

Compact Waterproof Automotive In-line Connector

CONNECTOR

MX80 Series

MB-0354-4

Feb.2021

RoHS Compliant



The MX80 Series is a family of compact waterproof automotive in-line connectors. They are miniaturized by design and ideal for use in areas where vehicle mounting space is limited. MX80 Series connectors support a varying wire size range for exceptional power and control.

Applicable Market Segments

Example automotive applications include but are not limited to side view mirrors, interior/exterior lighting, sunroof modules, body sensors, and peripheral devices.

Features

- ISO/JASO/EWCAP/VDA standard 0.64 mm tab size
- Terminal Position Assurance (TPA) on pin and socket housing
- USCAR-2 and LV214 Tested
- IPX7 ingress protection rated
- Compatible with 2.54mm pitch pin contacts
- Integrated bracket supports chassis fastening vehicle clips

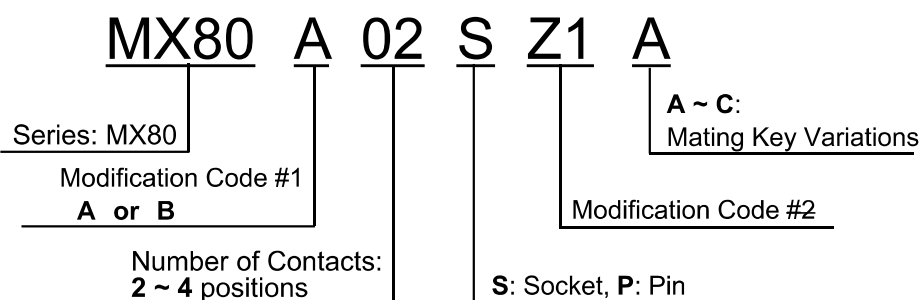
General Specifications

Number of Contacts	2, 3, and 4 positions			
Operating Temperature Range	-40 ~ +125 °C ¹			
Applicable Wire	0.13 ~ 1.0 ² nominal cross-section Cable types recommended: (FLRY-A, FLRY-B, AESSX, FLCUSNRY, etc.)			
Rated Current ²	Wire Size	Number of Positions		
		2	3	4
	0.13 ²	4.2 A	3.7 A	3.6 A
	0.35 ²	7.1 A	6.4 A	5.8 A
	1.0 ²	10.3 A	10.0 A	9.5 A
Dielectric Withstanding Voltage	AC 500V (1 minute)			

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

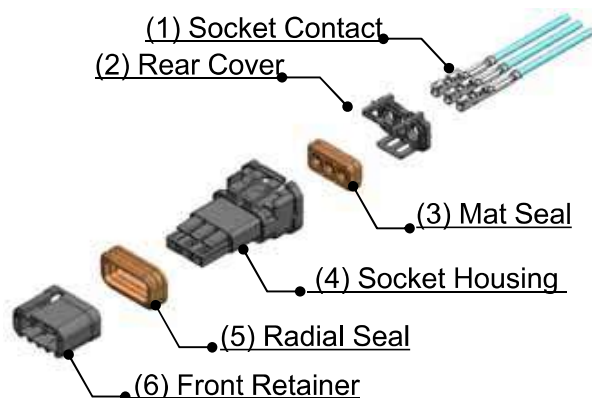
Note 2. Ambient temperature is 80°C when amperage was measured.

Ordering Information



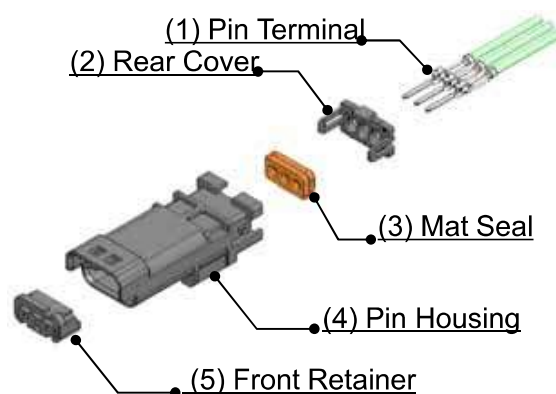
Configuration / Material and Finish

Socket Connector



Component	Material / Finish
(1) Socket Contact ³	Copper alloy / Tin plating
(2) Rear Cover	PBT-GF10
(3) Mat Seal	Silicone Rubber
(4) Socket Housing	PBT-GF10
(5) Radial Seal	Silicone Rubber
(6) Front Retainer	PBT-GF10

In-line Pin Connector



Component	Material / Finish
(1) Pin Contact ³	Copper alloy / Tin plating
(2) Rear Cover	PBT-GF10
(3) Mat Seal	Silicone Rubber
(4) Pin Housing	PBT-GF10
(5) Front Retainer	PBT-GF10

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

Part Numbers and Drawing Numbers

■ Socket Connector / In-line Pin Connector

Number of Contacts	Socket Connector			In-line Pin Connector	
	Part Number	Drawing Number		Part Number	Drawing Number
2	MX80A02SZ1A	SJ121265	⇔	MX80B02PZ1A	SJ121264
	MX80A02SZ1B ⁴	SJ121361	⇔		
	MX80A02SZ1C ⁴	SJ121362	⇔		
3	MX80A03SZ1A	SJ121229	⇔	MX80B03PZ1A	SJ121228
4	MX80A04SZ1A	SJ121382	⇔	MX80B04PZ1A	SJ121381

Note 4. This product is different mating key type.

■ Socket Contact

Part Number	Drawing Number	Applicable Wire
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 Contact

Part Number	Drawing Number	Applicable Wire
MX80P08K3F1	SJ121482	0.75 ~ 1.0mm ² wire (FLRY-A, FLRY-B, AESSX)
MX80P10K4F1	SJ121374	0.3 ~ 0.5mm ² wire (FLRY-A, FLRY-B, AESSX)
MX80P10K5F1	SJ121483	0.13 ~ 0.22mm ² wire (FLRY-A, FLCUSNRY)

■ Dummy plug

Part Number	Drawing Number	Applicable Connector
MX80A000XD1	SJ122489	All connector

Note 5. Dummy plug is used to seal off connector in case cavities are not plugged with terminal wire.

Applicable Tools

Tool type	Tool Part number	Applicable Contact and Connector	Tool Handling Instructions
Hand Crimp Tool	CT150-19C-MX80	Contact for 0.75 1.0mm ² wire	T700459
	CT150-19D-MX80	Contact for 0.3 0.5mm ² wire	T700460
	CT150-19E-MX80	Contact for 0.13 0.22mm ² wire	T700461
Semi-automated Applicator	3502-MX80-2	All Contact	T703574
Contact Extraction Tool	ET-MX80S	All Socket Connector	T711250
	ET MX80P	All In-line Pin Connector	T711251
Retainer Extraction Tool	RT MX80P	All In-line Pin Connector	T714405
Guide For Retainer Extraction Tool	AT MX80P-1	In-line Pin Connector 3 positions	(T714405)
	AT MX80P-2	In-line Pin Connector 2,4 positions	

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

Specification and Handling Instructions

Specification	Connector Handling Instructions
JACS-11280-1 (USCAR-2) ⁷	JAHL-11280
JACS-11280-2 (LV214) ⁷	

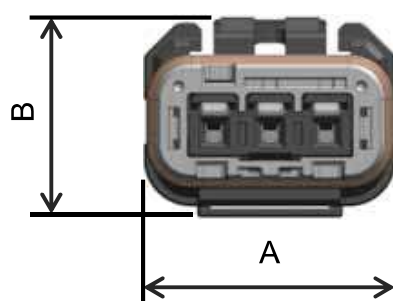
Note 7. There are some deviations to each specifications.

Outer Dimension

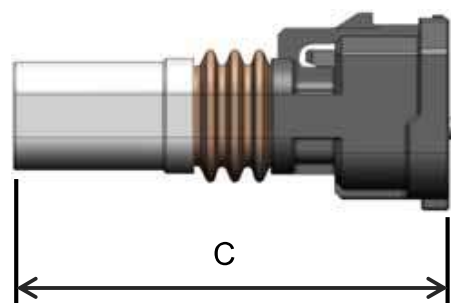
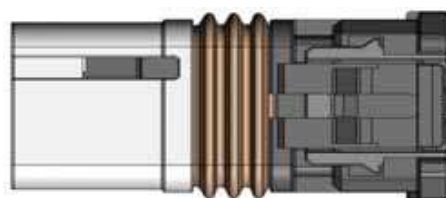
■ Socket Connector

Unit: mm

No. of Contacts	A	B	C
2	8.9	9.1	18.7
3	11.45		
4	14		



*Below is 3 positions type

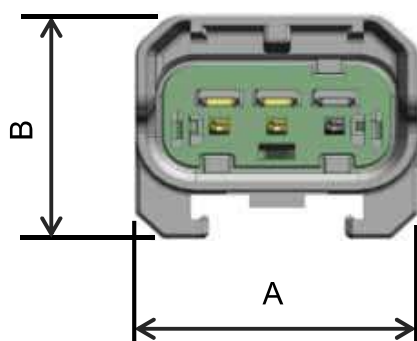


After Retainer is assembled

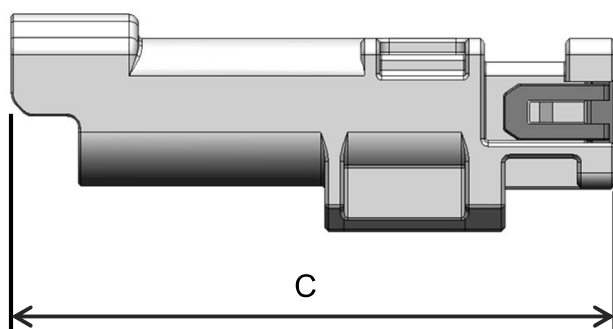
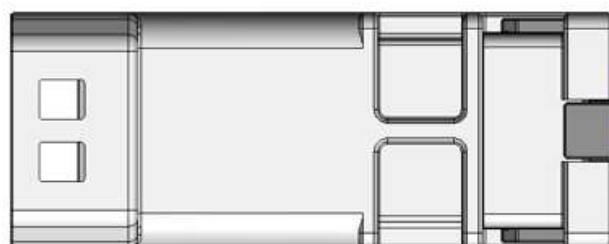
■ In-line Pin Connector

Unit: mm

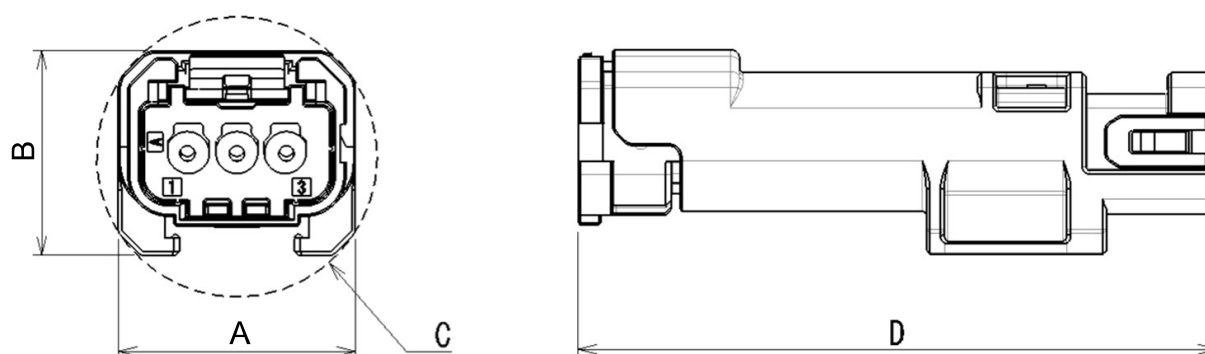
No. of Contacts	A	B	C
2	9.9	10.4	31.8
3	12.45	10.75	
4	15		



*Below is 3 positions type



Dimensions (when mated)



Unit: mm

Number of Contacts	A	B	C ⁸	D
2	9.9	10.4	Φ13.35	33.6
3	12.45	10.75	Φ14.75	
4	15		Φ16.15	

Note 8. The above dimensions are the target value for a circumscribed circle size. Please note that each connector through-hole size is “C + 2mm”.

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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