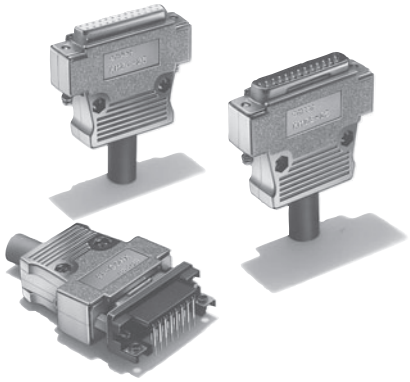
OMRON

D-sub Connectors

XM2/XM3

D-sub Connectors Are Ideal for Office Automation Interfacing.



- Shielded against EMI.
- Metallized plastic Hood (XM2S) provides excellent noise protection.
- A new line of multi-hole, ferrite-core Connectors (XM3B-F) offers space-saving design and superior noise protection at high frequency.
- Fitted in a rugged, compact metal shell.
- Many kinds of standard Anchors and grounding fixtures available.
- The XM2/XM3 conform to UL standards (No. E103202) (XM2S and some other models are not included)

RoHS Compliant

■ Terminology

● EMI

Abbreviation of ElectroMagnetic Interference (noise)

● Metallization

Here, metallization refers to plating over the plastic hood.

● Shielded connector

Connector having a structure that can be grounded.

● Beating

A processing technique that ensures the contact amongst the shells by beating a part of the shell.

● ESD

Abbreviation of ElectroStatic Discharge

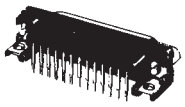
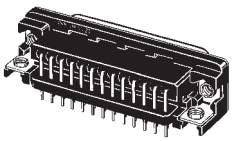
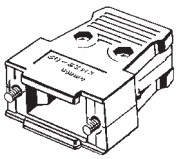
● Grounding structure

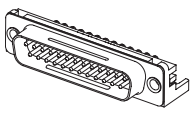
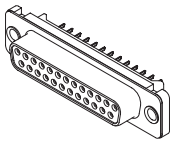
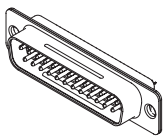
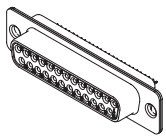
Here, grounding structure refers to a structure where an unmetallized hood can be grounded by an grounding plate.

● Shell

Refers to the case covering the connector. Here, the shell refers to the metal parts attached to the mating end.

■ Connectors

Model	XM3B	XM3B-F	XM2S
Appearance	 Sockets with right-angle DIP terminals	 Sockets with right-angle DIP terminals (with ferrite core)	 Hoods
Reference page	3 to 4	5	10

Model	XM3C	XM3F	XM3A	XM3D
Appearance	 Plugs with right-angle DIP terminals	 Sockets with straight DIP terminals	 Plugs with solder-cup terminals	 Sockets with solder-cup terminals
Reference page	6 to 7	8	9	

■ Ratings and Characteristics

Item \ Model	Plugs with Solder Cup Terminals: XM3A Socket with right-angle DIP Terminals: XM3B Socket with right-angle DIP Terminals (with ferrite core): XM3B-F Plugs with Right-angle DIP Terminals: All XM3C models except those with 37 pins XM3C-0922-□□□ XM3C-1522-□□□ XM3C-2522-□□□ Sockets with Solder Cup Terminals: XM3D Sockets with Straight DIP Terminals: XM3F	Plugs with Right-angle DIP Terminals: XM3C models with 37 pins XM3C-3722-□□□	Hoods XM2S
Rated current	5 A	3 A	---
Rated voltage	300 VAC		
Contact resistance	15 mΩ max. (at 20 mVDC, 100 mA max.)		
Insulation resistance	1,000 MΩ min. (at 500 V DC)		
Dielectric strength	1,000 VAC for 1 min (leakage current: 1 mA max.)		
Total insertion force	Number of pins × 3.33 N max		
Removal force	0.29 N min. (for gauge diameter of 0.99 mm)		
Insertion durability	200 times		
Ambient operating temperature	−55°C to 105°C (with no icing)		−25°C to 85°C
Shield performance	Mounted in panel: 25 dB min. (30 to 900 MHz) Mounted on board: 20 dB min. (30 to 300 MHz)		---

■ Materials and Finish

Item	Model	XM3B	XM3B-F	XM3C	XM3F	XM3A	XM3D	XM2S
Housing		Fiber-glass reinforced PBT resin (UL94V-0)/black				Fiber-glass reinforced PBT resin (UL94V-0)/Milky white		ABS resin/nickel plated
Contacts	Mating end	Phosphor bronze/nickel base, gold plated (0.4 μm)				Bronze/nickel base, gold plated (0.4 μm)	Phosphor bronze/nickel base, gold plated (0.4 μm)	---
	Terminals	Phosphor bronze/nickel base, tin plated (2 μm)		Phosphor bronze/nickel base, tin plated (3 μm)		Bronze/nickel base, tin plated (3 μm)	Phosphor bronze/nickel base, tin plated (3 μm)	
Shell		Steel/nickel						

■ Applicable Wires

The applicable wires for solder cup terminals are AWG 22 to 28 (solid or stranded).

XM3B Sockets with Right-angle DIP Terminals

■ Model Number Legend

XM3B-□□22-□□□
1 2 3

1. Anchor specifications
1: With Anchor 2
5: No anchors

2. Anchor screw specifications
1: M2.6 × 0.45 metric screws
3: #4-40 UNC inch screws
0: No anchors

3. Grounding Fixture
1: Tap Hole Grounding Fixture
2: Lock Pin Grounding Fixture

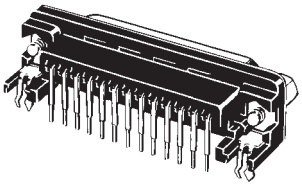
Note: Anchors and Grounding Fixtures are not supplied if 1, 2,and 3 are blank.

■ Dimensions

(unit: mm)

XM3B-□□22 (No anchors, no grounding fixtures)
XM3B-□□22-501 (No anchors, Tap Hole Grounding Fixtures)
XM3B-□□22-111 (With Anchor 2 (See note 1.), Tap Hole Grounding Fixtures)
XM3B-□□22-131 (With Anchor 2 (See note 2.), Tap Hole Grounding Fixtures)
XM3B-□□22-502 (No anchors, Lock Pin Grounding Fixtures)
XM3B-□□22-112 (With Anchor 2 (See note 1.), Lock Pin Grounding Fixtures)
XM3B-□□22-132 (With Anchor 2 (See note 2.), Lock Pin Grounding Fixtures)

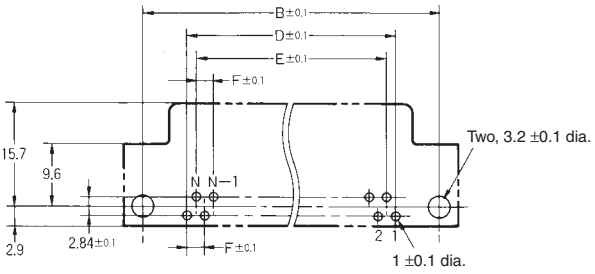
Note: 1. Metric screws (M2.6 × 0.45)
2. Inch screws (#4-40 UNC)

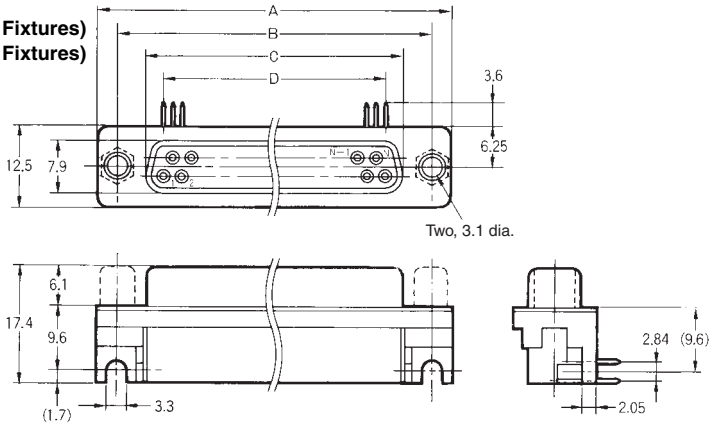


25-contact model shown above.
(With anchor 2, Lock Pin, Grounding Fixtures)

Note: XM3B Sockets were manufactured in accordance with JIS X 5101. Terminal pitches are a mixed arrangement of 2.77- and 2.74-mm contacts on 25- and 37-contact models as specified in the JIS standard. A pitch of 2.76 mm is recommended for the mounting holes because of the more advanced numerical control available today. This is sufficient to avoid any problems.

Mounting holes (t = 1.6 mm, bottom view)

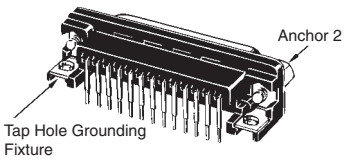
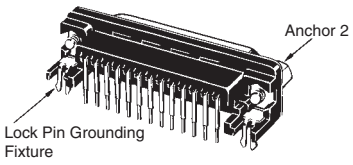
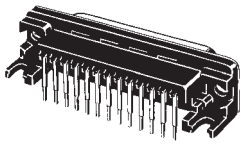




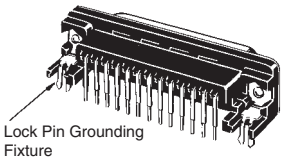
Dimensions

No. of contacts	Dimensions (mm)					
	A	B	C	D	E	F
9	30.8	24.99	16.30	10.96	8.22	2.74
15	39.1	33.32	24.65	19.18	16.44	2.74
25	53.0	47.04	38.35	33.12	30.36	2.76
37	69.3	63.50	54.80	49.68	46.92	2.76

■ Ordering Information

Appearance	Anchor 2 and Tap Hole Grounding Fixtures	Anchor 2 and Lock Pin Grounding Fixtures	No anchors or grounding fixtures (See note 1.)
			
Accessories	**XM2Z-0011 Anchor 2 (M2.6 × 0.45 metric screws)**		**---**
No. of contacts	**XM2Z-0061 Tap Hole Grounding Fixtures**	**XM2Z-0062 Lock Pin Grounding Fixtures**	**---**
9	XM3B-0922-111	XM3B-0922-112	XM3B-0922
15	XM3B-1522-111	XM3B-1522-112	XM3B-1522
25	XM3B-2522-111	XM3B-2522-112	XM3B-2522
37	XM3B-3722-111	XM3B-3722-112	XM3B-3722

Accessories	**XM2Z-0013 Anchor 2 (#4-40 UNC inch screws)**	
No. of contacts	**XM2Z-0061 Tap Hole Grounding Fixtures**	**XM2Z-0062 Lock Pin Grounding Fixtures**
9	XM3B-0922-131	XM3B-0922-132
15	XM3B-1522-131	XM3B-1522-132
25	XM3B-2522-131	XM3B-2522-132
37	XM3B-3722-131	XM3B-3722-132

Appearance	No anchors, with Tap Hole Grounding Fixtures	No anchors, with Lock Pin Grounding Fixtures
		
Accessories	**No anchors**	
No. of contacts	**XM2Z-0061 Tap Hole Grounding Fixtures**	**XM2Z-0062 Lock Pin Grounding Fixtures**
9	XM3B-0922-501	XM3B-0922-502
15	XM3B-1522-501	XM3B-1522-502
25	XM3B-2522-501	XM3B-2522-502
37	XM3B-3722-501	XM3B-3722-502

Note: 1. Use the XM3B-□□22 (No anchors or grounding fixtures) in combination with suitable Anchors and Grounding Fixtures.

2. Two M3 × 0.5 Tap Hole Grounding Fixtures and an M3 × 0.5 Lock Pin Grounding Fixture for the Anchor side are provided.

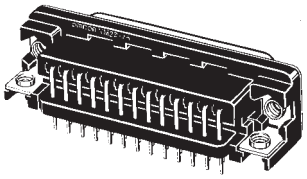
3. Contact your OMRON representative for other anchor and grounding fixture specifications. See Accessories (Sold Separately) of XM2/XM3 for details on accesories.

XM3B-F Sockets with Right-angle DIP Terminals and Ferrite Cores

■ Dimensions

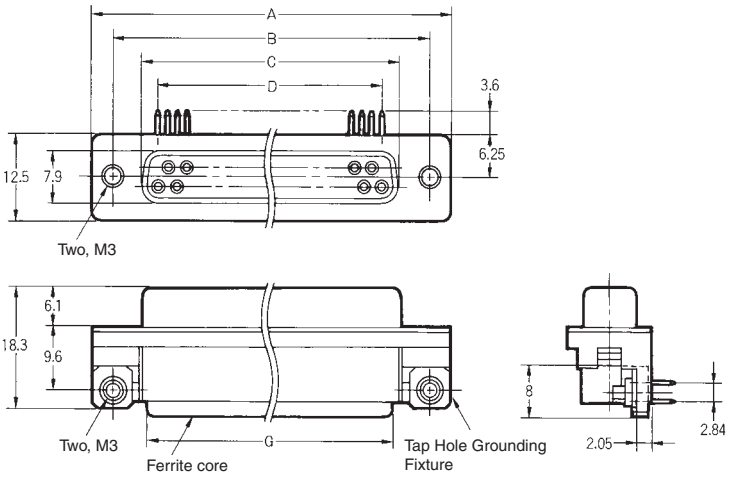
(unit: mm)

Sockets with Right-angle DIP Terminals
XM3B-□□22-501F
(With Tap Hole Grounding Fixtures)

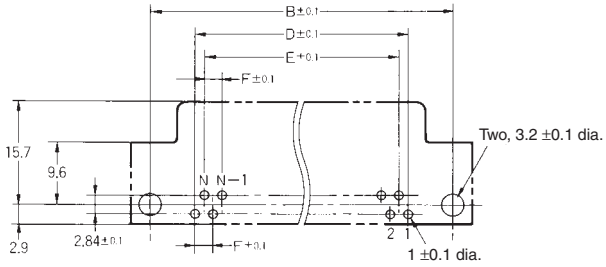


25-contact model shown above.
(With Tap Hole Grounding Fixtures)

Note: XM3B Sockets were manufactured in accordance with JIS X 5101. Terminal pitches are a mixed arrangement of 2.77- and 2.74-mm contacts on 25- and 37-contact models as specified in the JIS standard. A pitch of 2.76 mm is recommended for the mounting holes because of the more advanced numerical control available today. This is sufficient to avoid any problems.



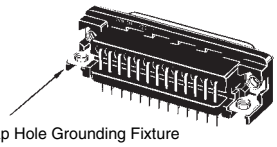
Mounting holes (t = 1.6 mm, bottom view)



Dimensions

No. of contacts	Dimensions (mm)						
	A	B	C	D	E	F	G
9	30.8	24.99	16.30	10.96	8.22	2.74	14.3
15	39.1	33.32	24.65	19.18	16.44	2.74	22.0
25	53.0	47.04	38.35	33.12	30.36	2.76	36.5
37	69.3	63.50	54.80	49.68	46.92	2.76	53.3

■ Ordering Information

	Tap Hole Grounding Fixtures
Appearance	 Tap Hole Grounding Fixture
Accessories	**XM2Z-0061 Tap Hole Grounding Fixtures**
No. of contacts	
9	XM3B-0922-501F
15	XM3B-1522-501F
25	XM3B-2522-501F
37	XM3B-3722-501F

XM3C Plugs with Right-angle DIP Terminals

■ Model Number Legend

XM3C-□□22-□□□
1 2 3

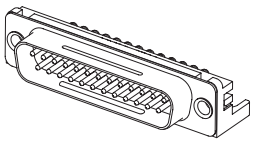
1. **Anchor specifications**
   1: With Anchor 2
   5: No anchors
2. **Anchor screw specifications**
   1: M2.6 × 0.45 metric screws
   3: Inch screws
   0: No anchors
3. **Grounding Fixture**
   1: Tap Hole Grounding Fixture
   2: Lock Pin Grounding Fixture

Note: Anchors and Grounding Fixtures are not supplied if 1, 2, and 3 are blank.

■ Dimensions

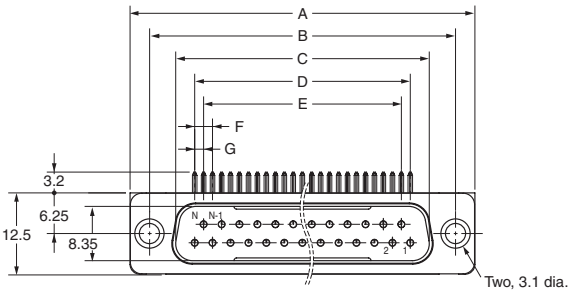
(unit: mm)

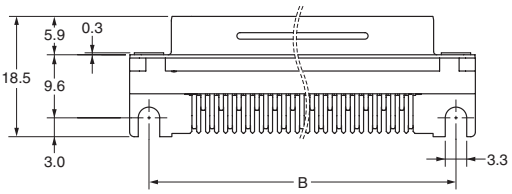
DIP Terminals
XM3C-□□22 (No Anchors or Grounding Fixtures)
XM3C-□□22-501 (No Anchors, with Tap Hole Grounding Fixtures)
XM3C-□□22-502 (No Anchors, with Lock Pin Grounding Fixtures)
XM3C-□□22-111 (With Anchor 2 and Tap Hole Grounding Fixtures)
XM3C-□□22-112 (With Anchor 2 and Lock Pin Grounding Fixtures)

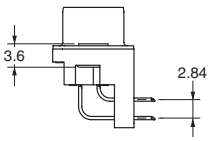


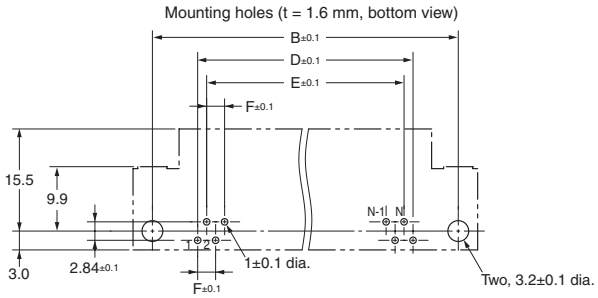
25-contact model shown above.
(No Anchor or Grounding Fixtures)

Note: XM3C Terminals were manufactured in accordance with JIS X 5101. Terminal pitches are a mixed arrangement of 2.77- and 2.74-mm contacts on 25- and 37-contact models as specified in the JIS standard. A pitch of 2.76 mm is recommended for the mounting holes because of the more advanced numerical control available today. This is sufficient to avoid any problems.





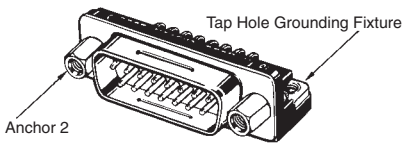
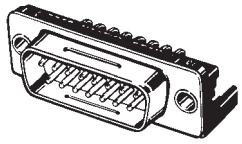


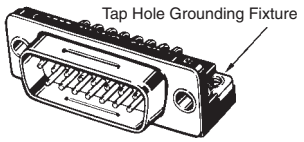
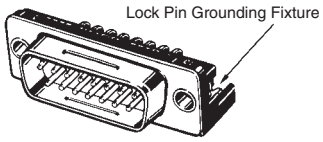


Dimensions

No. of contacts	A	B	C	D	E	F	G
9	30.8	24.99	16.91	10.96	8.22	2.74	1.37
15	39.1	33.32	25.25	19.18	16.44	2.74	1.37
25	53.0	47.04	38.96	33.12	30.36	2.76	1.38
37	69.3	63.50	55.42	49.68	46.92	2.76	1.38

■ Ordering Information

Appearance	Anchor 2 and Tap Hole Grounding Fixtures	Anchor 2 and Lock Pin Grounding Fixtures	No anchors or Grounding Fixtures
			
Accessories	**XM2Z-0011 Anchor 2 (M2.6 × 0.45 metric screws)**		**---**
No. of contacts	**Tap Hole Grounding Fixtures**	**Lock Pin Grounding Fixtures**	**---**
9	XM3C-0922-111	XM3C-0922-112	XM3C-0922
15	XM3C-1522-111	XM3C-1522-112	XM3C-1522
25	XM3C-2522-111	XM3C-2522-112	XM3C-2522
37	XM3C-3722-111	XM3C-3722-112	XM3C-3722

Appearance	No anchors, with Tap Hole Grounding Fixtures	No anchors, with Lock Pin Grounding Fixtures
		
Accessories	**No anchors**	
No. of contacts	**Tap Hole Grounding Fixtures**	**Lock Pin Grounding Fixtures**
9	XM3C-0922-501	XM3C-0922-502
15	XM3C-1522-501	XM3C-1522-502
25	XM3C-2522-501	XM3C-2522-502
37	XM3C-3722-501	XM3C-3722-502

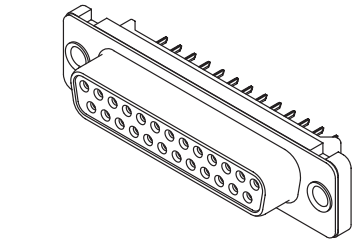
Note: The XM3C-□□22-111/-112 with Anchor 2 (M2.6 × 0.45) and Grounding Fixtures as well as the XM3C-□□22-501/-502 with Grounding Fixtures and no Anchor are available as standard models. Two M3 × 0.5 Tap Hole Grounding Fixtures and an M3 × 0.5 Lock Pin Grounding Fixture for the Anchor side are provided.
Contact your OMRON representative for other anchor and grounding fixture specifications. See Accessories (Sold Separately) of XM2/XM3 for details on accesories.

XM3F Sockets with Straight DIP Terminals

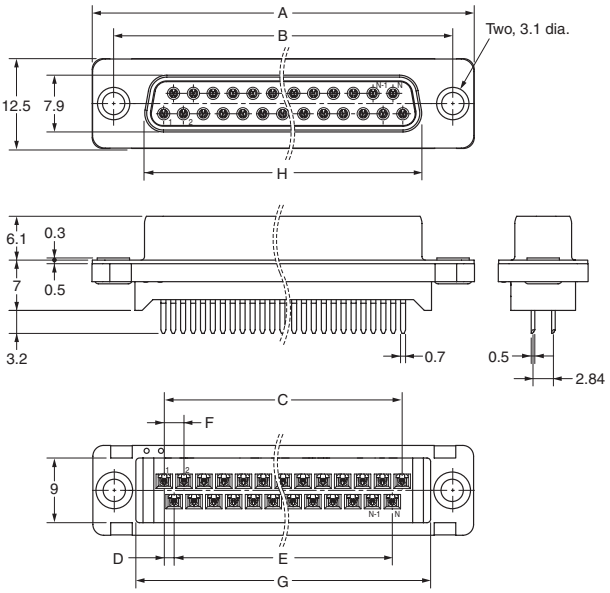
■ Dimensions

(unit: mm)

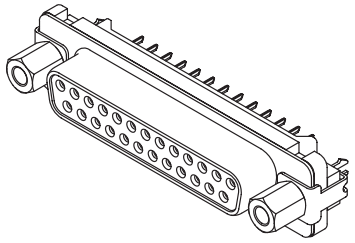
Straight DIP Terminals
XM3F-□□20
(No Anchor or Grounding Fixtures)



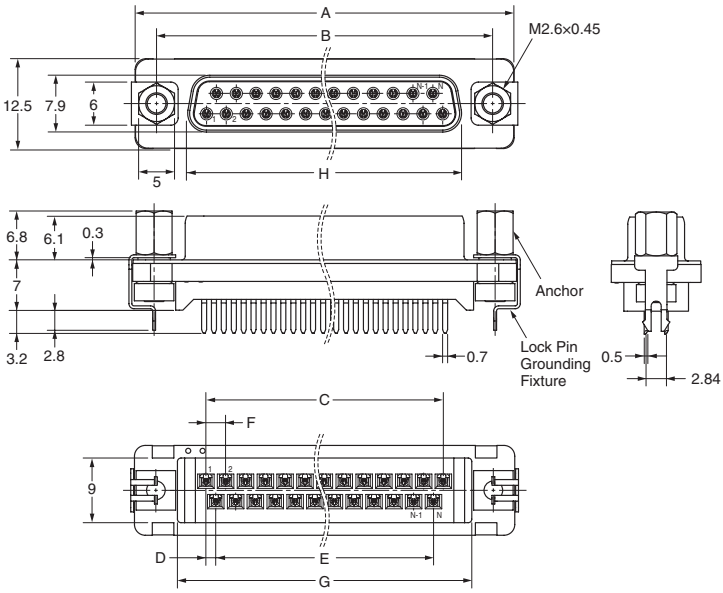
25-contact model shown on the left.
(No anchors or grounding fixtures)



XM3F-□□20-112
(With Anchor and Lock Pin Grounding Fixtures)



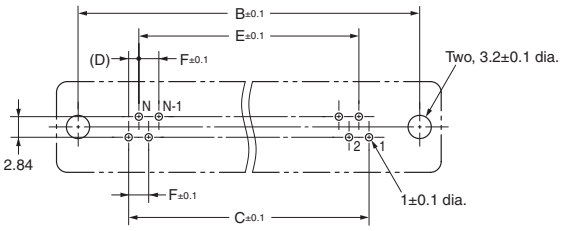
25-contact model shown on the left.
(With Anchors and Grounding Fixtures)



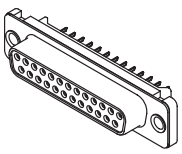
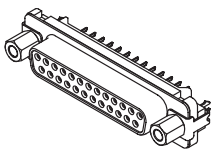
Dimensions

No. of contacts	A	B	C	D	E	F	G	H
9	30.7	24.99	10.98	1.37	8.22	2.74	19.00	16.33
15	39.0	33.32	19.20	1.37	16.44	2.74	27.12	24.66
25	52.9	47.04	33.12	1.38	30.36	2.76	41.04	38.38
37	69.2	63.50	49.68	1.38	46.92	2.76	57.60	54.84

Mounting holes (t = 1.6 mm, bottom view)



■ Ordering Information

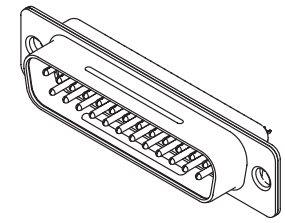
Appearance / No. of contacts	No anchors or Grounding Fixtures	Anchors and Lock Pin Grounding Fixtures
		
9	XM3F-0920	XM3F-0920-112
15	XM3F-1520	XM3F-1520-112
25	XM3F-2520	XM3F-2520-112
37	XM3F-3720	XM3F-3720-112

XM3A Plugs with Solder-cup Terminals
XM3D Sockets with Solder-cup Terminals

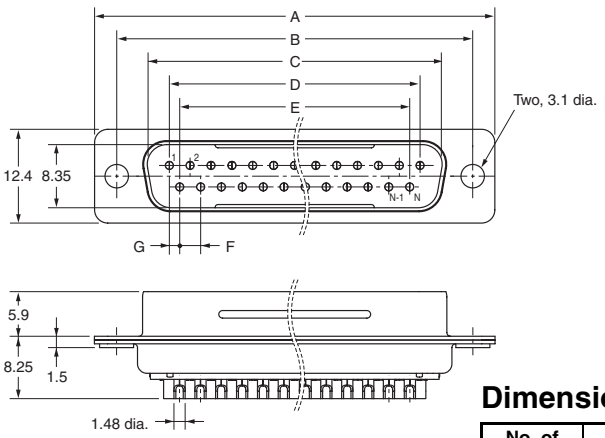
■ Dimensions

(unit: mm)

XM3A-□□21
Plugs/Solder-cup Terminals



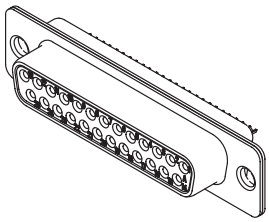
Note: 25-contact model shown above.



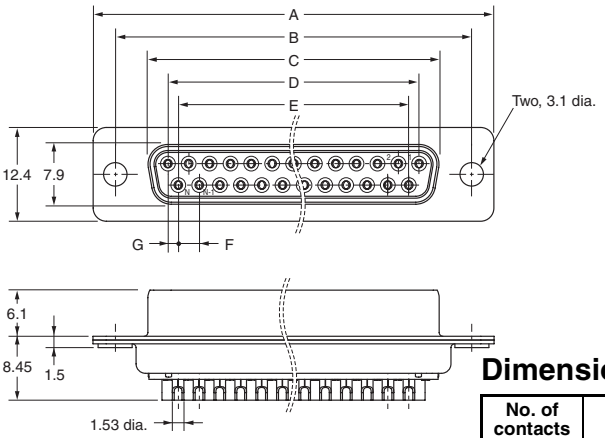
Dimensions (XM3A)

No. of contacts	A	B	C	D	E	F	G
9	30.7	24.99	16.91	10.96	8.22	2.74	1.37
15	39.0	33.32	25.25	19.18	16.44	2.74	1.37
25	52.9	47.04	38.96	33.12	30.36	2.76	1.38
37	69.2	63.50	55.42	49.68	46.92	2.76	1.38

XM3D-□□21
Sockets, Solder-cup Terminals



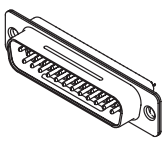
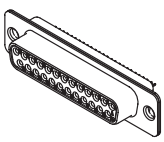
Note: 25-contact model shown above.



Dimensions (XM3D)

No. of contacts	A	B	C	D	E	F	G
9	30.7	24.99	16.33	10.96	8.22	2.74	1.37
15	39.0	33.32	24.66	19.18	16.44	2.74	1.37
25	52.9	47.04	38.38	33.12	30.36	2.76	1.38
37	69.2	63.50	54.84	49.68	46.92	2.76	1.38

■ Ordering Information

Appearance / No. of contacts	Plugs	Sockets
		
9	XM3A-0921	XM3D-0921
15	XM3A-1521	XM3D-1521
25	XM3A-2521	XM3D-2521
37	XM3A-3721	XM3D-3721