

Unsealed Compact Automotive Connector

CONNECTOR

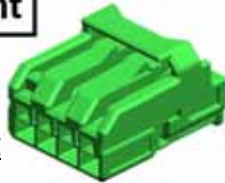
MX81 Series

MB-0388-1

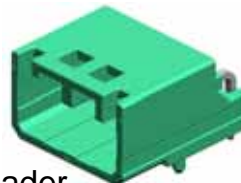
Jul.2023

RoHS Compliant

Socket



Pin header


Coming soon


Pin inline

Overview

The MX81 Series of unsealed compact connectors are ideal for interfacing with small control modules used in vehicles. These connectors share the same crimp socket terminals with the popular MX80 Series of sealed connectors and are compatible with a wide range of wire sizes. The same reliable terminals can be used for both sealed and unsealed areas of the vehicle.

Application

Various ECUs, sensors, lighting, and other general automotive applications

Features

- ISO/JASO/EWCAP/VDA standard 0.64 mm tab size
- Socket contacts are the same as those of sealed MX80 Series
- Socket housing is one-piece type with hinged retainer
- Pin header is through-hole reflow compatible, and the housings use UL94 V-0 rated material
- USCAR-2 Tested
- Compatible with 2.54mm pitch pin contacts and small size
- Multiple colored key codes are available.

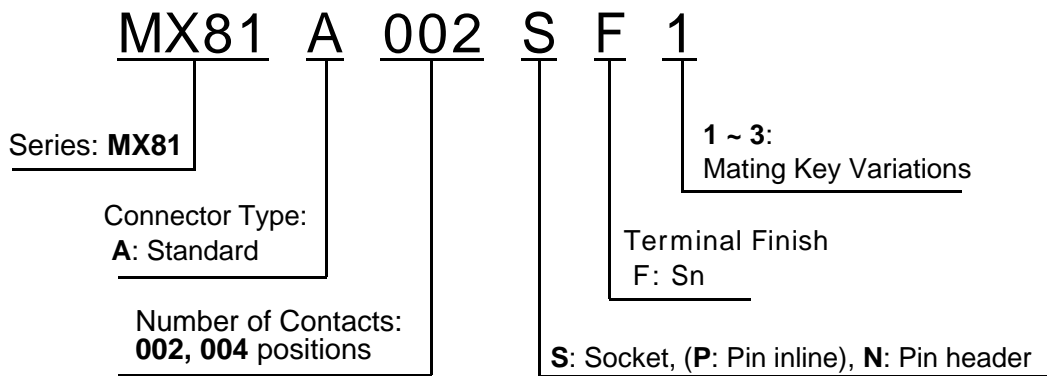
General Specifications

Number of Contacts	2, 4 positions		
Operating Temperature Range	-40 ~ +125 °C ¹		
Applicable Wire	0.13 ~ 1.0mm ² nominal cross-section Cable types recommended: FLRY-A, FLRY-B, AESSX, FLCUSNRY, etc.		
Rated Current ²	Wire Size	Number of Contacts	
		2	4
	0.13 mm ²	4.5A	4.1A
	0.35 mm ²	6.7A	5.5A
	1.0 mm ²	9.7A	8.5A
Dielectric Withstanding Voltage	AC 500V (1 minute)		
Vibration Classification	USCAR-2 : V2		

Note 1. This range includes temperature rise from current load.

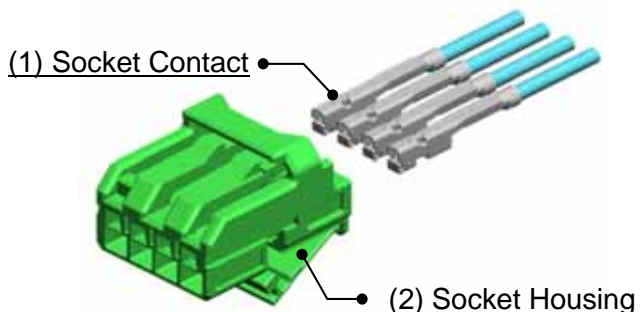
Note 2. Ambient temperature is 80°C. Contact JAE for rating at other temperatures.

Ordering Information

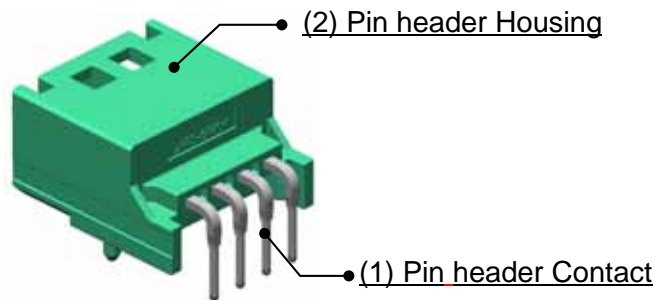
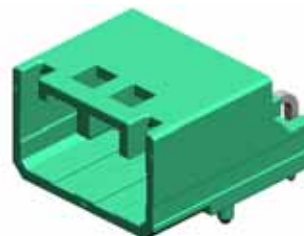


Configuration / Material and Finish

Socket Connector



Pin Header



Component	Material / Finish
(1) Socket Contact ³	Copper alloy / Tin plating
(2) Socket Housing	PBT-GF10

Component	Material / Finish
(1) Pin header Contact	Copper alloy / Tin plating
(2) Pin header Housing	PPS-GF40

Note 3. Socket contacts are sold separately and are not integrated into connector at the time of delivery.

Part Numbers and Drawing Numbers

Socket Housing / Pin Header Connector

Number of Contacts	Socket Housing		Pin Header Connector	
	Part Number	Drawing Number	Part Number	Drawing Number
2	MX81A002SF1	SJ125328	Connector: MX81A002NF1 Reel product: MX81A002NF1R470	SJ125326 SJ126068
	MX81A002SF3 ⁴	SJ125329	Connector: MX81A002NF3 ⁴ Reel product: MX81A002NF3R470 ⁴	SJ125327 SJ126069
4	MX81A004SF1	SJ123030	Connector: MX81A004NF1 Reel product: MX81A004NF1R300	SJ125811 SJ126070
	MX81A004SF2 ⁴	SJ123031	Connector: MX81A004NF2 ⁴ Reel product: MX81A004NF2R300 ⁴	SJ125812 SJ126071

Ref.)

Number of Contacts	Socket Housing		Pin Inline Housing		Pin Interface Drawing Number
	Part Number	Drawing Number	Part Number	Drawing Number	
2	MX81A002SF1	SJ125328	MX81A002PF1	Note 5	SJ121432
	MX81A002SF3 ⁴	SJ125329	MX81A002PF3 ⁴		
4	MX81A004SF1	SJ123030	MX81A004PF1		SJ121434
	MX81A004SF2 ⁴	SJ123031	MX81A004PF2 ⁴		

Socket / Pin inline Contact

	Part Number	Drawing Number	Applicable Wire
Socket Contacts	MX80S08K3F1	SJ121371	0.75 ~ 1.0mm ² wire (FLRY-A, FLRY-B, AESSX)
	MX80S08K4F1	SJ121372	0.3 ~ 0.5mm ² wire (FLRY-A, FLRY-B, AESSX)
	MX80S08K5F1	SJ121373	0.13 ~ 0.22mm ² wire (FLRY-A, FLCUSNRY)
Pin inline Contacts	TBD	Note 5	0.75 ~ 1.0mm ² wire (FLRY-A, FLRY-B, AESSX)
	MX81P08K4F1		0.3 ~ 0.5mm ² wire (FLRY-A, FLRY-B, AESSX)
	TBD		0.13 ~ 0.22mm ² wire (FLRY-A, FLCUSNRY)

Note 4. This product is an alternate colored key code.

Note 5. This product is under consideration as of July, 2023. Please ask us for current status.

Applicable Tools

Tool type	Tool Part number	Applicable Contact and Connector	Tool Handling Manual
Hand Crimp Tool	CT150-19C-MX80	Socket Contact for 0.75 ~ 1.0mm ² wire	T700459
	CT150-19D-MX80	Socket Contact for 0.3 ~ 0.5mm ² wire	T700460
	CT150-19E-MX80	Socket Contact for 0.13 ~ 0.22mm ² wire	T700461
Semi-automated Applicator	3502-MX80-2	All Socket Contacts	T703574
Contact Extraction Tool	ET-MX80S	All Socket Connectors	T711250

Note 6. For details on how to use each tool, refer to the tool handling manual and connector handling manual.

Specification and Handling Manual

Connector Specification	Connector Handling Manual
JACS-11333 (USCAR-2) ⁷	JABL-11333

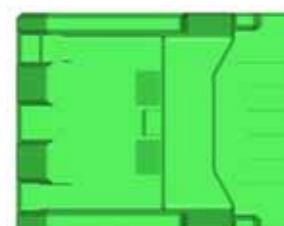
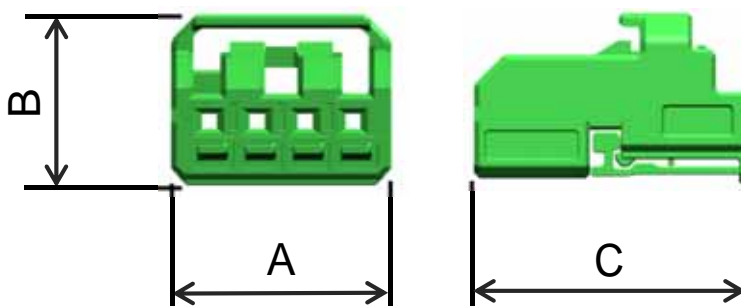
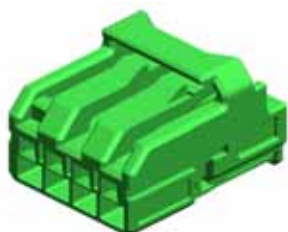
Note 7. There are some deviations to specifications.

Outer Dimension

Socket Housing

Unit : mm

No. of Contacts	A	B	C
2	6.4	11.75	14.6
4	11.7		

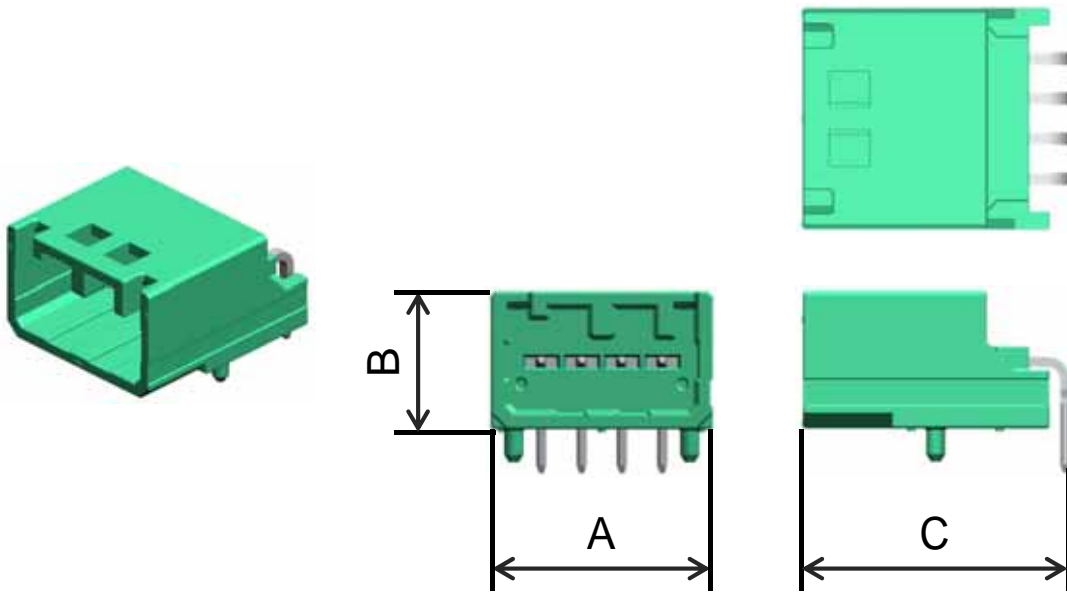


After Retainer is assembled

Pin Header Connector

Unit : mm

No. of Contacts	A	B	C
2	8.6	8.9	17.02
4	14		



Notice:

- 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.
- 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.
- 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.
 - Applications that require consultation:
 - 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.
 - 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.
 - 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

* The specifications in this brochure are subject to change without notice. Please contact JAE for information.