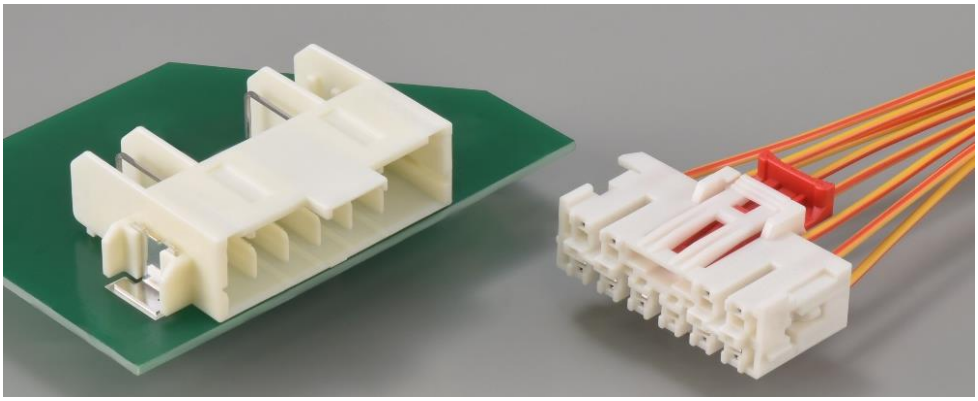
Compact 1,000V Automotive Connector

MY05 Series

CONNECTOR
MB-0406-1E
May 2025

RoHS Compliant

Halogen & PFAS Free



The MY05 Series is a family of high voltage, low current connectors which can support up to 1,000V DC. They are designed to meet creepage and clearance distance requirements based on the IEC 60664-1 specification.
The connectors are ideally suited for sensing or control of high voltage contactors or relays. The connectors are engineered to maintain a compact form factor while meeting the IEC specification and 4,800V DC withstanding voltage requirements.

Application

BMS on various battery pack (electric vehicles, battery energy storage units), high voltage industrial equipment and automotive applications.

Features

- Rated Voltage: 1,000V DC, Withstanding Voltage: 4,800V DC
- Voltage rating based on IEC 60664-1
- Plastic material: UL94 V-0, Halogen free, PFAS free, CTI600
- Tab size: 0.63 mm EU standard
- USCAR-2, USCAR-37, LV214, LV215 Tested
- Socket Connector :
  - 2 Socket connectors options available: MX80 terminal type or EU standard terminal type (near future)
  - Optional CPA (Connector Positioning Assurance)
  - Pre-set side retainer for TPA (Terminal Positioning Assurance)
- Common pin header connector for both types of socket connectors.
- 4 colored key codes possible (To be developed)

General Specifications

Number of Contacts	14 positions （10 positions coming soon）
Terminal Size	0.63mm Tab size
Operating Temperature range	-40 deg C to +125 deg C USCAR2 T3 (Note1)
Rated Voltage	1,000V DC
Rated Current	3A
Withstanding Voltage	4,800V DC (1minute)
Insulation Resistance	100MΩ minimum (1,000V DC for 1 minute)
PCB Soldering	Through hole reflow (Pin-in-Paste)
CPA	Optional (Non-CPA type coming soon)
TPA	Side retainer (Pre-set type)
Polarization	4 key codes possible（Please contact us for various key code)
Terminal Finish	Sn/Tin plating
Terminal Creepage and Clearance	IEC60664-1 (pollution degree 2, Altitude 6,000m)
CTI	600
Test Specification	USCAR-2, USCAR-37, LV214, LV215
Vibration Classification	USCAR-2 V1 Chassis Profile
Plastic Material	UL94 V0, Halogen free, PFAS free
Applicable Wire	0.13～1.0mm^2（Example: FLRY-A/B, AESSX）

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

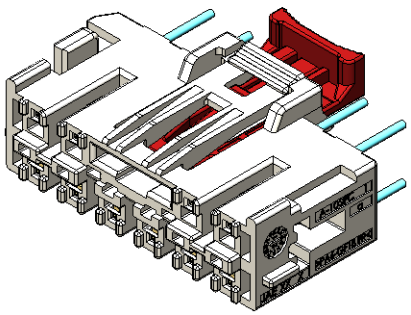
Ordering Information

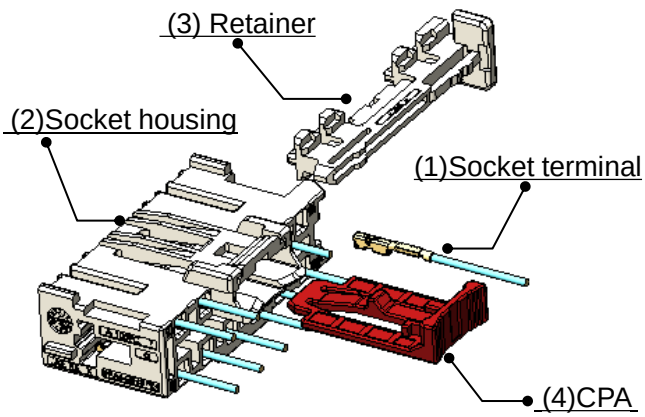
MY05 A C 14 S Z 1

- MY05: Series Name
- A: Connector Type
  - Socket: **A**: MX80 terminal type; **B**: EU standard terminal type
  - Pin Header: **A**: Standard type
- C: CPA type
  - Socket: **C** : with CPA; **N** : No CPA
  - Pin Header: **0** : N/A
- 14: Number of Contacts: **10, 14**
- S: Mating style
  - Socket: **S** : Socket housing
  - Pin Header: **N** : Angled type; **U** : Straight type
- Z: Terminal Finish
  - Socket: **Z** : Non-Terminal (Terminal is sold separately)
  - Pin Header: **F** : Sn/Tin Plating
- 1: **1～4**:Key Code

Configuration / Material and Finish

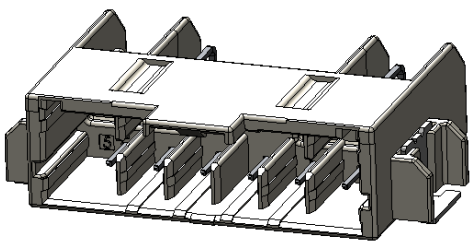
Socket Connector

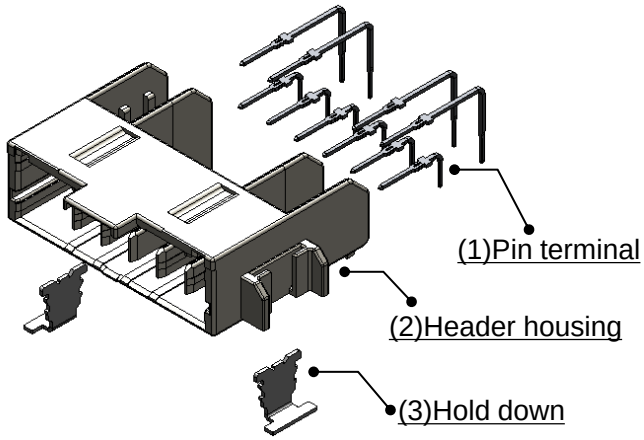




Component	Material/Finish
(1)Socket terminal (Note2)	Copper alloy / Tin plating
(2)Socket housing	PA6-GF18
(3)Retainer	PA6-GF18
(4)CPA	PA6-GF18

Pin Header Connector





Component	Material/Finish
(1)Pin terminal	Copper alloy / Tin plating
(2)Header housing	PA9T-GF30
(3)Hold down	Copper alloy / Tin plating

Note 2. Contacts are sold separately and are not integrated into connector at the time of delivery.

Part Numbers and Drawing Numbers

■ Socket Connector / Pin header connector

Number of Contacts	Socket Connector			Pin Header Connector	
				Angle Type	
	Part Number	Drawing Number		Part Number	Drawing Number
14	MY05AC14SZ1	SJ126436	⇔	MY05A014NF1	SJ126434

■ Socket terminal

	Part Number	Drawing Number	Individual Drawing No.	Applicable Wire
Socket Terminal	MX80S08K3F1	SJ121646	SJ121371	0.75～1.0mm^2 wire (FLRY-A/B、AESSX)
	MX80S08K4F1		SJ121372	0.3～0.5mm^2 wire (FLRY-A/B、AESSX)

Applicable Tools

Tool Type	Tool Part Number	Applicable Contact and Connector	Tool Handling Manual
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
Semi-automated Applicator	3502-MX80-2	All MX80 Contacts	T703574
Contact Extraction Tool	ET-MX80S	All Socket Connectors	T711250

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

Specification and Handling Manual

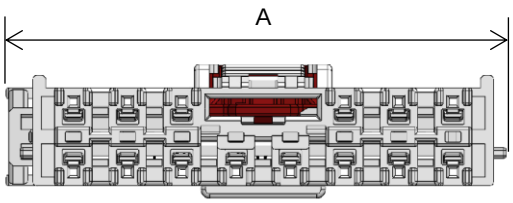
Connector Specification	Connector Handling Manual	Contact Crimping Manual
JACS-10016（USCAR2/37）	JAHL-10016	JAHL-11280-1

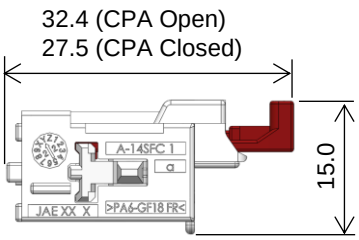
Outer Dimension

■ Socket Connector with CPA (Image is 14 positions)

Unit：mm

No. of contacts	A
10	TBD
14	56.3

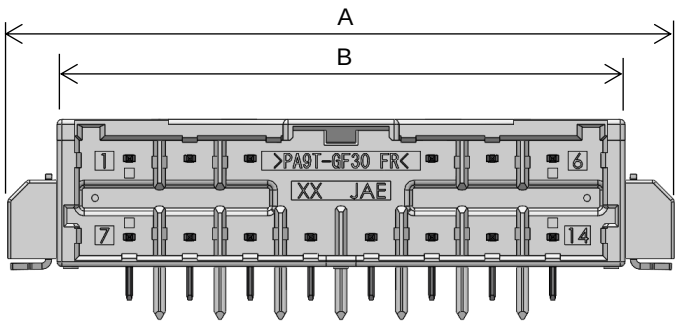


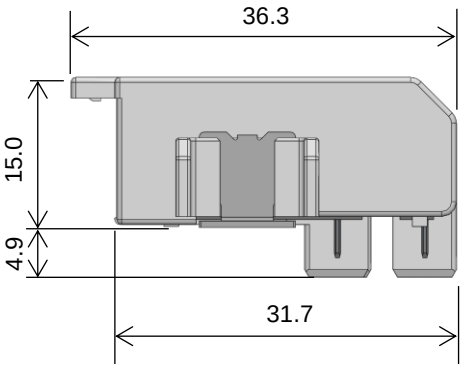


■ Pin Header Connector (Image is 14 positions)

Unit：mm

No. of contacts	A	B
10	TBD	
14	67.2	57.3





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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