

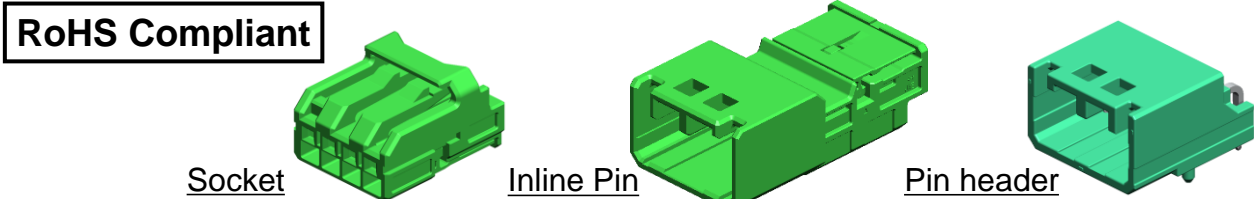
Unsealed Compact Automotive Connector

CONNECTOR

MB-0388-2

Sep.2024

MX81 Series



Overview

The MX81 Series of unsealed compact connectors are ideal for interfacing with small control modules uses 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 and inline pin housing are 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 deg. C to +125 deg. C ¹		
Applicable Wire	0.13 to 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 pos.	4 pos.
	0.13 mm ²	4.5A	4.1A
	0.35 mm ²	6.7A	5.5A
	1.0 mm ²	9.7A	8.5A
Insulation Resistance	100MΩ min. at 500V DC		
USCAR-2 Vibration Classification	Socket / Inline Pin: V1, Socket / Pin header: V2		

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

Note 2. In case of Socket / Pin header. Ambient temperature is 80°C. Contact JAE for rating at other temperatures.

Ordering Information

MX81

Series: **MX81**

A

Connector Type1:
A: Standard

0

Connector Type2:
0: Standard, **L**: Pin header with Leg

02

Number of Contacts:
02, 04 positions

S

Connector Type3:
S: Socket, **P**: Inline Pin, **N**: Pin header

F

Terminal Finish
F: Sn

1

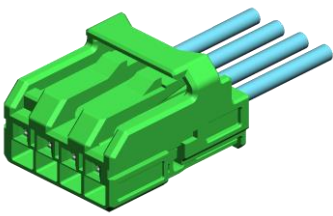
1 ~ 3:
Mating Key Variations

(R470)

Number of pin headers per reel
R470: 470pcs per reel

Configuration / Material and Finish

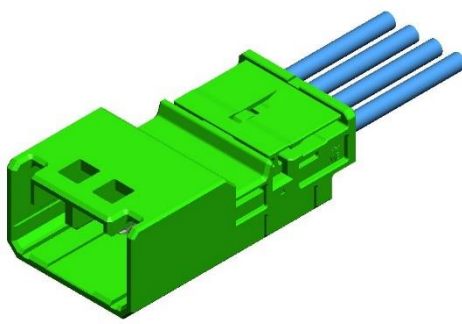
Socket Connector



(1) Crimp Contact

(2) Housing

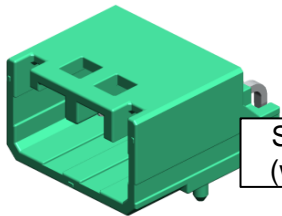
Inline Pin Connector



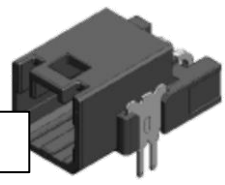
(2) Housing

(1) Crimp Contact

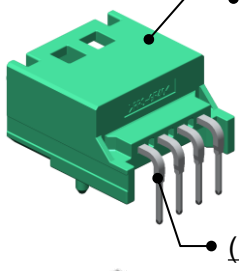
Pin Header



Standard
(w/o Leg)

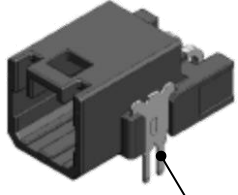


with Leg



(2) Housing

(1) Contact



(3) Leg

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

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

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

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Part Numbers and Drawing Numbers

■ Socket Housing / Inline Pin Housing / Pin Header Connector

Number of Contacts	Key Code	Socket Housing		Inline Pin Housing	Pin header Connector w/o Leg
		Part Number / Drawing Number		Part Number / Drawing Number	Part Number / Drawing Number
2 pos.	A	MX81A002SF1 / SJ125328	⇔	MX81A002PF1 / <div>SJ125326TBD</div>	Connector: MX81A002NF1 / SJ125326 Reel product: MX81A002NF1R470 / SJ126068
	C	MX81A002SF3 ⁴ / SJ125329	⇔	MX81A002PF3 ⁴ / <div>SJ125327TBD</div>	Connector: MX81A002NF3 ⁴ / SJ125327 Reel product: MX81A002NF3R470 ⁴ / SJ126069
4 pos.	A	MX81A004SF1 / SJ123030	⇔	MX81A004PF1 / <div>SJ125811TBD</div>	Connector: MX81A004NF1 / SJ125811 Reel product: MX81A004NF1R300 / SJ126070
	B	MX81A004SF2 ⁴ / SJ123031	⇔	MX81A004PF2 ⁴ / <div>SJ125812TBD</div>	Connector: MX81A004NF2 ⁴ / SJ125812 Reel product: MX81A004NF2R300 ⁴ / SJ126071

Number of Contacts	Key Code	Socket Housing		Pin header Connector with Leg	Pin Interface Drawing No.
		Part Number		Part Number / Drawing Number	
2 pos.	A	MX81A002SF1	⇔	Connector: MX81AL02NF1 / TBD Reel product: MX81AL02NF1R370 / TBD	SJ125893
	C	MX81A002SF3 ⁴	⇔	Connector: MX81AL02NF3 ⁴ / SJ127281 Reel product: MX81AL02NF3R370 ⁴ / SJ127397	
4 pos.	A	MX81A004SF1	⇔		SJ123035
	B	MX81A004SF2 ⁴	⇔		

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

■ Socket / Inline Pin Contact

	Part Number	Common Drawing No.	Individual Drawing No.	Applicable Wire
Socket Contacts	MX80S08K3F1	SJ121646	SJ121371	0.75~1.0mm ² wire (FLRY-A/B, AESSX, etc)
	MX80S08K4F1		SJ121372	0.3~0.5mm ² wire (FLRY-A/B, AESSX, etc)
	MX80S08K5F1		SJ121373	0.13~0.22mm ² wire (FLRY-A, FLCUSNRY, etc)
Inline Pin Contacts	MX81P08K3F1	<div>SJ127437TBD</div>	<div>SJ127353</div>	0.75~1.0mm ² wire (FLRY-A/B, AESSX, etc)
	MX81P08K4F1		<div>SJ127354</div>	0.3~0.5mm ² wire (FLRY-A/B, AESSX, etc)
	MX81P08K5F1		<div>SJ127355</div>	0.13~0.22mm ² wire (FLRY-A, FLCUSNRY, etc)

Applicable Tools

Tool type ⁵	Tool Part number	Applicable Contact and Connector	Tool Handling Manual
Hand Crimp Tool	CT150-19C-MX80	Socket Contact : MX80S08K3F1 for 0.75~1.0mm ² wire	T700459
	CT150-19D-MX80	Socket Contact : MX80S08K4F1 for 0.3~0.5mm ² wire	T700460
	CT150-19E-MX80	Socket Contact : MX80S08K5F1 for 0.13~0.22mm ² wire	T700461
	CT150-19C-MX81	Socket Contact : MX80S08K3F1 Inline Pin Contact : MX81P08K3F1 for 0.75~1.0mm ² wire	TBD
	CT150-19D-MX81	Socket Contact : MX80S08K4F1 Inline Pin Contact : MX81P08K4F1 for 0.3~0.5mm ² wire	T700487
	CT150-19E-MX81	Socket Contact : MX80S08K5F1 Inline Pin Contact : MX81P08K5F1 for 0.13~0.22mm ² wire	TBD
Semi-automated Applicator	3502-MX80-2	All Socket Contacts (All Inline Pin Contacts : TBD)	T703574
Contact Extraction Tool	ET-MX80S	All Socket Connectors	T711250
	TBD	All Inline Pin Connectors	TBD

Note 5. 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) ⁶	JAHL-11333

Note 6. There are some deviations to specifications.

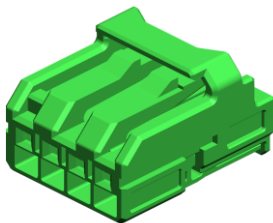
Outer Dimension

■ Socket Housing

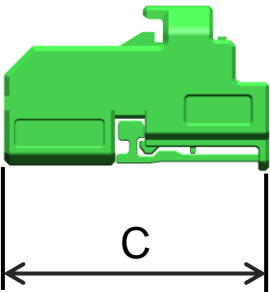
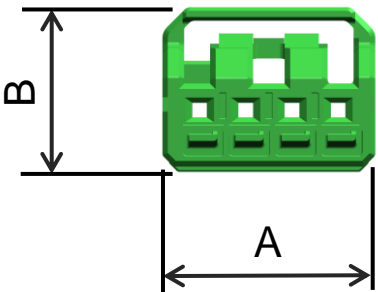
Unit : mm

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

*The figure below shows 4 pos. type



After Retainer is assembled

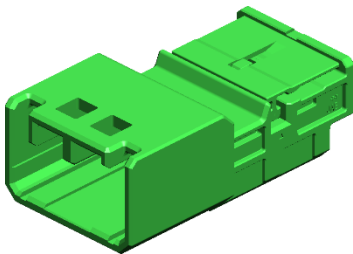


■ Inline Pin Housing

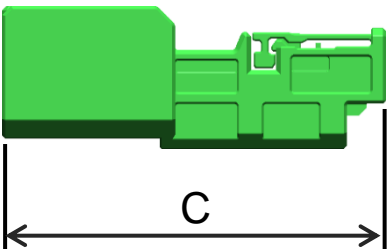
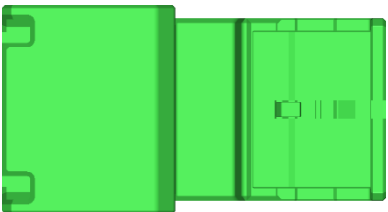
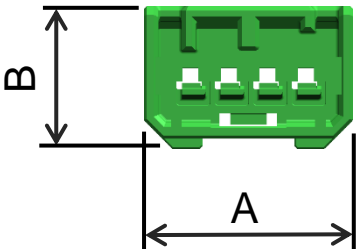
Unit : mm

No. of Contacts	A	B	C
2 pos.	8.6	9.4	25.3
4 pos.	13.8		

*The figure below shows 4 pos. type



After Retainer is assembled

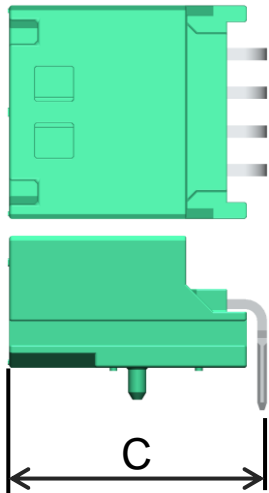
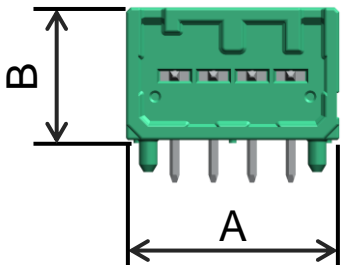
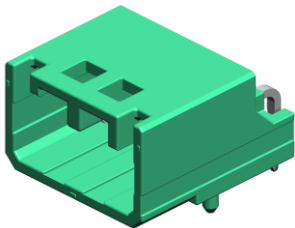


■ Pin Header Connector

Standard (w/o Leg) Unit : mm

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

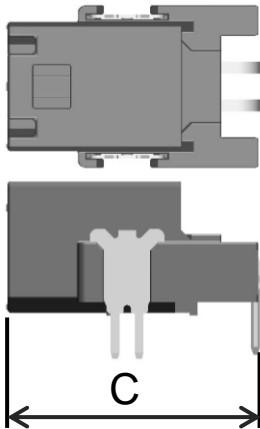
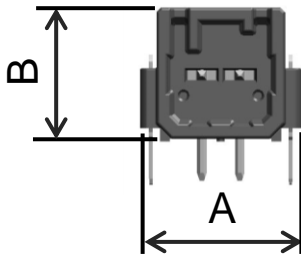
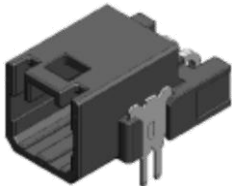
*The figure below shows 4pos. type



With Leg Unit : mm

No. of Contacts	A	B	C
2 pos.	10.8	8.9	17

*The figure below shows 2 pos. type



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