

HSD-compatible Connector for Automotive
Telecommunications Equipment

CONNECTOR

MB-0358-2

Mar. 2022

MX65 Series

RoHS Compliant

JAE has developed the MX65 Series, European standard HSD-compatible connector for high-speed transmission between in-vehicle information and communication technology (ICT) devices.

* HSD: High Speed Data

Applications

For various types of in-vehicle ICT devices, ideal for wiring between equipment requiring high-speed transmission.

Features

- Compatible with various types of differential signals such as vehicle LVDS, and USB 2.0. Compatible with STQ cables
- 2 differential signal channels or 1 differential signal channel + two power supply lines
- Lock on the socket connector is a double-sided lever spring structure that is integrated with the housing, preventing the cable being caught and the deformation of the lock. (Not applicable for the 12.7mm pitch 2-row type)
- The pin side in-line type connector can be held in place with a clip when fixing to the body.
- The end surface (edge portion) of the connector is curved, with consideration for the assembler.
- The external housing can pass through small-diameter holes when mounting or routing the product to the vehicle. (Caution will be required when handling contact spring part of the outer conductor on the socket side. Waterproof type is not applicable.)
- Line-up of signal 4 pos. (STQ cable) + two discrete cables

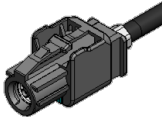




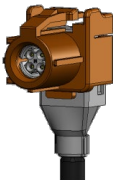
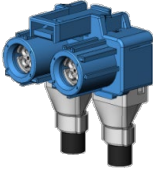
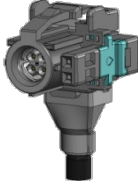

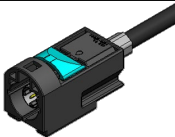
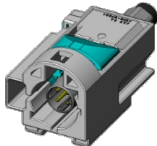
Note) This product is sold only as a cable harness and is not as an individual product.
Please contact us for cable harnessing.

General Specifications

Please contact us for details.

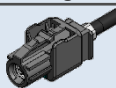














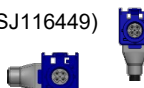













Number of Contacts	4 (STQ1), 8 (STQ2), and 6 (STQ1 +.two discrete) Note) STQ: Shielded Twisted Quad Wire
Operating Temperature Range	-40°C to 105°C
Maximum Operating Temperature	105°C (ambient temperature + temperature rise caused by energization)
Electrical Wire Specifications	Basic specifications : <ul style="list-style-type: none">• Differential 100 Ω type<ul style="list-style-type: none">◎ Wire Type 1 and 5 Conductors: 0.14sq x 4 Jacket outer diameter: 4.0mm◎ Wire Type 2 (Non-waterproof type only) Conductors: 0.14sq x 4 Jacket outer diameter: 4.6mm• Differential USB 2.0 x 2 channel type<ul style="list-style-type: none">◎ Wire Type 3 Conductors: 0.14sq x 4 Jacket outer diameter: 4.0mm◎ Wire Type 4 (Non-waterproof type, socket type only) Conductors: 0.22sq x 4 Jacket outer diameter: 4.6mm• Discrete wire FLRY type-B, 0.35sq socket size and 0.75sq pin, socket inline size

Product Lineup

Connector Type	Non-waterproof Type				Waterproof Type
	Single Type	Double Type		Complex Type	Single Type
	4 pos.	8mm pitch	12.7mm pitch	4 pos. + 2 pos.	4 pos.
Socket Straight					
Socket Right Angle		—			
Pin Relay		—	—		—


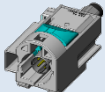

















Mating Key and Part Numbers

“x” at end of Part Number indicates Key Code







		Single Type			Double Type		
		Socket Side	Pin Side Relay	Socket Side	8mm Pitch	12.7mm Pitch	
		Straight	Straight	Angle	Straight	Straight	Angle
							
Part Number	Wire Type 1, 3, 5	MX65A004SQx	MX65A004PQx	Down: MX65B004SQx	N/A	N/A	MX65L008SQx
	Wire Type 2	MX65D004SQx	MX65D004PQx	Down: MX65E004SQx Right: MX65ER04SQx Left: MX65EL04SQx	MX65F00*SQx	MX65G00*SQx	MX65J008SQx
	Wire Type 4	MX65D0X4SQx	MX65D0X4PQx	Down: MX65E0X4SQx Left: MX65ELX4SQx	N/A	N/A	N/A
Non-Housing		Wire type 1 & 3 MX65A004SQ1 (SJ128502) Wire type 2 MX65D004SQ1 (SJ116443)	Wire type 1 & 3 MX65A004PQ1 (SJ115146)				
Key Code							
A		Wire type 1 & 3 (SJ114384) Wire type 2 (SJ116444) 	Wire type 1 & 3 (SJ114385) Wire type 2 (SJ120324) 	DOWN Wire type 1 (SJ117791) Wire type 2 (SJ121330) Wire type 5 (SJ121596) LEFT Wire type 2 (SJ121192) 	Wire type 2 (SJ116457) 	Wire type 2 (SJ116460) 2port Wire type 2 (SJ117751) 1port 	
B		Wire type 1 & 3 (SJ116114) Wire type 2 (SJ116445) 	Wire type 3 (SJ116865) Wire type 2 (SJ117058) 	DOWN Wire type 1 (SJ117792) Wire type 2 (SJ118400) LEFT Wire type 2 (SJ116456) Wire type 4 (SJ118050) 			
C		Wire type 1 (SJ116484) Wire type 2 (SJ116446) 		DOWN Wire type 1 & 3 (SJ117369) Wire type 2 (SJ120344) Wire type 5 (SJ121666) RIGHT Wire type 2 (SJ116449) 	Wire type 2 (SJ116458) 	Wire type 2 (SJ116461) 	Wire type 2 (SJ119657) Wire type 5 (SJ121667) 
D		Wire type 1 & 3 (SJ116115) Wire type 2 (SJ116447) 	Wire type 1 & 3 (SJ116117) Wire type 2 (SJ117059) 		Wire type 2 (SJ116459) 1port 		
E		Wire type 1 (SJ116116) Wire type 2 (SJ120339) 		DOWN Wire type 1 & 3 (SJ116864) 			
F		Wire type 1 (SJ117368) Wire type 2 (SJ116448) 		DOWN Wire type 1 (SJ114646) Wire type 2 (SJ118401) 			
G							
H							
J				DOWN Wire type 1 (SJ116863) Wire type 2 (SJ120345) 			
K		Wire type 2 (SJ116462) Wire type 4 (SJ118046) 					
M		Wire type 2 (SJ116462) Wire type 4 (SJ118047) 					

Mating Key and Part Numbers

“x” at end of Part Number indicates Key Code

		Complex Type			Waterproof Type	
		Socket Side	Pin Side Relay	Socket Side	Socket Side	Socket Side
		Straight	Straight	Angle	Straight	Angle
						
Part Number	Wire Type 1, 3, 5	MX65A006SQx	N/A	Down: MX65B006SQx	MX65C004SQx	DOWN: MX65H004SQx RIGHT: MX65HR04SQx LEFT: MX65HL04SQx
	Wire Type 2	MX65D006SQx	MX65D006PQx	Down: MX65E006SQx Right: MX65ER06SQx Left: MX65EL06SQx	N/A	N/A
	Wire Type 4	MX65D0X6SQx	MX65D0X6PQx	Down: MX65E0X6SQx	N/A	N/A
Key Code						
A				DOWN Wire type 1 & 3 (SJ116867) Wire type 2 (SJ120346) 		LEFT Wire type 1 (SJ117234) RIGHT Wire type 1 (SJ117235) 
B		Wire type 1 (SJ122805) Wire type 2 (SJ116450) Wire type 4 (SJ120340) 	Wire type 2 (SJ116455) Wire type 4 (SJ121606) 			
C					Wire type 1 (SJ117232) 	DOWN Wire type 1 (SJ117233) RIGHT Wire type 1 (SJ117586) 
D		Wire type 1 and 3 (SJ116866) Wire type 2 (SJ116451) Wire type 4 (SJ120341) 	Wire type 2 (SJ122812) Wire type 4 (SJ121191) 	DOWN Wire type 2 (SJ117060) Wire type 1 & 3 (SJ118247) RIGHT Wire type 2 (SJ117062) 		
E		Wire type 2 (SJ119656) 				
F						
G		Wire type 2 (SJ116452) 				
H		Wire type 2 (SJ116453) Wire type 4 (SJ118048) 		DOWN Wire type 2 (SJ117061) Wire type 4 (SJ118051) LEFT Wire type 2 (SJ118399) 		
J						
K		Wire type 2 (SJ116454) Wire type 4 (SJ118049) 				
M						

Recommended Cable Specifications (Reference)

Cable Type		Wire Type 1 STQ		Wire Type 3 STQ2	Wire Type 5 STQ	Wire Type 2 535	Wire Type 2 636 / 636-2	Wire Type 4 524
Differential Impedance		100Ω		90Ω	100Ω	100Ω		90Ω
Cross section								
Conductor	Size	AWG26 (0.14sq)				AWG26 (0.14sq)		AWG24 (0.22sq)
	Composition (pcs/mm)	7 / 0.16				7 / 0.16		7 / 0.2
	Diameter (mm)	0.48				0.48		0.6
Insulation	Material	Cross Linked PE			PP	PP		
	Diameter (mm)	1.09	1.07	1.08		1.20		
Jacket	Material	Halogen Free Resin				PVC	636: PVC 636-2: TPE-U	PVC
	Thickness (mm)	0.435	0.46	0.34		0.60		
	Outer Diameter (mm)	Φ4.0				Φ4.6		

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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