnetism Level: Not applicable.
(b) Para. 9.9, Seal Test: Not applicable.

4.2.3 Deviations from Burn-in and Electrical Measurements - Chart III

None (Chart III is not applicable).

4.2.4 Deviations from Qualification Tests - Chart IV

(a) Para. 9.9, Seal Test: Not applicable.
(b) Para. 9.11, Vibration: Measurements and inspections shall be performed in accordance with Table 6 herein.
(c) Para. 9.12, Shock or Bump: Measurements and inspections shall be performed in accordance with Table 6 herein.
(d) Para. 9.15, Joint Strength: Not applicable.
(e) Para. 9.16, Rapid Change of Temperature: Measurements and inspections shall be performed in accordance with Table 6 herein.
(f) Para. 9.18, Endurance: Measurements and inspections shall be performed in accordance with Table 6 herein.
(g) Para. 9.21, High Temperature Storage: Measurements and inspections shall be performed in accordance with Table 6 herein.
(h) Para. 9.24, Jackscrew Retention: Not applicable.
(i) Para. 9.27, Maintenance Ageing: Not applicable.
(j) Para. 9.29, Oversize Pin Exclusion: Not applicable.
(k) Para. 9.30, Probe Damage: Not applicable.

4.2.5 Deviations from Lot Acceptance Tests - Chart V

(a) Para. 9.9, Seal Test: Not applicable.
(b) Para. 9.15, Joint Strength: Not applicable.
(c) Para. 9.16, Rapid Change of Temperature: Measurements and inspections shall be performed in accordance with Table 6 herein.
(d) Para. 9.18, Endurance: Measurements and inspections shall be performed in accordance with Table 6 herein.
(e) Para. 9.27, Maintenance Ageing: Not applicable.
(f) Para. 9.29, Oversize Pin Exclusion: Not applicable.
(g) Para. 9.30, Probe Damage: Not applicable.

4.3 MECHANICAL REQUIREMENTS

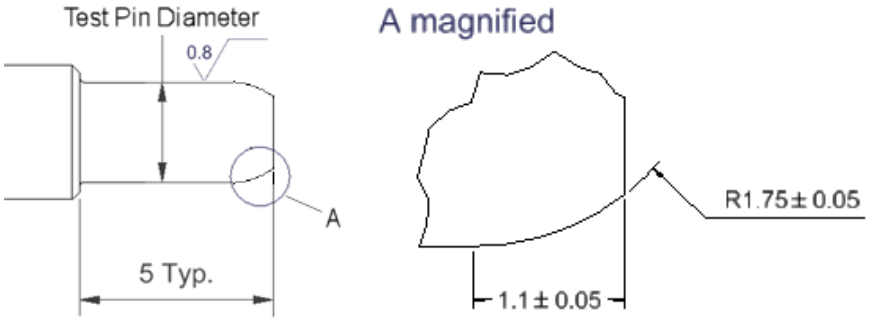
4.3.1 Dimension Check
See Figures 2 and 3.

4.3.2 Weight
See Table 1(a).

4.3.3 Contact Capability (Female Contacts Only)

	Pick-Up Weight	Drop Weight
Weight (g)	86	600
Test Pin Diameter (mm) (1)	2.589 to 2.591	2.609 to 2.611
Insertion Depth (mm)	1.5	1.5

NOTES:
1. The following dimensions (in mm) shall apply to the test pin:



4.3.4 Contact Retention (in Insert)
Applied force: 41N.

4.3.5 Mating and Unmating Forces

Variant Number	Mating Force (N) (1)	Unmating Force (N) (1)	
	Max	Min	Max
01, 02, 03, 04, 05, 06	7.5	0.85	7.5

NOTES:
1. The mating and unmating forces are per contact.

4.3.6 Insert Retention (in Shell)
Maximum load: 50N applied from the mating side to the rear side.

4.3.7 Engagement and Separation Forces (Female Contacts Only)

	Test Pin Diameter (mm)	Separation Force (N)	Engagement Force (N)	Insertion Depth (mm)
		Min	Max	Min
Maximum Diameter Test Pin	2.609 to 2.611	0.85	-	1.5
Minimum Diameter Test Pin	2.589 to 2.591	-	7.5	1.5

NOTES:
1. See Para. 4.3.3 for test pin dimensions.

4.3.8 Solderability (Variants 01, 02, 03, 04 Only)

Solderability shall be performed on the connector PCB terminations. A size B soldering iron shall be used.

4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the components specified herein to meet the performance requirements of this specification shall be used. Acceptance or approval of any constituent material does not guarantee acceptance of the finished product.

(a) Shell: Aluminium alloy, nickel plated 15µm minimum.
(b) Contacts: Beryllium Copper alloy, gold plated 1.27µm minimum over nickel underplate 1.27µm minimum.
(c) PCB terminations (Variants 01, 02, 03, 04): Beryllium Copper alloy, gold plated 1.27µm minimum over nickel underplate 1.27µm minimum.
(d) Pigtail termination wire (Variants 05, 06): in accordance with the applicable ESCC Detail Specification for the selected wire (unshielded, single core wire) (see Para. 4.5.2.1(c)).
(e) Insert: glass fibre-filled liquid crystal polymer.
(f) Rear body potting: epoxy resin.
(g) Interfacial seals: silicone-base rubber.
(h) D-Click latch posts: Passivated stainless steel.

4.5 MARKING

4.5.1 General

The marking of all components delivered to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and the following paragraphs.

Each component or the component's primary package shall be marked in respect of:

(a) The ESCC qualified components symbol (for ESCC qualified components only).
(b) The ESCC Component Number (see Para. 4.5.2).
(c) Traceability Information.

4.5.2 The ESCC Component Number

The ESCC Component Number shall be constituted as follows:

(a) For PCB connectors: Variants 01, 02, 03, 04:

Example: 340109201B4P12P01B

- Detail Specification Reference: 3401092
- Component Type Variant Number: 01 (as required; see Table 1(a))
- Testing Level: B
- Characteristic code: Shell Size (4): 4 Way (as required)
- Characteristic code: Connector and Contact Type (P12P): Receptacle with non-removable male power contacts (as required)
- Characteristic code: PCB Termination Tail Length (01): 2.7mm nominal (as required)
- Characteristic code: Mounting/Locking Type (B): Through-hole PCB mounting without hardware (as required)

(b) For pigtail connectors: Variants 05, 06:

Example: 340109206B8S12P00129L150G1

- Detail Specification Reference: 3401092
- Component Type Variant Number: 06 (as required; see Table 1(a)
- Testing Level: B
- Characteristic code: Shell Size (8): 8 Way (as required)
- Characteristic code: Connector and Contact Type (S12P): Plug with non-removable female power contacts (as required)
- Characteristic code: Pigtail Termination Type (00129): Pigtail termination wire per 340100129B (as required)
- Characteristic code: Pigtail Termination Wire Length (L150): 150cm (as required)
- Characteristic code: Mounting/Locking Type (G1): D-Click latch posts for 0.8mm rear panel mounting (as required)

4.5.2.1 Characteristics Codes

Characteristics to be codified as part of the ESCC Component Number shall be as follows:

(a) Shell Size

Shell size shall be indicated by a code for the quantity of contacts as follows:

Quantity of Contacts	Code
4 Way	4
8 Way	8

(b) Connector and Contact Type

The connector and contact type shall be indicated by the following codes:

Connector Type	Contact Type	Code (1)
Plug	Non-removable Female Power Contacts	S12P
Receptacle	Non-removable Male Power Contacts	P12P

NOTES:

1. 12P indicates that these are size 12 power contacts.

(c) Termination
The termination type and the applicable termination length shall be indicated by the following codes:

- For PCB connectors: Variants 01, 02, 03, 04 (see Figure 2.10):

PCB Termination Nominal Tail Length (mm)	PCB Thickness	Length Code
2.7	For PCB thickness: 0.8 to 1.6mm	01
3.5	For PCB thickness: 1.6 to 2.4mm	02
4.3	For PCB thickness: 2.4 to 3.2mm	03

- For pigtail connectors: Variants 05, 06 (see Figure 2.11):

Pigtail Termination Wire Type (ESCC Component Number)	Applicable Wire ESCC Detail Specification	Pigtail Termination Wire Size (AWG)	Type Code
390100129B	ESCC 3901/001	16	00129
390100130B		14	00130
390100131B		12	00131
390101208B	ESCC 3901/012	16	01208
390101209B		14	01209
390101210B		12	01210
390101357B	ESCC 3901/013	16	01357
390101907B	ESCC 3901/019	16	01907
390101908B		12	01908

Pigtail Termination Nominal Wire Length (cm)	Length Code
10 to 99	L0XX
100 to 999	LXXX

(d) Mounting/Locking Type
The mounting and locking type shall be indicated by the following codes:

- For PCB connectors: Variants 01, 02, 03, 04 (see Figure 2):

Mounting/Locking Details	Compatible Variant Number	Code
Through-hole mounting without hardware	01, 03	B
Threaded insert mounting holes without hardware	01, 03	W
Through-hole mounting with standard D-Click latch posts	02	G
Threaded insert mounting holes with standard D-Click latch posts	02, 04	H
Through-hole mounting with D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 0.8mm	02	G1
Through-hole mounting with D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 1.2mm	02	G2
Through-hole mounting with D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 1.6mm	02	G3
Through-hole mounting with D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 2mm	02	G4
Through-hole mounting with D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 2.4mm	02	G5
Threaded insert mounting holes with D-Click latch posts for rear panel mounting with nominal panel thickness: T = 0.8mm	02, 04	H1
Threaded insert mounting holes with D-Click latch posts for rear panel mounting with nominal panel thickness: T = 1.2mm	02, 04	H2
Threaded insert mounting holes with D-Click latch posts for rear panel mounting with nominal panel thickness: T = 1.6mm	02, 04	H3
Threaded insert mounting holes with D-Click latch posts for rear panel mounting with nominal panel thickness: T = 2mm	02, 04	H4
Threaded insert mounting holes with D-Click latch posts for rear panel mounting with nominal panel thickness: T = 2.4mm	02, 04	H5

- For pigtail connectors: Variants 05, 06 (see Figure 2):

Mounting/Locking Details	Compatible Variant Number	Code
Through-hole mounting without mounting/locking hardware	05	B
Standard D-Click latch posts	06	G
D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 0.8mm	06	G1
D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 1.2mm	06	G2
D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 1.6mm	06	G3
D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 2mm	06	G4
D-Click latch posts for rear panel mounting with nominal Panel thickness: T = 2.4mm	06	G5

4.5.3 Traceability Information

Traceability information shall be marked in accordance with the requirements of ESCC Basic Specification No. 21700.

4.6 ELECTRICAL MEASUREMENTS

4.6.1 Electrical Measurements at Room Temperature

The parameters to be measured in respect of electrical characteristics are scheduled in Table 2. Unless otherwise specified, the measurements shall be performed at T_{amb} = +22 ±3°C.

TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE

No.	Characteristic	Symbol	ESCC 3401 Test Method	Test Condition	Limits		Unit
					Min	Max	
1	Insulation Resistance	R_I	Para. 9.1.1.1	1500Vdc	5000	-	MΩ
2	Voltage Proof Leakage Current	I_L	Para. 9.1.1.2	1000Vrms	-	2	mA
3	Contact Resistance (Low Level Current)	R_{cl}	Para. 9.1.1.3	I_{test} ≤ 10mA	-	2	mΩ
4	Contact Resistance (Rated Current)	R_{cr}	Para. 9.1.1.3	I_{test} = 23A	-	2.5	mΩ

TABLES 3, 4 AND 5

Not applicable.

4.7 ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESCC GENERIC SPECIFICATION No. 3401)

4.7.1 Measurements and Inspections on Completion of Environmental Tests

The parameters to be measured and inspections to be performed on completion of environmental testing shall be those specified in Table 6. Unless otherwise specified, these measurements shall be performed at T_{amb} = +22 ±3°C.

4.7.2 Measurements and Inspections on Completion of Endurance Tests

The parameters to be measured and inspections to be performed on completion of endurance testing shall be those specified in Table 6. Unless otherwise specified, these measurements shall be performed at T_{amb} = +22 ±3°C.

TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL AND ENDURANCE TESTING

No.	ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
	Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
01	Wiring (Variants 05, 06 only)	Para. 9.10	Contact Resistance (Low Level Current)	Table 2	R_{cl}	-	Table 2	
02	Vibration	Para. 9.11	**Initial Measurements**					
			Coupling screw(s) Unlocking Torque (2)	-	Tqe	Record value		
			Contact Resistance (Low Level Current)	Table 2	R_{cl}	Record values		
			Contact Resistance (Rated Current)	Table 2	R_{cr}	Record values		
			During Testing					
			Monitor contacts for discontinuities	ESCC 3401	-	No discontinuities > 1µs		
			Final Measurements					
			Full Engagement					
			Coupling screw(s) Unlocking Torque Drift (2)	-	ΔTqe/Tqe	-25	+25	%
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Contact Resistance Drift (Low Level Current)	Table 2	ΔR_{cl}	-	+1	mΩ
			Contact Resistance Drift (Rated Current)	Table 2	ΔR_{cr}	-	+1	mΩ
			Visual Examination	ESCC 3401	-	-	-	

No.	ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
	Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
03	Shock or Bump	Para. 9.11	**Initial Measurements**					
			Coupling screw(s) Unlocking Torque (2)	-	Tqe	Record value		
			Contact Resistance (Low Level Current)	Table 2	R_{cl}	Record values		
			Contact Resistance (Rated Current)	Table 2	R_{cr}	Record values		
			During Testing					
			Monitor contacts for discontinuities	ESCC 3401	-	No discontinuities > 1µs		
			Final Measurements					
			Full Engagement					
			Coupling screw(s) Unlocking Torque Drift (2)	-	ΔTqe/Tqe	-25	+25	%
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Contact Resistance Drift (Low Level Current)	Table 2	ΔR_{cl}	-	+1	mΩ
			Contact Resistance Drift (Rated Current)	Table 2	ΔR_{cr}	-	+1	mΩ
			Visual Examination	ESCC 3401	-	-	-	
04	Climatic Sequence	Para. 9.13	**Dry Heat**					
			Insulation Resistance	At T_{amb} = +125°C, Table 2	R_I	1000	-	MΩ
			Low Air Pressure					
			Voltage Proof Leakage Current	250V	I_L	-	1	mA
			Damp Heat					
			Insulation Resistance	Table 2	R_I	100	-	MΩ
			Final Measurements					
			External Visual Inspection	ESCC 3401	-	-	-	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
05	Plating Thickness	Para. 9.14	Plating thickness	ESCC 3401	-	Para. 4.4		-

No.	ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
	Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
06	Rapid Change of Temperature	Para. 9.16	**Initial Measurements**					
			External Visual Inspection	ESCC 3401	-	-	-	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
			Contact Resistance (Low Level Current)	Table 2	R_{cl}	Record values		
			Contact Resistance (Rated Current)	Table 2	R_{cr}	Record values		
			During Testing					
			Monitor contacts for discontinuities	-	-	No discontinuities > 1µs		
			Final Measurements					
			Visual Examination	ESCC 3401	-	-	-	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
			Contact Resistance Drift (Low Level Current)	Table 2	ΔR_{cl}	-	+1	mΩ
			Contact Resistance Drift (Rated Current)	Table 2	ΔR_{cr}	-	+1	mΩ
07	Contact Retention (in Insert)	Para. 9.17 and Para. 4.3.4 herein	Contact axial displacement	ESCC 3401	-	ESCC 3401		
08	Endurance	Para. 9.18	**Initial Measurements**					
			Mating and Unmating Forces	-	F	Para. 4.3.5		
			Contact Resistance (Low Level Current)	Table 2	R_{cl}	Record Values		
			Contact Resistance (Rated Current)	Table 2	R_{cr}	Record Values		
			Final Measurements					
			Visual Examination	-	-	-	-	
			Mating and Unmating Forces	-	F	Para. 4.3.5		
			Contact Resistance Drift (Low Level Current)	Table 2	ΔR_{cl}	-	+1	mΩ
			Contact Resistance Drift (Rated Current)	Table 2	ΔR_{cr}	-	+1	mΩ
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
09	Permanence of Marking	Para. 9.19	-	-	-	-		-
10	Mating and Unmating Forces	Para. 9.20	Force	-	F	Para. 4.3.5		

No.	ESCC Generic Spec. No. 3401		Measurements and Inspections		Symbol	Limits		Unit
	Environmental and Endurance Tests (1)	Test Method and Conditions	Identification	Conditions		Min	Max	
11	High Temperature Storage	Para. 9.21	**Initial Measurements**					
			Contact Resistance (Low Level Current)	Table 2	R_{cl}	Record Values		
			Contact Resistance (Rated Current)	Table 2	R_{cr}	Record Values		
			Final Measurements					
			Visual Examination	-	-	-		
			Mating and Unmating Forces	-	F	Para. 4.3.5		
			Contact Resistance Drift (Low Level Current)	Table 2	ΔR_{cl}	-	+1	mΩ
			Contact Resistance Drift (Rated Current)	Table 2	ΔR_{cr}	-	+1	mΩ
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
			Contact Retention (In Insert)	ESCC 3401	-	Para. 4.3.4		
12	Corrosion	Para. 9.22	Visual Examination	ESCC 3401	-	-	-	
13	Insert Retention (in Shell)	Para. 9.23 and Para. 0 herein	Visual Examination	ESCC 3401	-	ESCC 3401		-
14	High Temperature Measurements	Para. 9.25	Insulation Resistance	At T_{amb} = +125°C, Table 2	R_I	500	-	MΩ
15	Overload Test	Para. 9.26	Internal Temperature	-	T	-	+150	°C
			Contact Resistance (Rated Current)	Table 2	R_{cr}	-	Table 2	
			Insulation Resistance	Table 2	R_I	Table 2	-	
			Voltage Proof Leakage Current	Table 2	I_L	-	Table 2	
16	Engagement and Separation Forces	Para. 9.28 and Para. 4.3.7 herein	Force	Para. 4.3.7	F	Para. 4.3.7		
17	Solderability (Variants 01, 02, 03, 04 only)	Para. 9.31 and Para. 4.3.8 herein	-	-	-	-	-	-

NOTES:

1. The tests in this Table refer to either Chart IV or V and shall be used as applicable.
2. Not applicable to connectors with D-Click latch posts (Variants 02, 04, 06).