# **D-Sub Connectors** XM3

## **XM3 Series**

# D-Sub Connectors That Are Ideal for Office Equipment Interfaces

- Shielded against EMI.
- Compact, robust connectors with metal shells.
- Anchors and Grounding Fixtures are available.

**RoHS Compliant** 



#### Slim Models Join the XM2-L/XM3-L Series

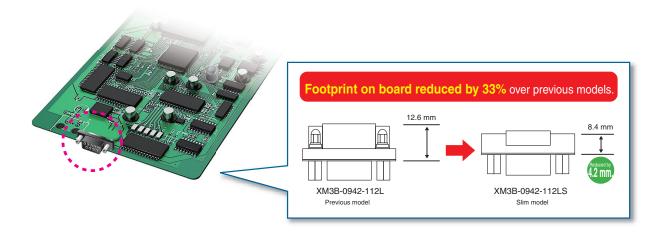
Refer to page 7 for detailed specifications.

## XM3B-LS

# Space-saving 9-pin Slim D-sub Socket Connectors for Boards

- Board mounting area is reduced by 33% (compared with previous models) using depth of 8.4 mm.
- D-sub sockets with nine right-angle DIP terminals.
- Mounting board thickness of either 1.6 mm or 1.0 mm (from difference in lock pin structure).





# **XM3 Series**

## Connectors

Model	XM3C	XM3F	ХМЗА	XM3D
	Plugs with Right-angle DIP Terminals	Sockets with Straight DIP Terminals	Plugs with Solder Cup Terminals	Sockets with Solder Cup Terminals
Appearance				

# ■Ratings and Characteristics

Model	Plugs with Solder Cup Terminals: XM3A Plugs with Right-angle DIP Terminals: All XM3C models except those with 37 pins XM3C-0922-□□□ XM3C-1522-□□□ 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-□□□			
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)				
Withstand voltage	1,000 VAC for 1 min (leakage current: 1 mA max.)				
Total insertion force	Number of pins × 3.33 N max				
Individual pull-out force	0.29 N min. (for gauge diameter of 0.99 mm)				
Insertion durability	200 times				
Operating temperature	−55°C to 105°C (with no icing)				
Shield effectiveness (electrical field method)	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	el XM3C XM3F		XM3A	XM3D	
Housing		Fiber-glass reinforced PBT resin (UL94V-0)/black		Fiber-glass reinforced PBT resin (UL94V-0)/Milky white		
Contacts	Mating end	Phosphor bronze/nickel base, gol	Phosphor bronze/nickel base, gold plated		Phosphor bronze/nickel base, gold plated	
Contacts	Terminals	Phosphor bronze/nickel base, tin plated		Bronze/nickel base, tin plated	Phosphor bronze/nickel base, tin plated	
Shell		Steel/nickel				

# **■**Applicable Wires

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

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# **XM3C Plugs with Right-angle DIP Terminals**

# ■Model Number Legend.

XM3C-□□22-□□□

1 2 3

1 Anchor Type 2 Anchor Screw Specifications

1: Anchor 2 1: M2.6 x 0.45 metric screws 1: Tap-hole Grounding Fixture

5: No anchors

3: Inch screws

2: Lock Pin Grounding Fixture

0: No anchors

O: NO BRICHORS

Note: If 1, 2, or 3 are omitted in the model number, then no Anchor or Grounding Fixture is included

3 Grounding Fixture

# Ordering Information

	Anchor 2 and Tap-hole Grounding Fixture	Anchor 2 and Lock Pin Grounding Fixture	No Ancho	or or Grounding Fixture	
Appear- ance	Tap-hole Grounding Fixture	Lock Pin Grounding Fixture Anchor 2			Minimum ordering quantity (pieces)
	Anchor 2: XM2Z-0011 (N	12.6 x 0.45 metric screws)			
Accessories No. of contacts	Tap-hole Grounding Fixture	Lock Pin Grounding Fixture			
9	XM3C-0922-111	XM3C-0922-112		XM3C-0922	90
15	XM3C-1522-111	XM3C-1522-112		XM3C-1522	70
25	XM3C-2522-111	XM3C-2522-112		XM3C-2522	50
37	XM3C-3722-111	XM3C-3722-112		XM3C-3722	40
	No Anchor and Tap-hole Grounding Fixture	No Anchor and Lock Pin Grounding Fixture			
Appear- ance	Tap-hole Grounding Fixture	Lock Pin Grounding Fixture	Minimum ordering quantity (pieces)		
	No ar	nchors			
Accessories No. of contacts	Tap-hole Grounding Fixture	Lock Pin Grounding Fixture			
9	XM3C-0922-501	XM3C-0922-502	90		
15	XM3C-1522-501	XM3C-1522-502	70		
25	XM3C-2522-501	XM3C-2522-502	50		
37	XM3C-3722-501	XM3C-3722-502	40		

Note: Also available as standard models are the XM3C- $\square$ 22-111/-112 with Anchor 2 (M 2.6 x 0.45) and Grounding Fixture, as well as the XM3C- $\square$ 22-501/502 with Grounding Fixture and no Anchor.

The enclosed Tap-hole Grounding Fixture is two M3 x 0.5, and the Lock Pin Grounding Fixture is M3 x 0.5 on the Anchor side.

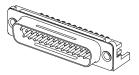
4

Dimensions (Unit: mm)

#### Right-angle DIP Terminals

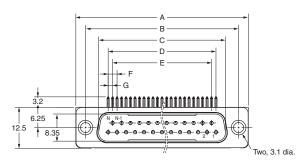
XM3C-□□22 (No Anchor or Grounding Fixture)

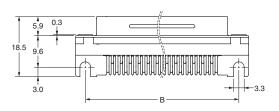
XM3C-□□22-501 (No Anchor, Tap-hole Grounding Fixture Included) XM3C-□□22-502 (No Anchor, Long Pin Grounding Fixture Included) XM3C-□□22-111 (Anchor 2, Tap-hole Grounding Fixture Included) XM3C-□□22-112 (Anchor 2, Long Pin Grounding Fixture Included)

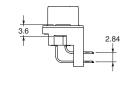


The above illustration is for the 25-pin model (no Anchor or Grounding Fixture).

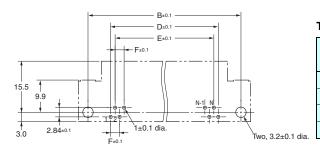
Note: The XM3C is produced based on JIS X5101. The pin pitch is in a mixed arrangement of 2.77 mm and 2.74 mm following JIS standards (for 25-pin and 37-pin models). A uniform pitch of 2.76 mm, however, is recommended for the mounting holes. A board processed using a pinch of 2.76 mm will have sufficient margin and pose no practical problems.







#### Mounting Holes (t=1.6mm, Bottom View)



#### **Table of Dimensions**

Dimensions (mm) No. of contacts	Α	В	С	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

# XM3F Sockets with Straight DIP Terminals

## **■**Ordering Information

	No Anchor or Grounding Fixture	Anchor and Lock Pin Grounding Fixture	
Appearance  No. of contacts	COLOR OF THE STATE	Constitution of the second of	Minimum ordering quantity (pieces)
9	XM3F-0920	XM3F-0920-112	90
15	XM3F-1520	XM3F-1520-112	70
25	XM3F-2520	XM3F-2520-112	50
37	XM3F-3720	XM3F-3720-112	40

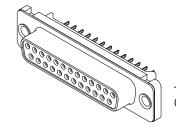
■Dimensions (Unit: mm)

#### Straight DIP Terminals

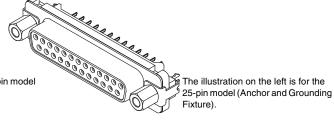
XM3F-□□20

(No Anchor or Grounding Fixture)

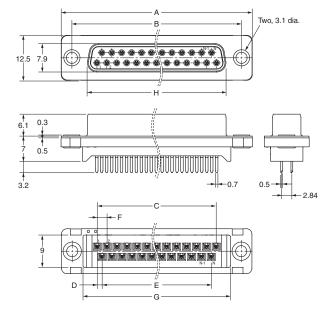


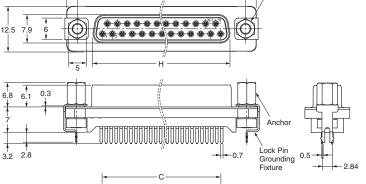


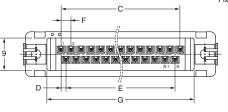
The illustration on the left is for the 25-pin model (no Anchor or Grounding Fixture).



M2.6×0.45



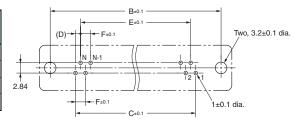




#### **Table of Dimensions**

Dimensions (mm) No. of contacts	А	В	С	D	E	F	G	Н
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=1.6mm, Bottom View)



# XM3A Plugs with Solder Cup Terminals XM3D Sockets with Solder Cup Terminals

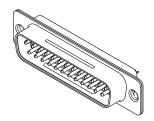
## **■**Ordering Information

Appearance	Plug	Socket	
No. of contacts			Minimum ordering quantity (pieces)
9	XM3A-0921	XM3D-0921	
15	XM3A-1521	XM3D-1521	50
25	XM3A-2521	XM3D-2521	30
37	XM3A-3721	XM3D-3721	

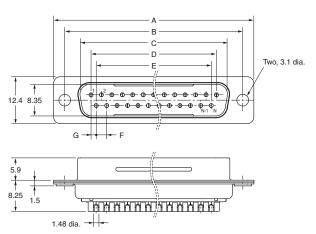
■Dimensions (Unit: mm)

#### Plugs with Solder Cup Terminals

#### XM3A-□□21



Note: The illustration above is for a 25-pin model.

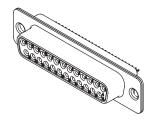


#### Table of Dimensions (XM3A)

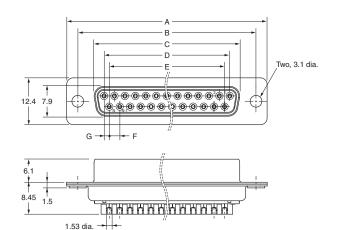
Dimensions (mm) No. of contacts	А	В	С	D	E	F	G
9	30.7	24.99	16.91	10.96	8.22	2.74	1.37
15	39.0	33.32	25.25	19.18	16.44	2.74	1.37
25	52.9	47.04	38.96	33.12	30.36	2.76	1.38
37	69.2	63.50	55.42	49.68	46.92	2.76	1.38

#### Sockets with Solder Cup Terminals

#### XM3D-□**□**21



Note: The illustration above is for a 25-pin model.



#### Table of Dimensions (XM3D)

Dimensions (mm) No. of contacts	А	В	С	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

# XM3B-LS Sockets with Right-angle DIP Terminals

## ■Ratings and Characteristics

Rated current	3 A
Rated voltage	300 VAC
Contact resistance	20 mΩ max. (at 20 mVDC, 100 mA max.)
Insulation resistance	1,000 M $\Omega$ min. (at 500 VDC for 1 min)
Withstand voltage	1,000 VAC for 1 min (leakage current: 1 mA max.)
Insertion durability	100 times
Operating temperature	-25 to 105°C (with no condensation or icing)

# **■**Ordering Information

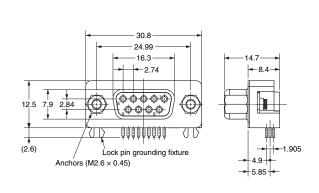
Appearance  No. of contacts Accessories	Anchors, M2.6 × 0.45	Minimum ordering quantity (pieces)
9	XM3B-0942-112LS	80

#### ■Materials and Finish

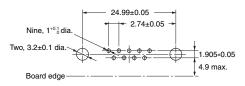
Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
Contacts	Phosphor bronze/nickel base, flash gold plated
Shell	Steel/nickel plated
Anchors	Stainless steel
Lock pin grounding fixture	Brass/tin plated

■Dimensions (Unit: mm)

#### XM3B-0942-112LS

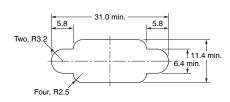


#### Mounting Holes (BOTTOM VIEW)



Note: Applicable board thickness: 1.6 or 1.0 mm.

#### **Panel Cutout**

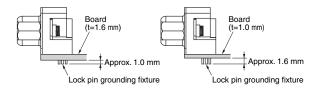


Note: Applicable panel thickness is 1.2 mm max.

#### Precautions

#### **Precautions for Correct Use**

 Insert the Connector into the board and then simultaneously dip-solder the Connector terminals and lock pins to the board.



#### Automatic Soldering

#### **Automated Soldering Conditions (Jet Flow)**

- (1) Soldering temperature: 250 ±5°C
- (2) Continuous soldering time:  $5 \pm 1$  s max.

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