

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

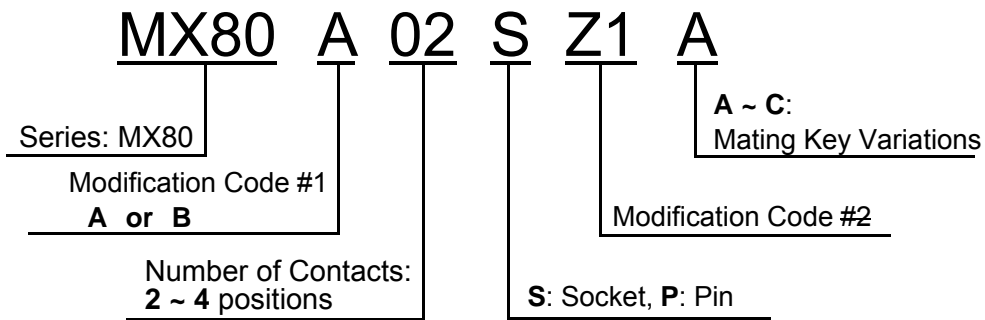
General Specifications

| | | | | |
|---------------------------------|---|---------------------|--------|-------|
| Number of Contacts | 2, 3, and 4 positions | | | |
| Operating Temperature Range | -40 ~ +125 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 Positions | | |
| | | 2 | 3 | 4 |
| | 0.13 mm ² | 4.2 A | 3.7 A | 3.6 A |
| | 0.35 mm ² | 7.1 A | 6.4 A | 5.8 A |
| | 1.0 mm 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.

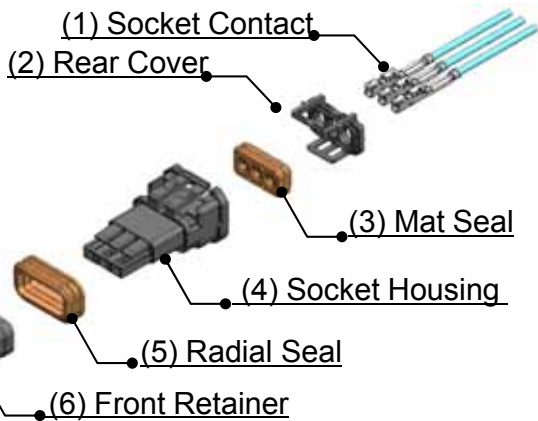
Note 2. Ambient temperature is 80°C when amperage was measured.

Ordering Information

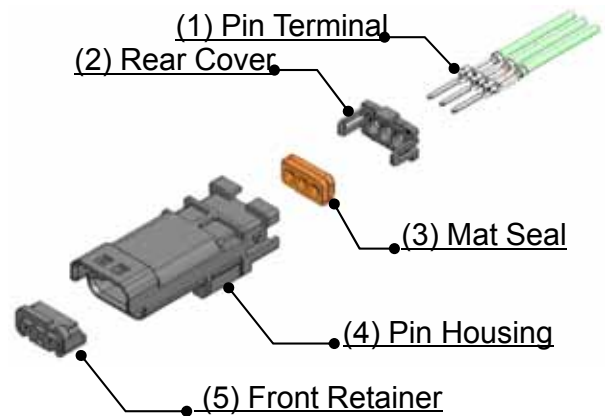


Configuration / Material and Finish

Socket Connector



In-line Pin 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 |

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| (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.

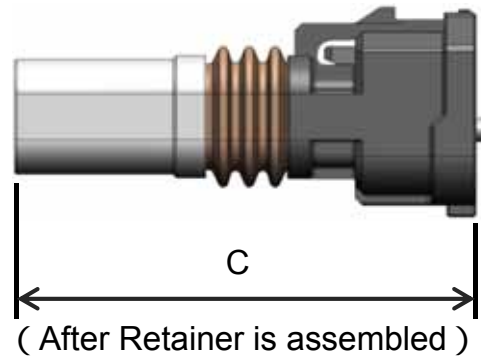
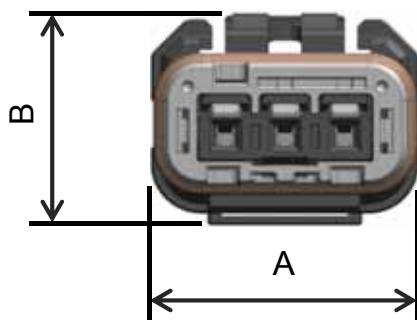
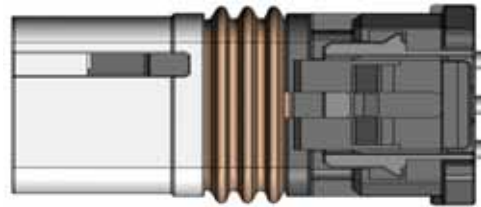
Outer Dimension

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

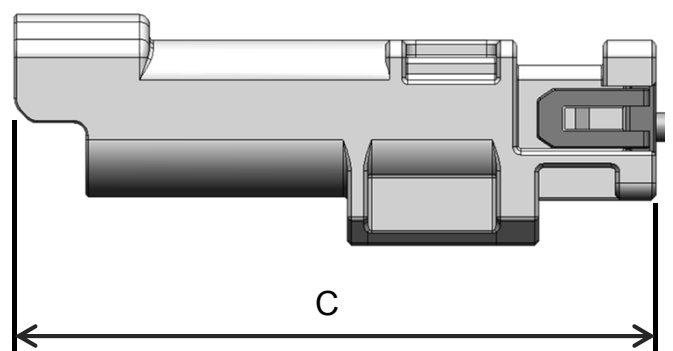
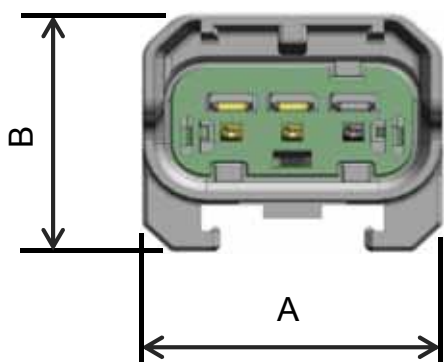
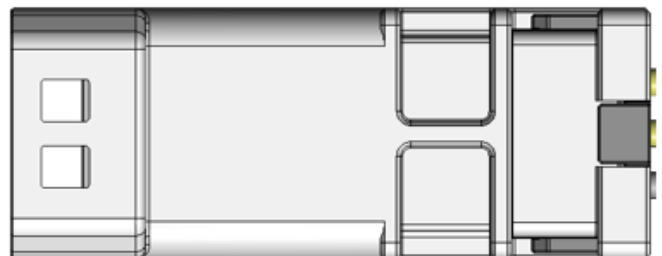


In-line Pin Connector

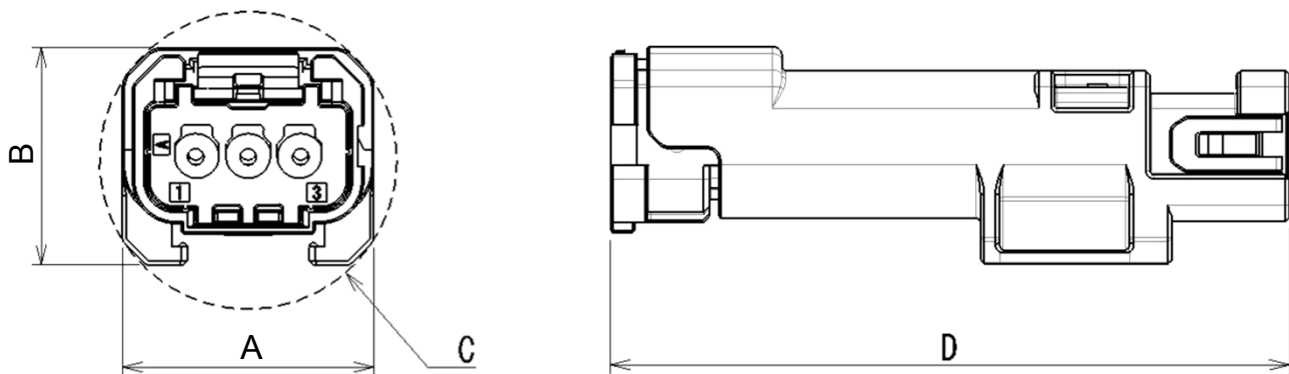
Unit: mm

| 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.
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