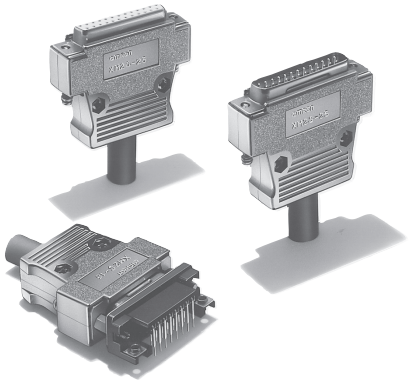
OMRON

D-sub Connectors

XM3

D-sub Connectors Are Ideal for Office Automation Interfacing.

- Fitted in a rugged, compact metal shell.
- Many kinds of standard Anchors and grounding fixtures available.



■ Terminology

● Shielded connector

Connector having a structure that can be grounded.

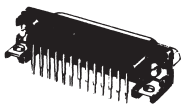
● Beating

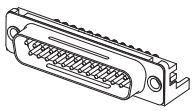
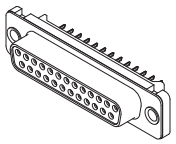
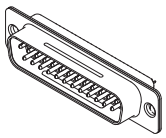
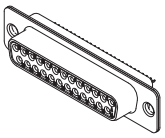
A processing technique that ensures the contact amongst the shells by beating a part of the shell.

● Shell

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

■ Connectors

Model	XM3B
Appearance	 Sockets with right-angle DIP terminals
Reference page	3 to 4

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	5 to 6	7	8	

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■ Ratings and Characteristics

Item \ Model	XM3A XM3B All XM3C models except for those with 37 pins XM3D XM3F	XM3C models with 37 pins
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.)	
Insertion durability	200 times	
Ambient operating temperature	–55 to 105°C (with no condensation or icing)	

■ Materials and Finish

Item \ Model		XM3B	XM3B-F	XM3C	XM3F	XM3A	XM3D
Housing		PBT (UL94 V-0)/black				PBT (UL94 V-0)/Milky white	
Contacts	Mating end	Phosphor bronze/nickel base, gold plated				Bronze/nickel base, gold plated	Phosphor bronze/nickel base, gold plated
	Terminals	Phosphor bronze/nickel base, tin plated		Phosphor bronze/nickel base, tin plated		Bronze/nickel base, tin plated	Phosphor bronze/nickel base, tin plated
Shell		Steel/nickel plated					

■ Applicable Wires

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

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XM3B Sockets with Right-angle DIP Terminals

■ Model Number Legend

XM3B-□□22-□□□
1 2 3 4

1. **Number of contacts**
   09: 9 contacts
   15: 15 contacts
   25: 25 contacts
   37: 37 contacts

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

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

4. **Grounding Fixture**
   1: Tap Hole Grounding Fixture
   2: Lock Pin Grounding Fixture

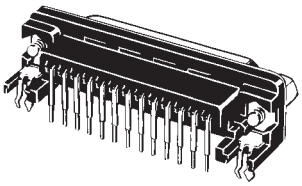
Note: Anchors and Grounding Fixtures are not supplied if 2, 3,and 4 are blank.

■ Dimensions

(unit: mm)

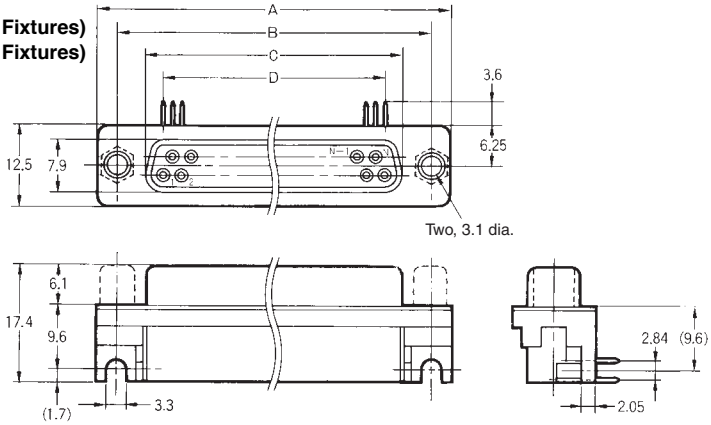
XM3B-□□22 (No anchors, no grounding fixtures)
XM3B-□□22-501 (No anchors, Tap Hole Grounding Fixtures)
XM3B-□□22-111 (With Anchor 2 (See note 1.), Tap Hole Grounding Fixtures)
XM3B-□□22-131 (With Anchor 2 (See note 2.), Tap Hole Grounding Fixtures)
XM3B-□□22-502 (No anchors, Lock Pin Grounding Fixtures)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

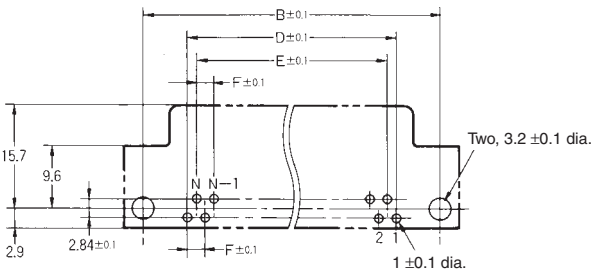


25-contact model shown above.
(With anchor 2, Lock Pin, Grounding Fixtures)

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)

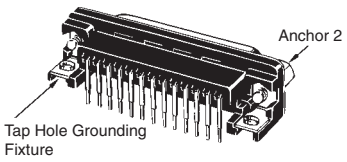
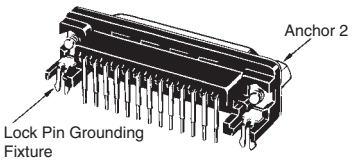
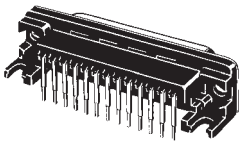


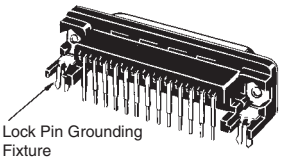
Dimensions

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

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■ 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. For other models with Anchors or Grounding Fixtures, contact your OMRON representative. For accessories, refer to *Accessories (Sold Separately)* in the XM2/XM3 datasheet.

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XM3C Plugs with Right-angle DIP Terminals

■ Model Number Legend

XM3C-□□22-□□□
1 2 3 4

1. **Number of contacts**
   09: 9 contacts
   15: 15 contacts
   25: 25 contacts
   37: 37 contacts

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

3. **Anchor screw specifications**
   1: M2.6 × 0.45 metric screws
   3: Inch screws
   0: No anchors

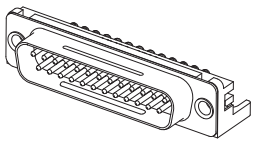
4. **Grounding Fixture**
   1: Tap Hole Grounding Fixture
   2: Lock Pin Grounding Fixture

Note: Anchors and Grounding Fixtures are not supplied if 2, 3, and 4 are blank.

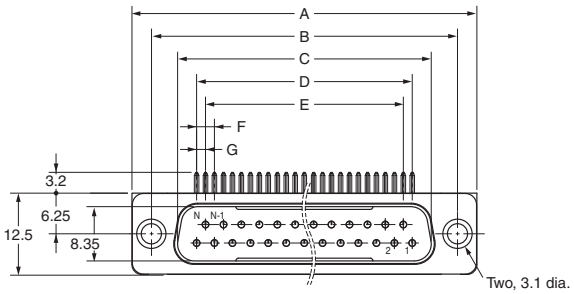
■ Dimensions

(unit: mm)

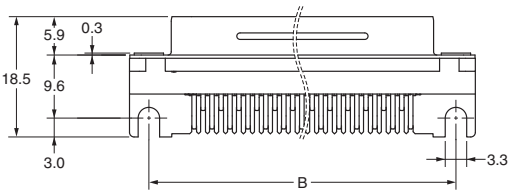
DIP Terminals
XM3C-□□22 (No Anchors or Grounding Fixtures)
XM3C-□□22-501 (No Anchors, with Tap Hole Grounding Fixtures)
XM3C-□□22-502 (No Anchors, with Lock Pin Grounding Fixtures)
XM3C-□□22-111 (With Anchor 2 and Tap Hole Grounding Fixtures)
XM3C-□□22-112 (With Anchor 2 and Lock Pin Grounding Fixtures)

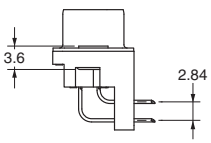


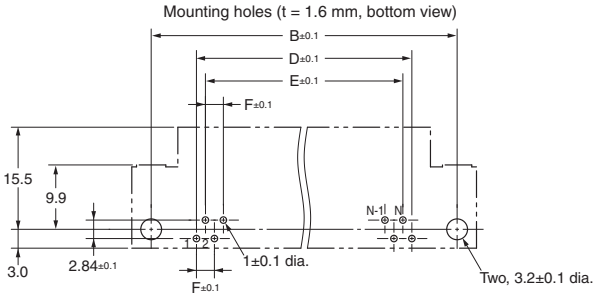
25-contact model shown above.
(No Anchor or Grounding Fixtures)



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.





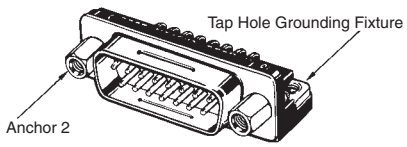
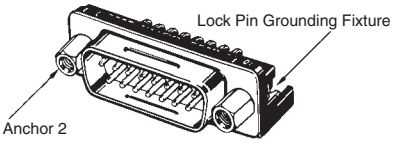
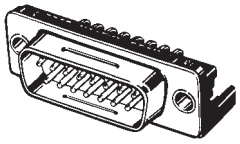


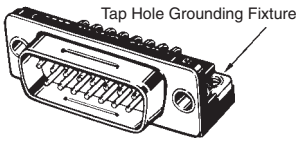
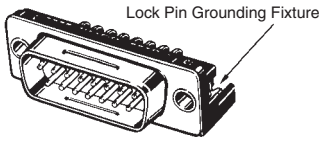
Dimensions

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

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■ 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.
Tap Hole Grounding Fixtures and Lock Pin Grounding Fixtures are not sold separately.

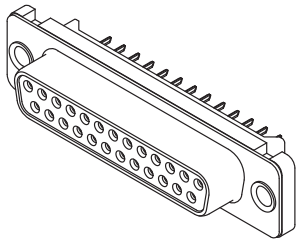
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XM3F Sockets with Straight DIP Terminals

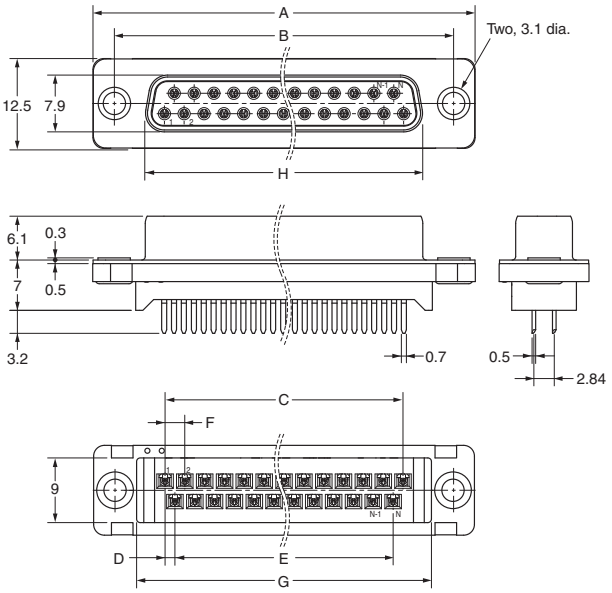
■ Dimensions

(unit: mm)

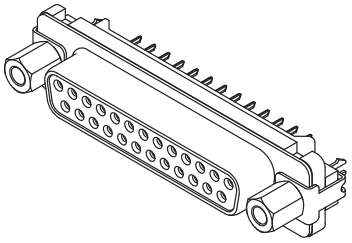
Straight DIP Terminals
XM3F-□□20
(No Anchor or Grounding Fixtures)



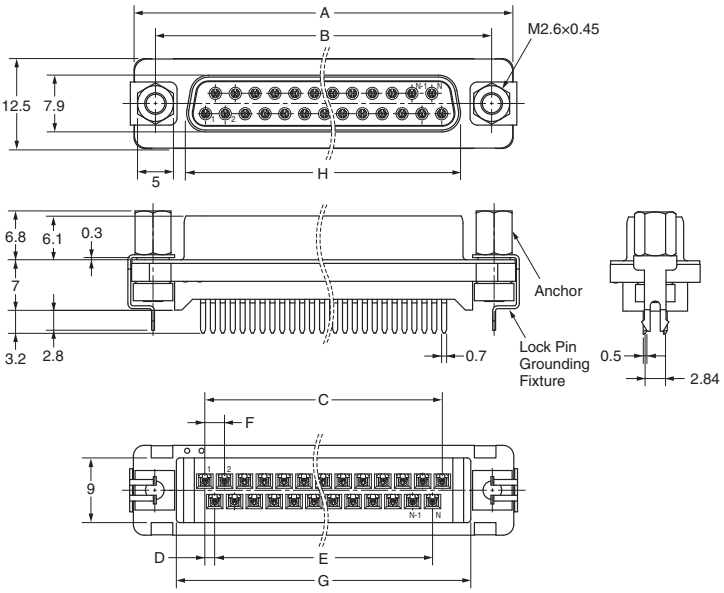
25-contact model shown on the left.
(No anchors or grounding fixtures)



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



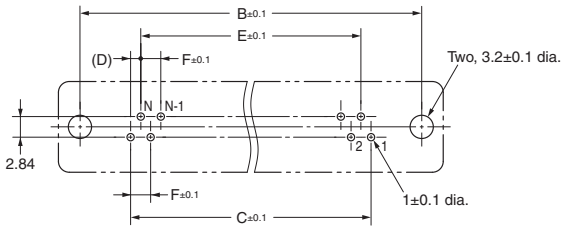
25-contact model shown on the left.
(With Anchors and Grounding Fixtures)



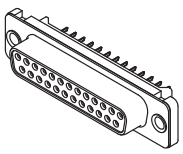
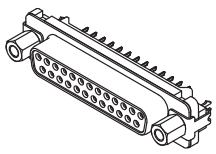
Dimensions

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

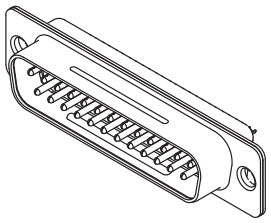
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XM3A Plugs with Solder-cup Terminals
XM3D Sockets with Solder-cup Terminals

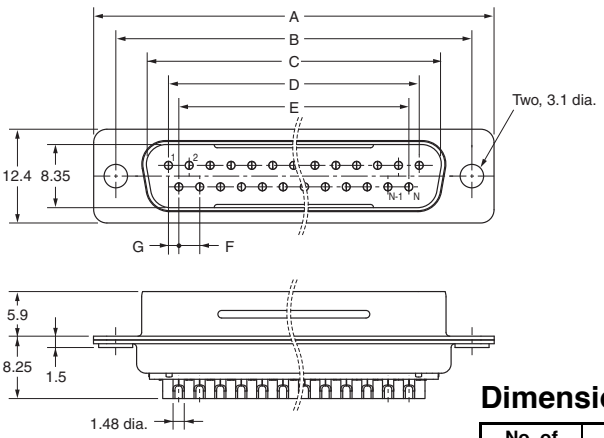
■ Dimensions

(unit: mm)

XM3A-□□21
Plugs/Solder-cup Terminals



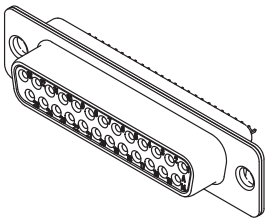
Note: 25-contact model shown above.



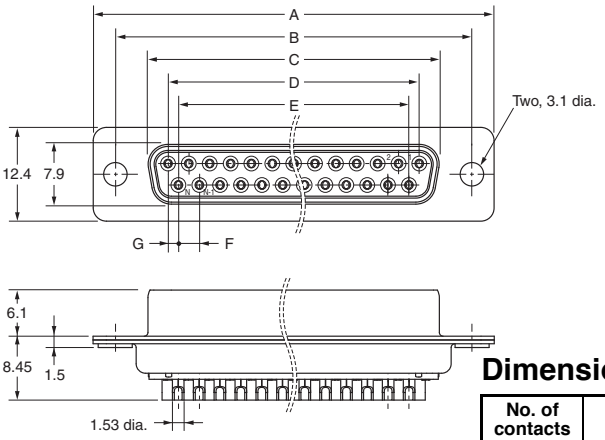
Dimensions (XM3A)

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



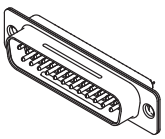
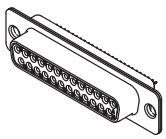
Note: 25-contact model shown above.



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

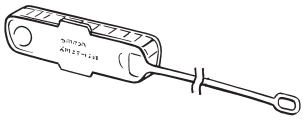
Appearance / No. of contacts	Plugs	Sockets
		
9	XM3A-0921	XM3D-0921
15	XM3A-1521	XM3D-1521
25	XM3A-2521	XM3D-2521
37	XM3A-3721	XM3D-3721

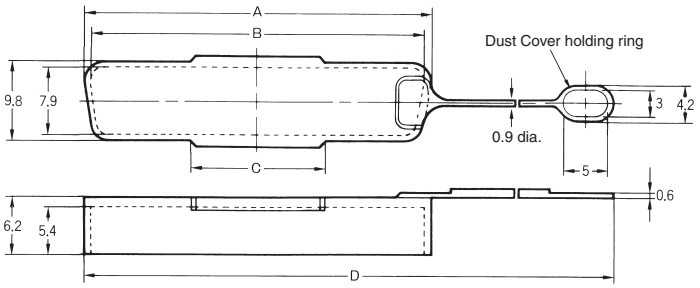
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■ Accessories (Sold Separately)

(unit: mm)

Dust Covers For XM3B/D/F Sockets
With retaining ring
XM2T-0901 (9 contacts)
XM2T-1501 (15 contacts)
XM2T-2501 (25 contacts)
XM2T-3701 (37 contacts)





Ratings and Specifications

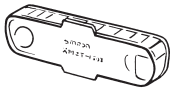
Operating temperature	– 25 to 85°C (with no condensation or icing)
Material	PA

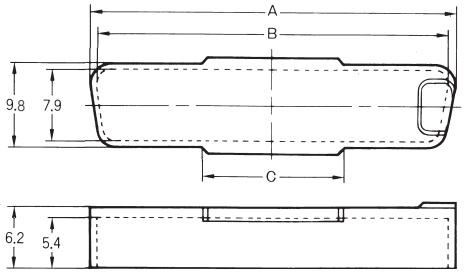
Dimensions

No. of contacts	Dimensions			
	A	B	C	D
9	17.7	16.3	8	68
15	26.1	24.7	10	77
25	39.8	38.4	15	120
37	56.2	54.8	18	135

Model
XM2T-0901
XM2T-1501
XM2T-2501
XM2T-3701

Dust Covers For XM3B/D/F Sockets
Without retaining ring
XM2T-0901-0 (9 contacts)
XM2T-1501-0 (15 contacts)
XM2T-2501-0 (25 contacts)
XM2T-3701-0 (37 contacts)





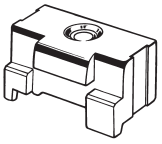
Dimensions

No. of contacts	Dimensions		
	A	B	C
9	17.7	16.3	8
15	26.1	24.7	10
25	39.8	38.4	15
37	56.2	54.8	18

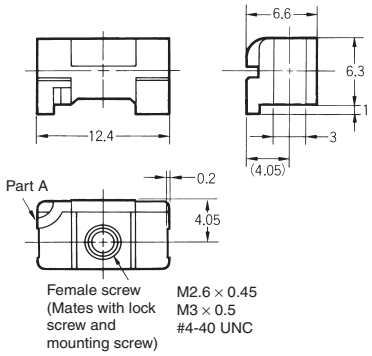
Model
XM2T-0901-0
XM2T-1501-0
XM2T-2701-0
XM2T-3701-0

Downloaded from Arrow.com.

Anchor 1 (Rectangular)
XM2Z-0001
(M2.6 × 0.45 metric screws)
XM2Z-0002
(M3.0 × 0.5 metric screws)
XM2Z-0003
(#4-40 UNC inch screws)



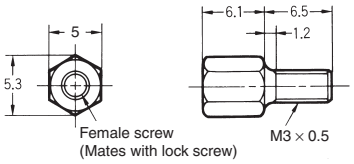
Materials and Finish
Zinc die-cast/nickel plated

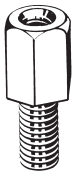


Note: If you use a Dust Cover with a holding ring, secure the holding ring at part A.

Model
XM2Z-0001
XM2Z-0002
XM2Z-0003

Anchor 2 (Hexagonal)
XM2Z-0011
(M2.6 × 0.45 metric screws)
XM2Z-0012
(M3.0 × 0.5 metric screws)
XM2Z-0013
(#4-40 UNC inch screws)

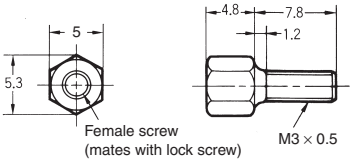


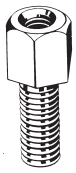


Materials and Finish
Iron/nickel plated

Model
XM2Z-0011
XM2Z-0012
XM2Z-0013

Anchor 3 (Hexagonal)
XM2Z-0021
(M2.6 × 0.45 metric screws)
XM2Z-0022
(M3.0 × 0.5 metric screws)
XM2Z-0023
(#4-40 UNC inch screws)





Materials and Finish
Iron/nickel plated

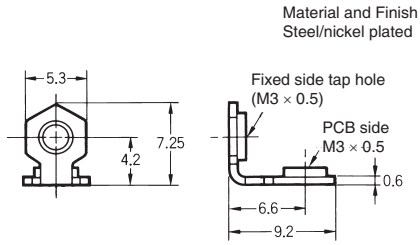
Model
XM2Z-0021
XM2Z-0022
XM2Z-0023

Note: Anchor 3 is used for panel mounting Connectors. Applicable panel thickness is 0.6 to 1.3 mm.

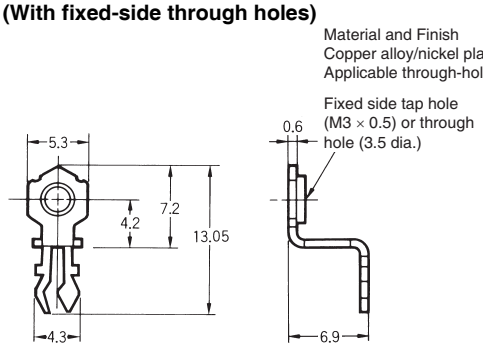
Note: 1. 2 anchors are necessary per connector.
2. Attachment to the XM3K/L is not possible.

Downloaded from Arrow.com.

Grounding Fixtures for XM3B
Tap Hole Grounding Fixtures
XM2Z-0061
(With fixed-side tap holes)



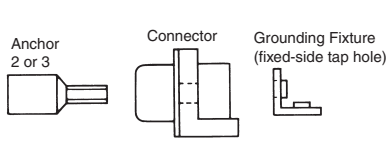
Lock Pin Grounding Fixtures (for XM3B)
XM2Z-0062
(With fixed-side tap holes)
XM2Z-0064
(With fixed-side through holes)



Model
XM2Z-0061
XM2Z-0062
XM2Z-0064

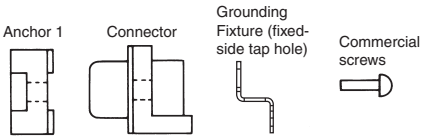
Anchors and Grounding Fixtures

Anchor 2 and 3



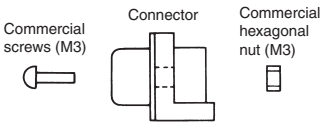
Note: Use Grounding Fixtures XM2Z-0061 or XM2Z-0062.

Anchor 1



Note: 1. Use a 6-mm screw that mates with the male screw on Anchor 1.
2. Use Grounding Fixtures XM2Z-0064.

Without Anchor



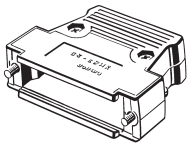
Note: Always use a screw without an Anchor. A Grounding Fixture (fixed-side tap) can be used in place of the hexagonal nut.

Note: 1. Anchor 2 and the following Grounding Fixtures are available: XM3B-□□22-11 and XM3B-□□22-112. Contact your OMRON representative for other anchor and grounding fixture specifications.
2. 2 anchors are necessary per connector.

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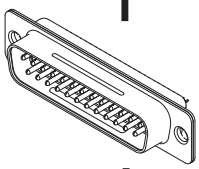
■ Combination Examples

Hood



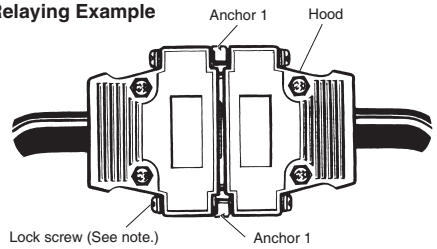
Hood
(XM2S-□□1□)

Plug



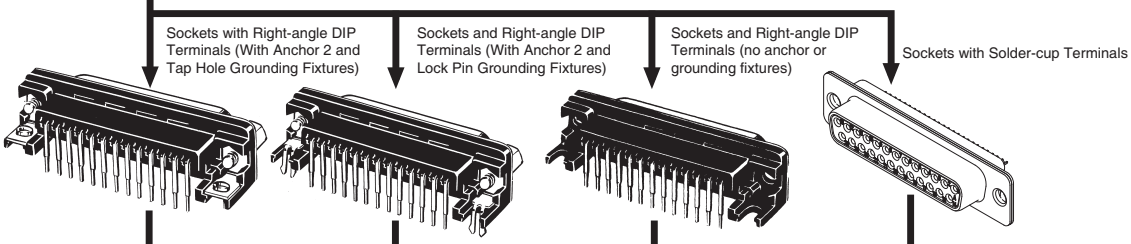
Plug with Solder-cup Terminals

Relaying Example

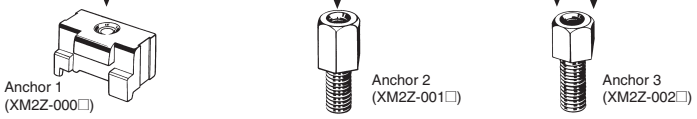


Note: Screw the lock screw of the Hood into the hole on Anchor 1. Use screws with the same screw specifications for the Hood and Anchor 1 on both sides.

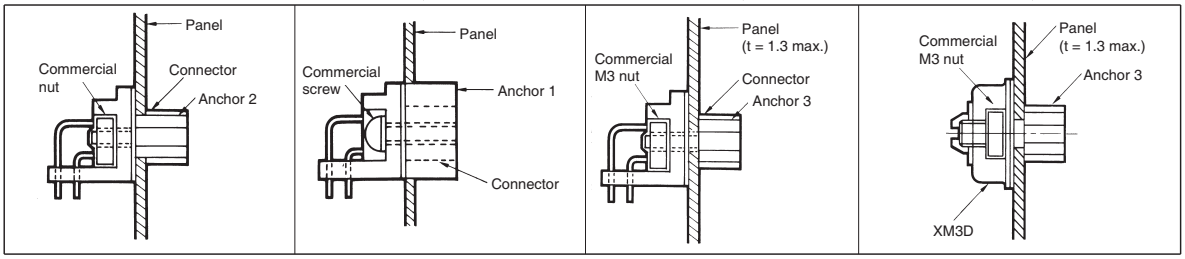
Sockets



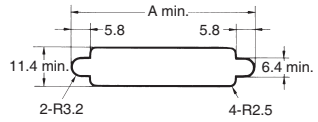
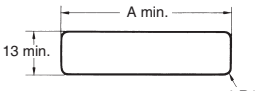
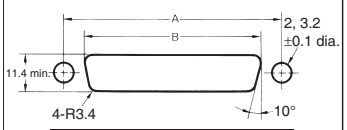
Anchor



Panel-mounting Sockets



Panel Dimensions

Panel mounting procedure	Not secured to the panel		Secured to the panel
Applicable anchors	Anchor 2	Anchor 1	Anchor 3 or M3 screws
Panel dimensions			

No. of contacts	A (mm)
9	31.0
15	39.4
25	53.3
37	69.6

No. of contacts	A (mm)
9	34.1
15	42.4
25	56.1
37	72.6

No. of contacts	A (mm)	B (mm)
9	24.99	20.5
15	33.32	28.8
25	47.04	42.5
37	63.50	59.1

Note: 1. Two Anchors are required per Connector.
2. Applicable panel thickness is 1.3 mm max.

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Combination of hexagonal anchors for each connector (in post installation)

Type	Model	Without panel insertion	With panel insertion	Commercially available nut
Dip L type socket	XM3B-□□22	XM2Z-001□	XM2Z-002□	Necessary
	XM3B-□□22-501□			Not necessary
	XM3B-□□22-502			
Dip L type plug	XM3C-□□22	XM2Z-001□	XM2Z-002□	Necessary
	XM3C-□□22-501			Not necessary
	XM3C-□□22-502			
Dip straight socket	XM3F-□□20	XM2Z-001□	XM2Z-002□	Necessary

■ Safety Precautions

Precautions for Correct Use

For Mounting

- When mounting the connector by manual soldering, observe the following precautions to ensure contact reliability.
  (1) Conditions for manual soldering: 350±5 °C 3±1 sec
  (2) PCB thickness: 1.6 mm
  (3) Do not apply an excessive amount of solder. Excessive solder will cause the flux to rise.
  (4) Do not apply the soldering iron to the mount attachments using force. Doing so may cause the connectors to change shape.
  (5) Do not apply the soldering iron to any parts of the connector other than the mount attachments. Doing so may cause the connector to change shape.
- Before soldering the Switch on a multilayer PCB, test to confirm that soldering can be performed properly. Otherwise the Switch may be deformed by the soldering heat on the pattern or lands of the multilayer PCB.

Automated Soldering Conditions (Jet Flow)

(1) Soldering temperature: 250 ±5°C
(2) Continuous soldering time: Within 5±1 s
(3) PCB thickness: 1.6 mm

- These conditions depend on the type of solder, the manufacturer, the amount of solder, the size of the circuit board, and the other mounting materials. You must check and select the actual conditions yourself.

Storage

- Do not store the connectors in locations subject to dust or high humidity.
- Do not store the connectors in locations close to sources of gasses such ammonia gas or sulfide gas.

■ Approval Standard

The approval rating values for overseas standards are different from the performance values determined individually. Confirm the values before use.

Model	Standard	File No.	Rating
XM3B-□□22-111	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22-112	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22-131	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22-132	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22-501	UL certified product (Recognized)	E103202	300 V, 5 A
XM3B-□□22-502	UL certified product (Recognized)	E103202	300 V, 5 A
XM3C-□□22-111	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3C-□□22-112	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3C-□□22	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3C-□□22-501	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3C-□□22-502	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3F-□□20	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3F-□□20-112	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3A-□□21	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM3D-□□21	UL/C-UL certified product (Recognized)	E103202	300 VAC, 1.5 A
XM2T-□□01	Non Approved Models	---	---
XM2T-□□01-0	Non Approved Models	---	---
XM2Z-□□□□	Non Approved Models	---	---

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