

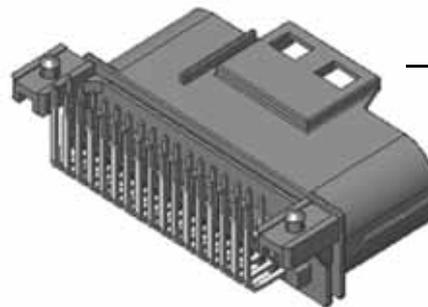
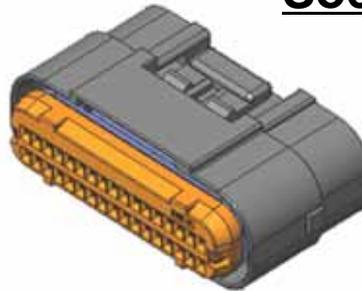
Compact Low-profile Waterproof Connector

CONNECTOR

MX23A Series

MB-0094-3

Nov.2023

RoHS Compliant**Socket Connector****Pin Connector**
(Standard Type)**Pin Connector**
(Reverse Type)**Overview**

MX23A connector is a compact, low-profile, waterproof connector that can be used in a wide range of waterproof equipment including automobiles, motorcycles and other outdoor equipment .

This connector has high environmental capability with a waterproof structure consisting of a seal ring in its mating area and a grommet in its wire insertion area for full protection against water. Reverse type pin connector (with pins facing up) is also available in consideration of mounting flexibility.

Applicable Markets

Waterproof equipment for automobiles, motorcycles, and general waterproof equipment

Features

Low profile with board mounting height of 18.3mm and socket connector height of 22.2mm max. (2-row type :12 to 34 pos.)

Two leaf springs with high reliability is adopted for socket contact and large chamfer is prepared in the front-edge to prevent damaging the grommet .

Incomplete insertion of socket contact into its housing can be detected with the front cap mounting process.

Fully waterproof grommet is used for crimped socket contact insertion area to reduce size.

Water ingress protection is achieved in connector's mating area with a seal ring . It is fully protected from handling by the insulator .

Reverse type pin connector (with pins facing up) is also available. (18, 26, 34 pos.)

General Specifications

Item	Specifications
Pitch	2.5mm
Number of Contacts	2-row : 12,18,26,34,40 3-row : 36
Current Rating	3 A*
Dielectric Withstanding Voltage	AC 1,000Vr.m.s. (1 minute)
Insulation Resistance	100M ohm min.
Contact Resistance	5m ohm max. (initial) 10m ohm max. (post-test)
Applicable PCB Thickness	1.6mm
Operating Temperature	-40 to +125 (Including temperature rise caused by power distribution)
Waterproof	100 kPa min. (50 kPa min. post-test)
Applicable Wires	AVSS 0.3 ~ 1.25mm ²

*Up to 7A depending on operating conditions

Materials and Finishes

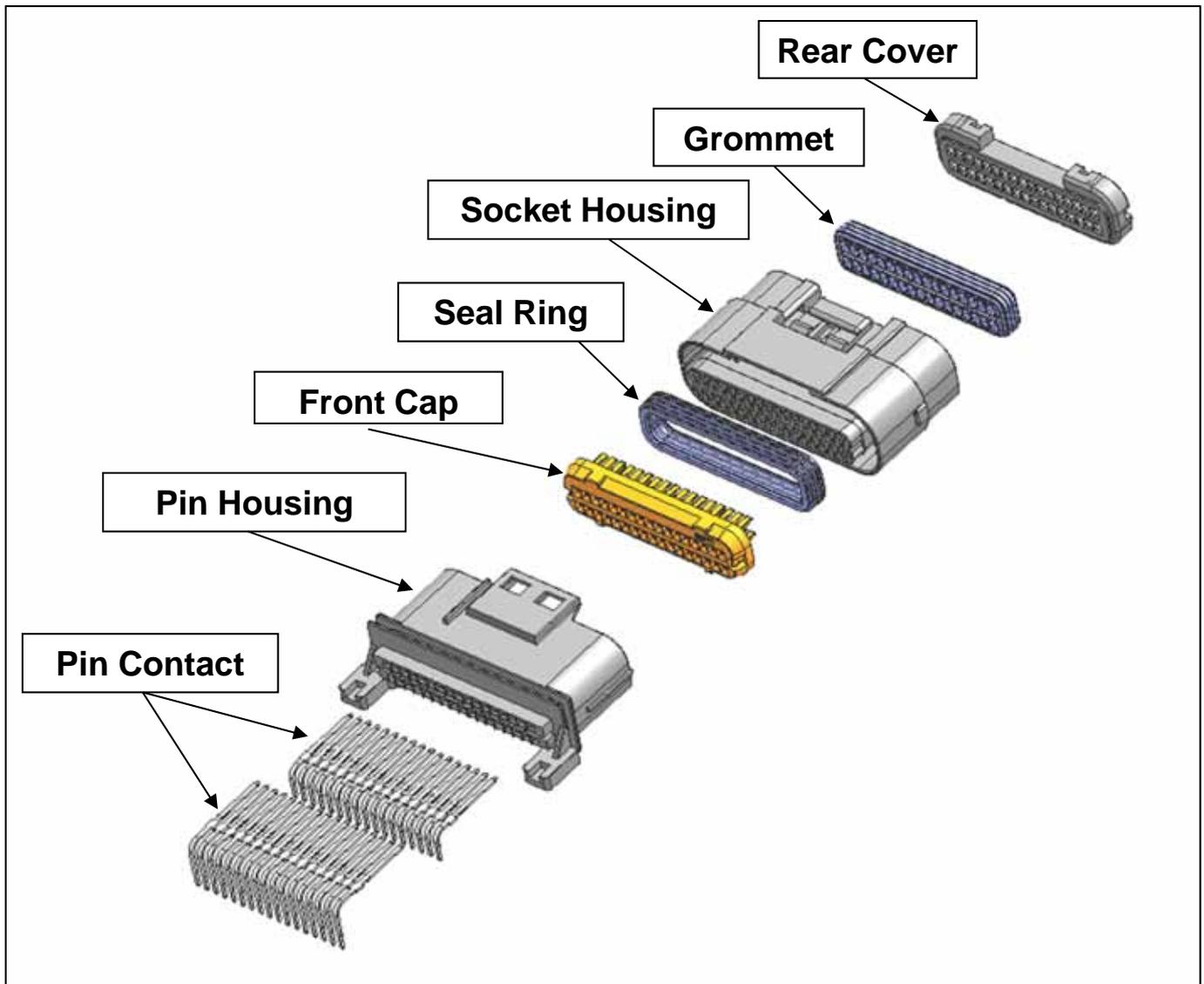
Socket Connector

Component	Material / Finish (color)
Socket Housing	Glass filled PBT (Black)
Front Cap	Glass filled PBT (Orange)
Rear Cover	Glass filled PBT (Gray)
Grommet	Silicone rubber (Blue)
Seal Ring	Silicone rubber (Blue)
Dummy Pin	Glass filled PBT (White)
Socket Contact	Copper alloy / Sn plating

Pin Connector

Component	Material / Finish (color)
Pin Insulator	Glass filled PBT (Black)
Pin Contact	Copper alloy / Sn plating

Configuration

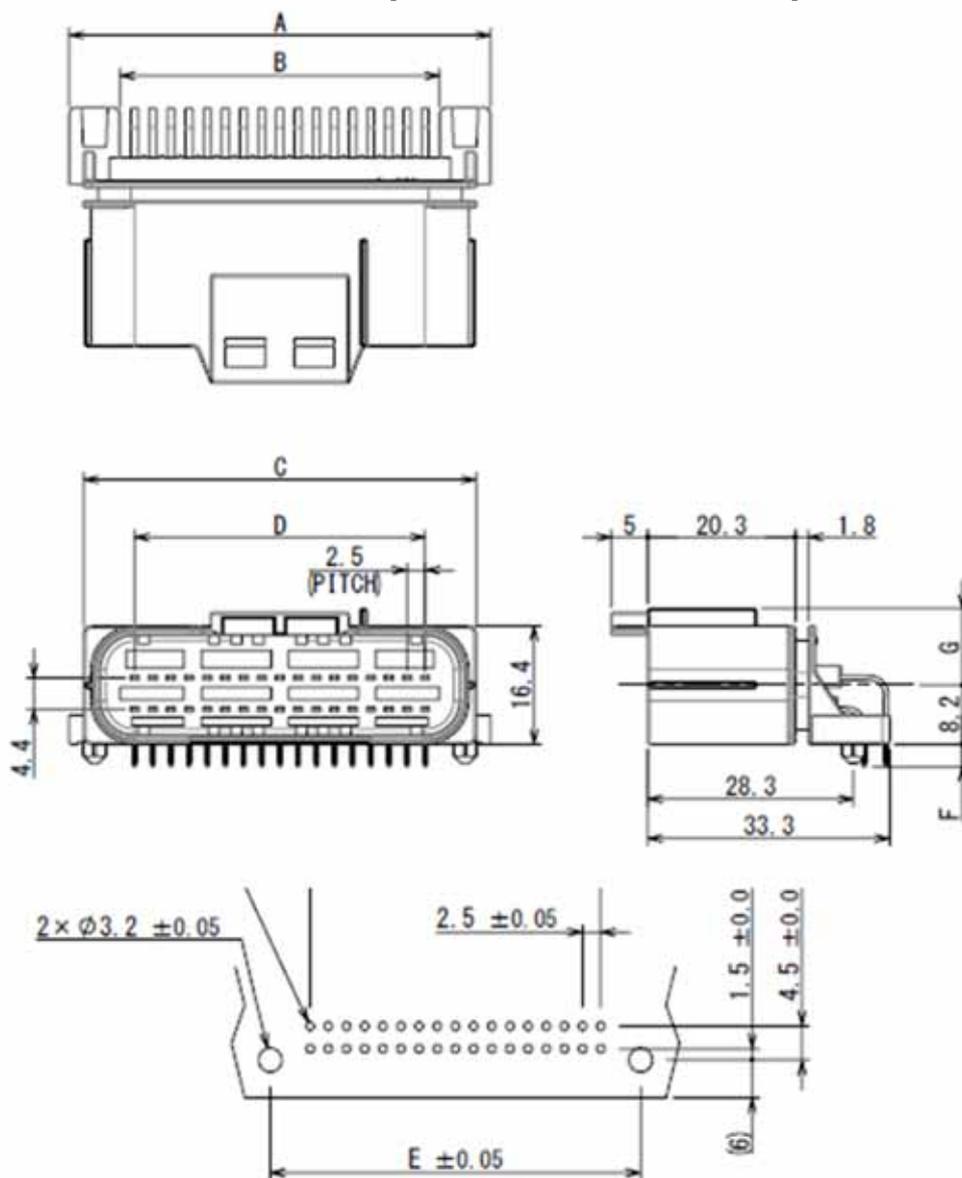


Crimp Tool

Socket Contact	Cable Type	Cable outer diameter	AWG No.	Hand Crimping tool	Semi Automatic Applicator	Contact Release jig
M23S05K351	AVSS 0.5- 1.25mm ²	ø1.6 ~ 2.2 mm	Equivalent to #20- #16	CT170- 14B- MX23	3502- MX23-2	ET- MX23
M23S05K4F1	AVSS 0.3mm ²	ø1.4 ~ 1.5 mm	Equivalent to #22	—		

Dimensions

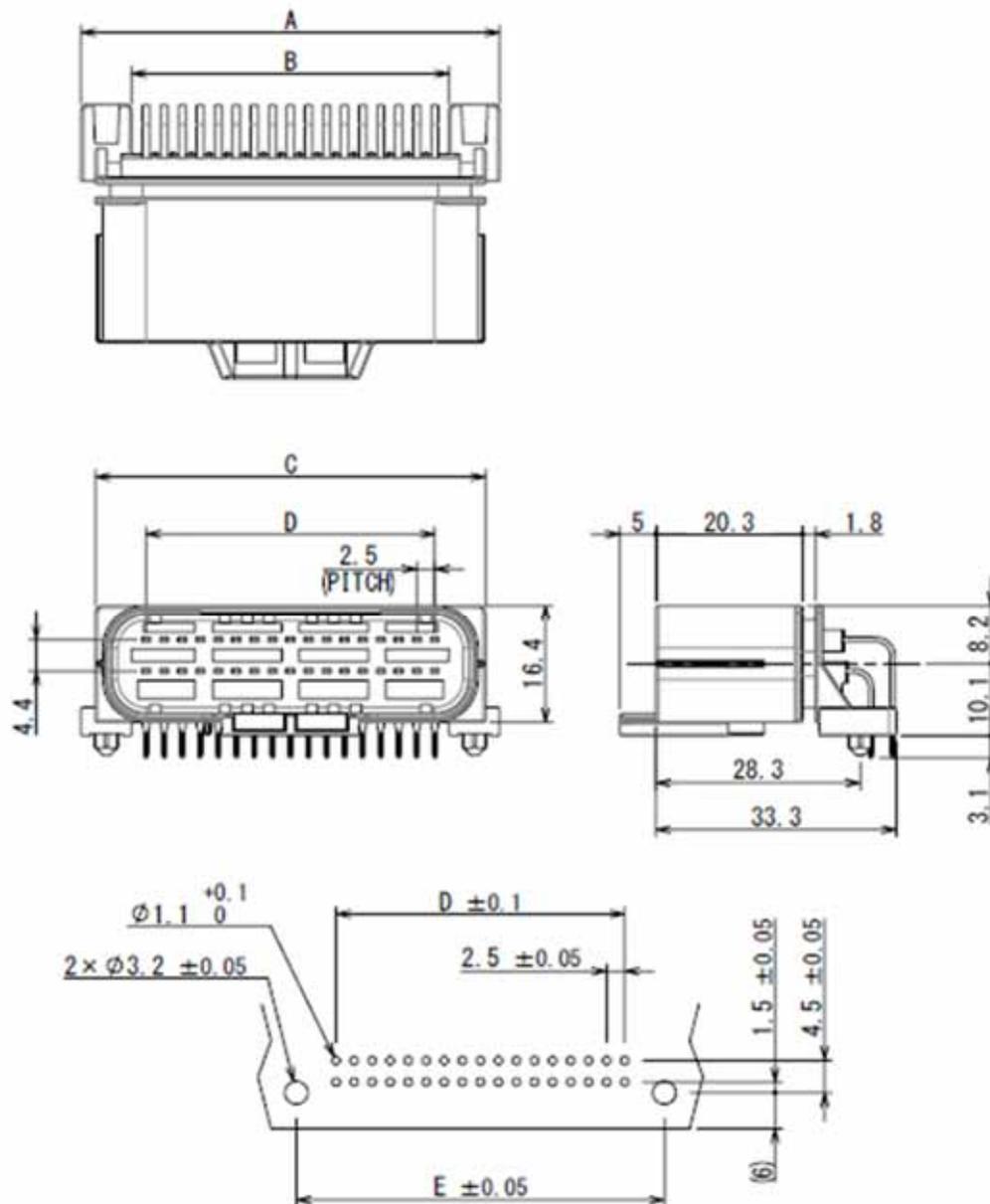
1. Pin Connector (Standard 2-rows)



Applicable PCB dimensions (reference)

	Part Number	Alternate Key Product	A	B	C	D	E	F	G
12 pos.	MX23A12NF1	—	30.5	16.5	26.5	12.5	23.5	3.1	10.1
18 pos.	MX23A18NF1	—	38	24	34	20	31	3.1	10.1
26 pos.	MX23A26NF1	—	48	34	44	30	41	3.1	10.1
34 pos.	MX23A34NF1	MX23A34NF6	58	44	54	40	51	3.1	10.1
40 pos.	MX23A40NF1	—	65.5	51.5	61.5	47.5	58.5	3.5	10.7

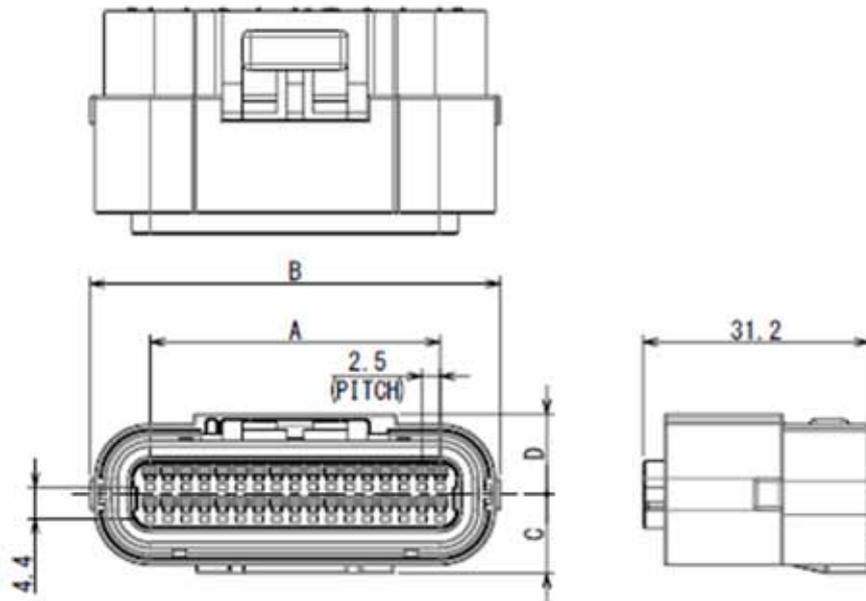
2. Pin Connector (Reverse 2-rows)



Applicable PCB dimensions (reference)

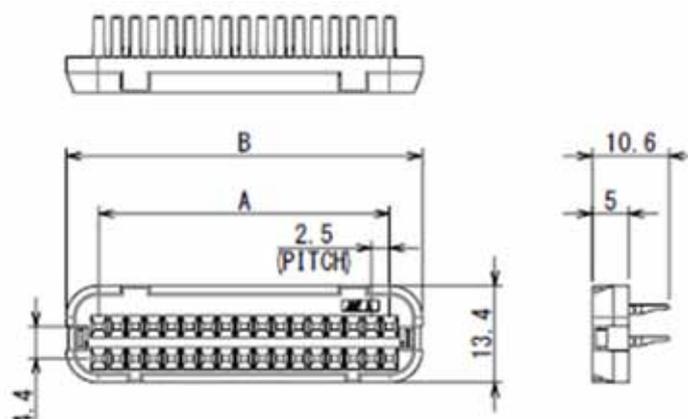
	Part Number	A	B	C	D	E
18 pos.	MX23A18NF2	38	24	34	20	31
26 pos.	MX23A26NF2	48	34	44	30	41
34 pos.	MX23A34NF2	58	44	54	40	51

3. Socket Housing (2-rows)



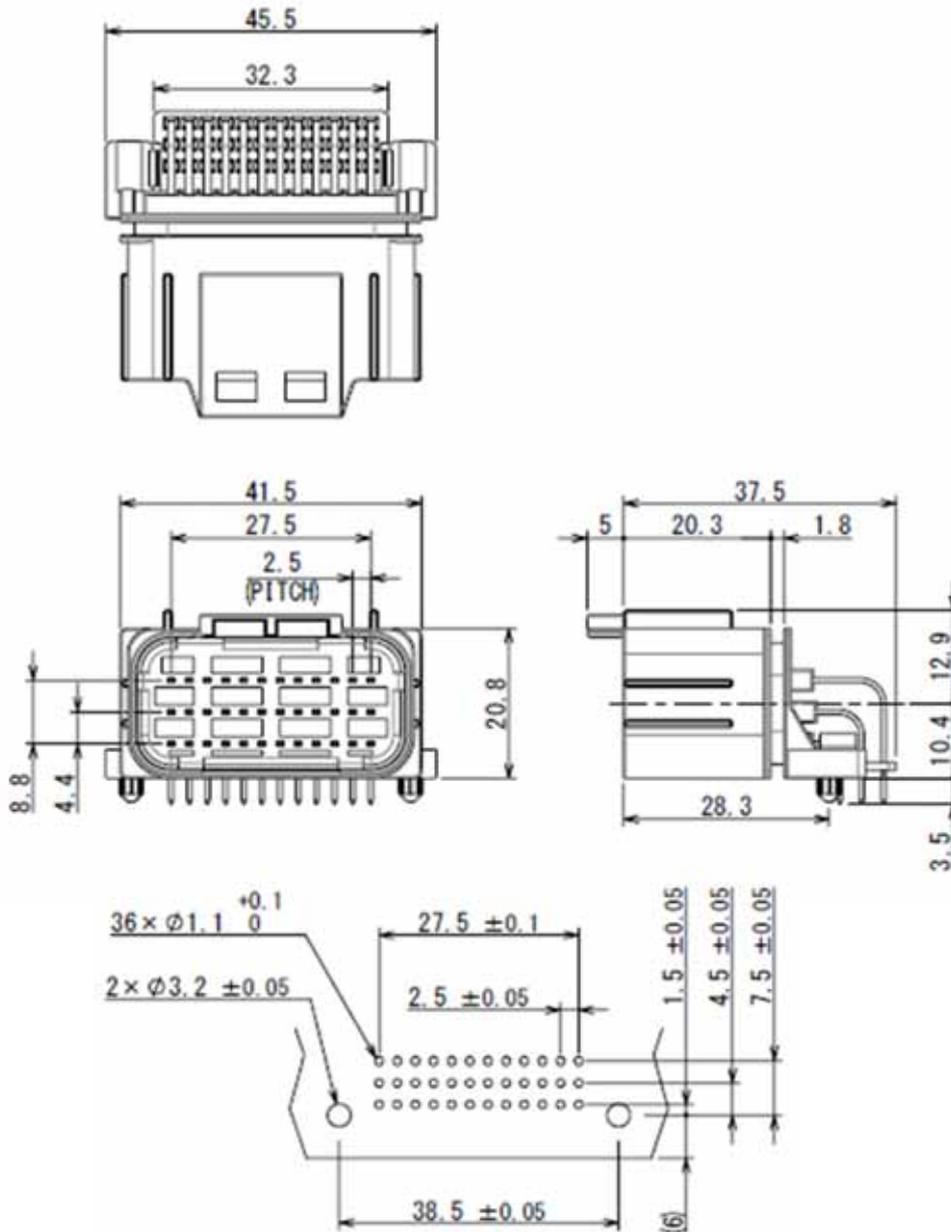
	Part Number	Alternate Key Product	A	B	C	D
12 pos.	MX23A12SF1	—	12.5	29.1	11	11.2
18 pos.	MX23A18SF1	—	20	36.6	11	11.2
26 pos.	MX23A26SF1	—	30	46.6	11	11.2
34 pos.	MX23A34SF1	MX23A34SF6	40	56.6	11	11.2
40 pos.	MX23A40SF1	—	47.5	64.1	11.5	11.7

4. Front Cap (2-rows)



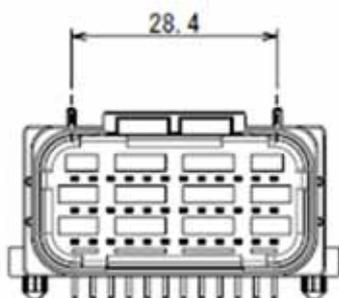
	Part Number	A	B
12 pos.	MX23A12XF1	12.5	21.7
18 pos.	MX23A18XF1	20	28.9
26 pos.	MX23A26XF1	30	38.9
34 pos.	MX23A34XF1	40	48.9
40 pos.	MX23A40XF1	47.5	56.5

5. Pin Connector (Standard 3-rows)

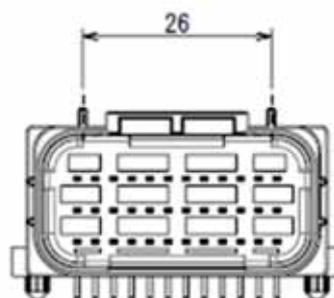


Applicable PCB dimensions (reference)

Shape of standard product



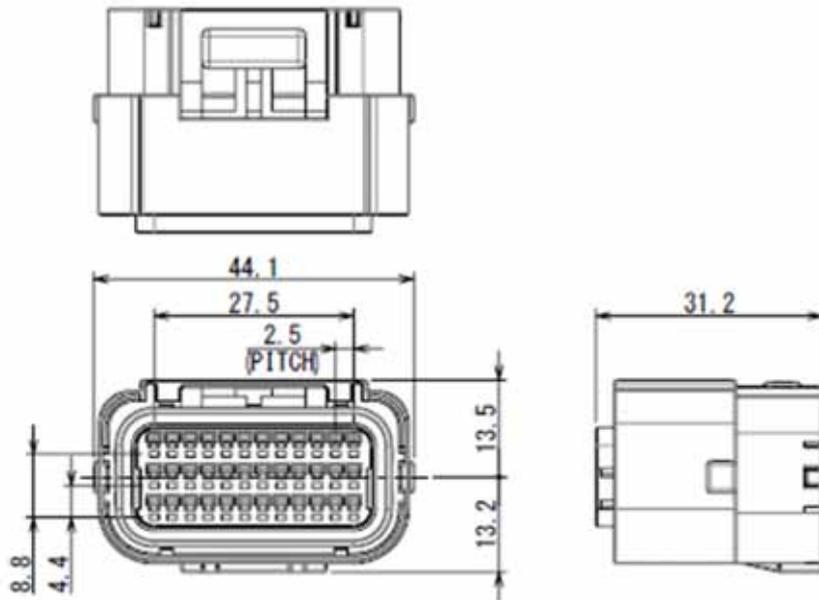
Shape of alternate key



Part Number : MX23A36NF1

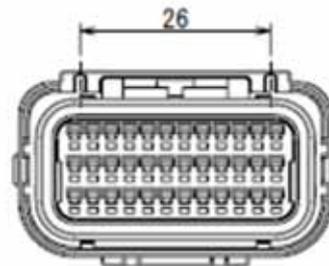
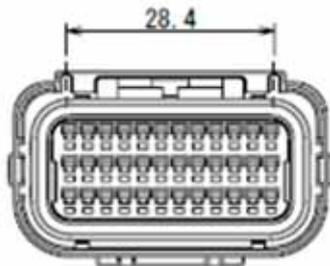
MX23A36NF6

6. Socket Housing (Standard 3-rows)

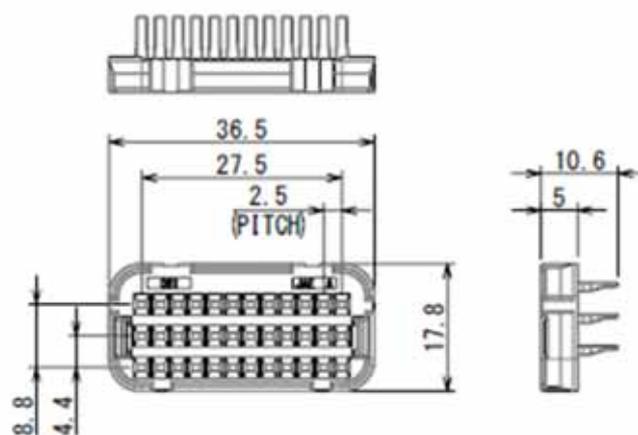


Shape of standard product

Shape of alternate key

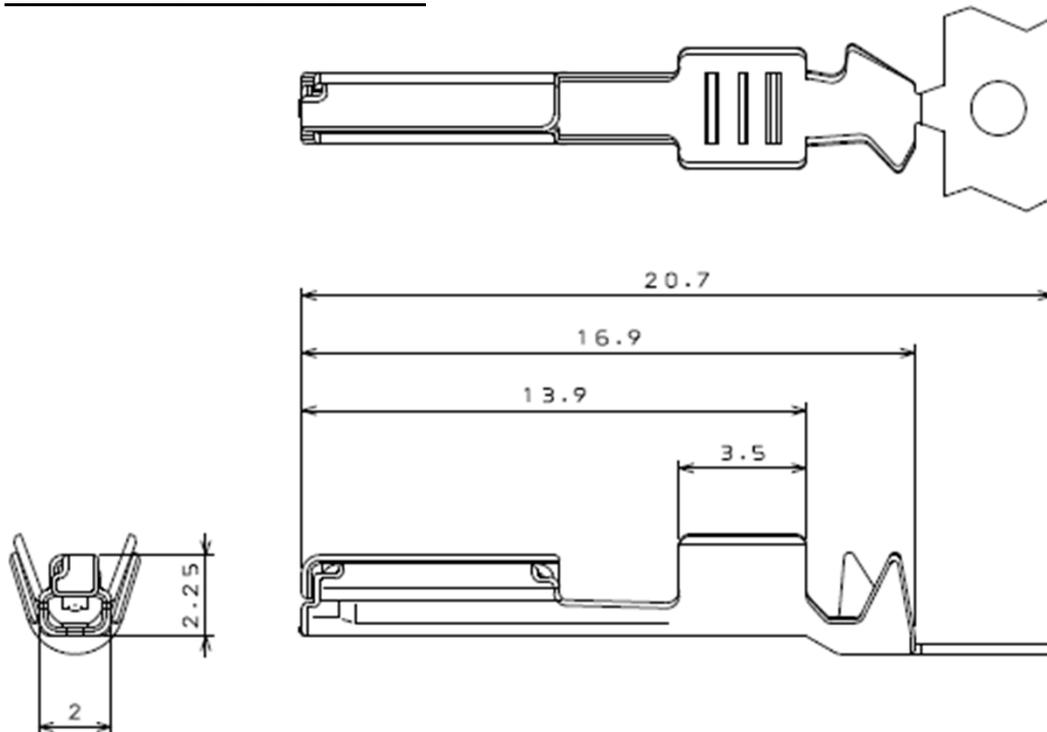


7. Front Cap (3-rows)



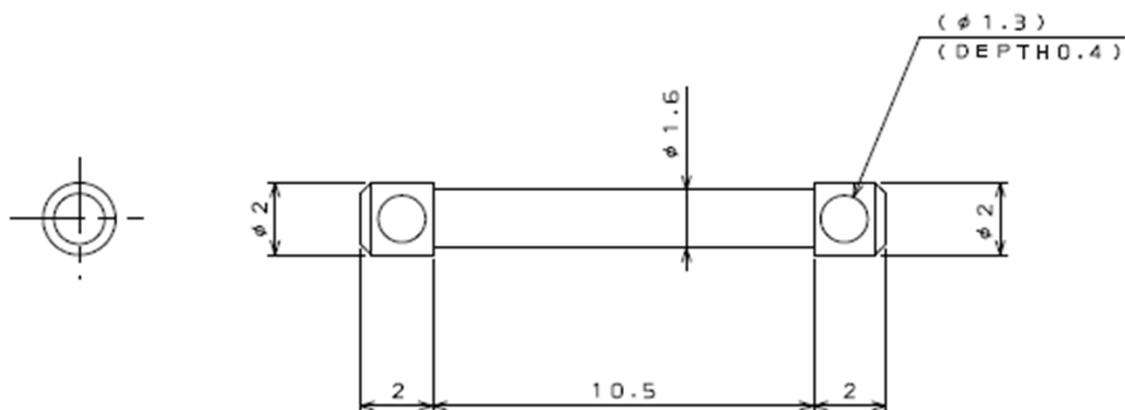
Product Name : MX23A36XF1

8. Socket Contact



Socket Contact	Cable Type	Cable outer diameter	AWG No.
M23S05K351	AVSS 0.5-1.25mm ²	ø1.6 ~ 2.2mm	Equivalent to #20-#16
M23S05K4F1	AVSS 0.3mm ²	ø1.4 ~ 1.5mm	Equivalent to #22

9. Dummy Pin (Part Number: M120-55780)



- Dummy pins are inserted into housing cavities which socket contacts are not inserted, to maintain water resistance.

Part Number and drawing number

Part Number	Drawing No.	Note
MX23A12SF1	SJ100915	12pos. Socket Housing
MX23A12XF1	SJ100916	12pos. Front Cap
MX23A12NF1	SJ100917	12pos. Standard Pin Connector
MX23A18SF1	SJ037397	18pos. Socket Housing
MX23A18XF1	SJ037398	18pos. Front Cap
MX23A18NF1	SJ037399	18pos. Standard Pin Connector
MX23A18NF2	SJ037340	18pos. Reverse Pin Connector
MX23A26SF1	SJ037393	26pos. Socket Housing
MX23A26XF1	SJ037394	26pos. Front Cap
MX23A26NF1	SJ037395	26pos. Standard Pin Connector
MX23A26NF2	SJ037396	26pos. Reverse Pin Connector
MX23A34SF1	SJ037389	34pos. Socket Housing
MX23A34SF2	SJ101174	34pos. Alternate Key Socket Housing
MX23A34XF1	SJ037390	34pos. Front Cap
MX23A34NF1	SJ037391	34pos. Standard Pin Connector
MX23A34NF2	SJ037392	34pos. Alternate Key Pin Connector
MX23A34NF6	SJ101173	34pos. Reverse Pin Connector
MX23A40SF1	SJ106125	40pos. Socket Housing
MX23A40XF1	SJ106126	40pos. Front Cap
MX23A40NF1	SJ106127	40pos. Standard Pin Connector
MX23A36SF1	SJ105852	36pos. Socket Housing
MX23A36SF2	SJ105853	36pos. Alternate Key Socket Housing
MX23A36XF1	SJ105854	36pos. Front Cap
MX23A36NF1	SJ105855	36pos. Standard Pin Connector
MX23A36NF6	SJ105856	36pos. Alternate Key Pin Connector
M23S05K351	SJ036377	Socket Contact (AVSS 0.5-1.25mm ²)
M23S05K4F1	SJ036635	Socket Contact (AVSS 0.3mm ²)
M120-55780	SJ036379	Dummy Pin

Technical Documents

Connector Specification	JACS-1728
Handling Instructions	JAHL-1728

Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that

you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

Japan Aviation Electronics Industry, Limited

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