



2024-25

# Connector Selection Guide



For More Details Visit  
[\*\*JAE.COM\*\*](https://www.jae.com)



**Board-to-Board Connectors**



**Industrial I/O Connectors  
(Circular)**



**Card Connectors 2  
(SIM, Micro SIM, Nano SIM)**



**Transportation Connectors**



**Board-to-FPC Connectors**



**Industrial I/O Connectors  
(Optical)**



**LED Lighting Connectors**

**Company Profile – Pg. 2**

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**Commercial I/O Connectors**



**Board-to-Cable Connectors**



**High-Power Connectors**



**Industrial I/O Connectors  
(Rectangular)**



**Card Connectors 1  
(microSD, nano SIM, SD, SODIMM, PCI-SIG Mini Card, PCI-SIG M.2)**



**EV Charging Connectors**





## Technology to Inspire Innovation

In 1953, Japan Aviation Electronics Industry, Ltd. began with the ambition of becoming a leading manufacturer in the aviation and space industries in Japan. Since then, we were able to expand and also specialize in designing and manufacturing connectors and gyroscopes.

Always keeping our corporate philosophy ***“Explore, Create, and Practice”*** in mind, we were able to successfully establish 3 strong product lines:

- ▶ Connectors
- ▶ User Interface Solutions
- ▶ Aerospace


JAE strives to be the number one partner for global customers by staying innovative and creative in an industry where technology is continuously evolving and advancing.

The latest electronic equipment has revolutionized equipment mounting types through developments in digital technologies and addition of multifunction capabilities. Improved reliability, smaller size and greater compactness, lighter weight, as well as higher productivity and lower cost have all contributed to these developments, and a variety of connectors have been devised. We have been in the business of manufacturing and marketing connectors since 1955.

As an integrated connector manufacturer, we take pride in expertise accumulated through development of products conformed to MIL standard, primarily for aeronautics and space flight. We combine top notch technological skills with carefully monitored product quality to continue to develop connectors for multiple applications. Our products meet needs in a wide variety of fields including communications equipment, industrial machinery.

This catalog bring together a sampling of the best connectors to meet a variety of needs. Here you will find everything from connectors to meet a variety of needs. Here you will find everything from connectors for internal parts, printed circuit board, to interface connectors for linking devices. Besides the products you see here, we are also able to provide cable assembly processing and custom design. Look to JAE when choosing connectors.

# Board-to-Board Connectors (1/2)

Series	WP86SD	WP55DK	WP56DK	WP16RS	WP66DK	WP26DK	WP27D	WP10	WP6C
Photo									
Pitch	Contact Area: 0.25 mm, 2 rows Soldering Area: 0.5 mm, 4 rows	0.3mm	0.3mm	0.35mm	0.35mm	0.35mm	0.35mm	0.4mm	0.4mm
Stacking Heights	0.6mm	0.5mm	0.6mm	0.6mm	0.6mm	0.6mm	0.7mm	0.7mm	0.8mm
Pin Count (Parallel)	80 (+2 power)	6, 8, 10, 22 (+2 power)	26 (+2 power)	2 pos. (RF(IF)), 6 pos. (Signal)	6, 8, 30 (+2 power)	10, 16, 24, 30, 34, 40, 48, 50, 60 (+2 power)	10, 24, 30, 34, 38, 40, 50, 60 (+2 power)	2, 4 (+4 power +2 power Hold-down)	24, 30
Pin Count (Right Angle)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
High Power Contacts	2	2	2	N/A	2	2	2	4	N/A
Board Mount	SMT	SMT	SMT	SMT	SMT	SMT	SMT	SMT	SMT
Current Rating	0.3A Signal, 8A Power	0.3A Signal, 5A Power	0.3A Signal, 5A Power	0.3A RF, 1.0A signal	0.3A Signal, 5A Power	0.3A Signal, 5A Power	0.3A Signal, 5A Power	0.4A Signal, 5A Power, 2A Power Hold- down (Power hold-down is only for 12A products)	0.3A
Voltage Rating	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC	50V AC/DC
Durability	30 cycles	30 cycles	30 cycles	30 cycles	30 cycles	30 cycles	30 cycles	30 cycles	30 cycles
Features	Staggered 0.25 mm contact pitch, quad row array for both miniaturization and soldering performance. Hybrid 8A/pos. power contact included.	Smallest terminal pitch to save space. Lowest mated height for extremely compact devices. Hybrid power contact included.	Smallest terminal pitch to save space. Additional metal reinforcement for protection against misaligned mating. Hybrid power contacts included.	Fully shielded connector with dedicated high performance RF contacts supporting 20GHz+.	Ultra small width of 1.6mm. Additional metal reinforcement for ultimate protection against misaligned mating. Hybrid power contacts included.	Additional metal reinforcement for ultimate protection against misaligned mating. Hybrid power contacts included. Wide variety of pin counts available.	Hybrid connector with high power contacts as well as metal reinforcement in mating area to reduce risk of damage to insulator.	High power connector ideal for connecting batteries. 4 additional power contact supporting 5A each and 2 power Hold-down supporting 2A each.	Shielded connector for improved grounding and EMI/EMC performance.

View all JAE connectors at [www.JAE.com](http://www.JAE.com)

**WP86SD Series**

Receptacle side: **WP86SD - S###VA# - R20000**  
Plug side: **WP86SD - P###VA# - R20000**

*\*Shielded version*

Orderable in Reels of 20,000

**WP16RS Series**

Receptacle side: **WP16RS-S###VA1-R20000**  
Plug side: **WP16RS-P###VA1-R20000**

*\*Fully shielded version*

Orderable in Reels of 20,000

**WP27D Series**

Receptacle side: **WP27D - S###VA3 - R15000**  
Plug side: **WP27D - P###VA3 - R15000**

Orderable in Reels of 15,000

**WP55DK Series**

Receptacle side: **WP55DK-S###VA1-R20000**  
Plug side: **WP55DK-P###VA1-R20000**

Orderable in Reels of 20,000

**WP66DK Series**

Receptacle side: **WP66DK-S###VA1-R15000**  
Plug side: **WP66DK-P###VA1-R15000**

Orderable in Reels of 15,000

**WP10 Series**

Receptacle side: **WP10-S###VA10/12-R15000**  
Plug side: **WP10-P###VA10/12-R15000**

Orderable in Reels of 15,000

**WP56DK Series**

Receptacle side: **WP56DK-S###VA1-R15000**  
Plug side: **WP56DK-P###VA1-R15000**

Orderable in Reels of 15,000

**WP26DK Series**

Receptacle side: **WP26DK - S###VA3 - R15000**  
Plug side: **WP26DK - P###VA3 - R15000**

Orderable in Reels of 15,000







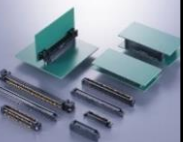



**WP6C Series**

Receptacle side: **WP6C - S###VA1 - R6000**  
Plug side: **WP6C - P###VA1 - R6000**

*\*Shielded version*

Orderable in Reels of 6,000

# Board-to-Board Connectors (2/2)

Series	AC02	WR	MA01		AX03	IL-WX	KX14/15	KX24/25	TX24/25	TX24A/25A
Photo										
Pitch	0.5mm	0.5mm	0.635mm	0.635mm	0.635mm	0.80mm	0.8mm	0.8mm	1.27mm	1.27mm
Stacking Heights	2.5mm: 60, 80 pos. 2.5mm / 3.0mm: 50, 100 pos.	4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 8.0, 9.0mm	8, 10, 14, 16, 18, 20, 22, 24, 30mm	11.5, 13.5, 21.5mm	N/A	4-9mm	4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0mm	N/A	12-24mm (2mm increments)	N/A
Pin Count (Parallel)	50, 60, 80, 100	20, 30, 40, 50, 60, 70, 80, 100, 120, 160	30, 40, 60, 80, 90, 100, 120, 140	30	N/A	6, 8, 10, 12, 14, 16, 18, 20, 24, 26, 28, 30, 32, 34, 36	20, 30, 40, 50, 60, 70, 80	80, 100, 120, 140, 180 (horizontal)	30, 40, 50, 60, 80, 100, 120	N/A
Pin Count (Right Angle)	N/A	30, 40, 50, 60, 70, 80, 120	30, 40, 60, 80, 90, 100, 120, 140	N/A	50 (horizontal)	6, 8, 10, 12, 14, 16, 18, 20, 24, 26, 28, 30, 32, 34, 36	20, 30, 40, 50, 60, 70, 80	80, 100, 120, 140, 180	30, 40, 50, 60, 80, 100, 120, 140	80 (horizontal)
Board Mount	SMT	SMT	SMT	SMT	SMT	SMT	SMT	Thru-hole	Thru-hole	Thru-hole
Current Rating	0.3A	0.3A	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A	1.0A	1.0A
Voltage Rating	200VAC/300VDC	200VAC/300VDC	50VAC	50VAC	50VAC	200VAC/300VDC	200VAC/300VDC	200VAC	250VAC	250VAC
Durability	50 cycles	500 cycles	100 cycles	100 cycles	100 cycles	30 cycles	500 cycles	500 cycles	500 cycles	500 cycles
Features	Highly stable and reliable contact structure, proven over decades of use.	Large variety of options including 9 different vertical stack heights.	Compatible with PCIe Gen3 high-speed transmission. Floating feature for easy blind mating, and dual contact structure for high reliability. This connector is suitable for use in the automotive industry.	New variation of MA01 series with expanded floating tolerance from the conventional 0.5 mm to 0.8 mm in the X & Y directions.	Floating feature allowing for easy blind mating, and dual contact structure for high reliability.	Combination of socket receptacle (straight) and pin header (straight/right angle) enable vertical and parallel connections.	Mating guide and key to prevent mis-mating.	Robust mating guide. Click response when mated.	Ribbon type contacts ensure reliable electrical continuity.	Ribbon type contacts ensure reliable electrical continuity. Improved electrical characteristics from TX24/25 Series for high-speed transmission.

## AC02 Series

Socket side: **AC02 - S### - WA# - R####**

Modification Code  
WA1: 2.5mm (Stacking height)  
WA2: 3.0mm (Stacking height)  
Emboss Reel Packaging

Plug side: **AC02 - P### - WA1 - R####**

Modification Code  
WA1: 2.5mm (Stacking height)  
Emboss Reel Packaging

## WR Series

Receptacle: **WR - ###S - VF - N1**

B: Positioning Boss  
H05: +0.5mm  
H30: +3.0mm

Straight Plug: **WR - ###P - VF - N1**

B: Positioning Boss  
50: +1.0mm  
60: +2.0mm

R/A Plug: **WR - ###P - HF - HD - A1E**

## MA01 Series

**MA01 F ### V A C B R###**

Connector Type  
F: Floating Type  
Mounting Type  
V: SMT, Straight  
Emboss Reel Packaging  
Modification Code  
B: With Positioning Boss  
J: 0.8mm Floating product  
Connector Height  
A: 6.3mm, B: 12.3mm  
C: 18.3mm, D: 9.8mm  
A: Plating of connection area is Au0.1 µm min.

**MA01 R ### V A B B R###**

Connector Type  
R: Rigid Type  
Mounting Type  
V: SMT, Straight  
H: SMT, Horizontal  
Emboss Reel Packaging  
Modification Code  
B: With Positioning Boss  
Connector Height  
B: 6.6mm, D: 8.6mm  
N: 16.6mm, Y: Vertical type  
A: Plating of connection area is Au0.1 µm min.

## AX03 Series

**AX03 \* 050 H A #1 R###**

Series  
Connector Type  
F: Floating Type  
R: Rigid Type (fixed type)  
Number of Contacts  
Mounting Type  
H: Angle type, contact SMT  
Emboss Reel Packaging  
Modification Code  
A: Plating of connection area is Au0.1 µm min.

## IL-WX Series

Socket receptacle: **IL-WX - ##S - VF - B**

B: Positioning Boss  
Hold Down

Straight Pin header: **IL-WX - ##P - VF - HD - S - B**

B: Positioning Boss  
Hold Down  
Modification Code

R/A Pin header: **IL-WX - ##P - HF - HD - S - B**

B: Positioning Boss  
Hold Down  
Modification Code

## KX14/15 Series

Receptacle: **KX14 - ##K 2 DE**

Stack Height:  
2, 5, 8mm

Straight Plug: **KX15 - ##K 3 DE**

Stack Height:  
2, 3, 4mm

R/A Plug: **KX15 - ##K L DLE**

Right angle

R/A Plug: **KX15 - ##K L DNL**  
(with Hexagonal Nut)

Right angle

## KX24/25 Series

Receptacle: **KX24 - ###R - LT - H1**

Plug: **KX25 - ###P - LT - H1**

LT: Right-angle  
6ST: Straight  
H: Hook pin

## TX24/25 Series

Receptacle: **TX24 - ###R - LT - H1E**

Plug: **TX25 - ###P - LT - H1E**

Stacking Height:  
Receptacle:  
6, 10, 12mm  
Plug:  
6, 8, 12mm  
\*Right-angle leave blank  
H: Hook pin  
N: No hook pin  
LT: Right angle  
ST: Straight

## TX24A/25A Series




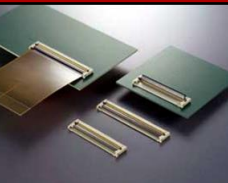

Receptacle: **TX24A - 80R - LT - H1E**

Plug: **TX25A - 80P - LT - H1E**

LT: Right-angle  
H: Hook pin



# Board-to-FPC Connectors

Series	FF08	FR02	FA10	FF03	FM8
Photo					
Pitch	0.2mm	0.2mm	0.5mm	0.5mm	0.5mm
Mounted Height	1mm	0.82mm	0.9mm	2mm	2.2mm
FPC/FFC Thickness	0.15 ± 0.02mm	0.2 ± 0.03mm	0.2 ± 0.03mm	0.3 ± 0.05mm	0.3mm ± 0.03mm
FPC Contact Orientation	Bottom	Top or bottom	Top or bottom	Bottom	Bottom
Pin Count	25,29,41,51,71,81	23,41,51,61	4,5,6,10	60,80,96	41, 51, 60
Current Rating	0.3A	0.25A	0.5A	0.5A	0.5A
Voltage Rating	50V	50V	50V	50V	50V
Features	Smallest pitch. Rotating actuator.	Lowest profile in class. Robust rear actuator. Compatible with top and bottom contact FPC.	Quick one-step insertion & removal. Requires no actuator operation. Compatible with top and bottom contact FPC.	Highest pin count.	Compatible with high speed signal transmission. Guides hold the FFC in place to prevent misalignment.



**FF08 Series**

Reel: **FF08##SA1-R3000**

**FF03 Series**

Loose pcs: **FF03##SA1**

Reel: **FF03##SA1 - R2000**

**FR02 Series**

Reel: **FR02C0##JA1-R5000**



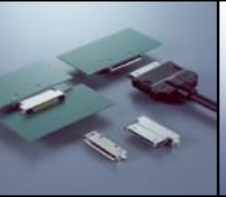
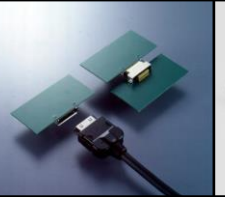




**FM8 Series**

Reel: **FM8S###HA2R4000**

**FA10 Series**

Reel: **FA10##SA1-R8000**

# Commercial I/O Connectors

Series	DC2	DC3	DD1	DD2	DX07	DX07 Cable	DC1	DC04
Photo								
Pitch	0.4mm	0.4mm	0.5mm	0.5mm	0.5mm	0.5mm	1.0mm	1.0mm
Interface Type	Cable I/O	Cable I/O	Cable I/O R/A Dock 75° Vert Dock	Cable I/O R/A Dock Vert Dock	Cable I/O Vert Dock	Cable I/O (C-C, C-A)	Cable I/O	Cable I/O
Pin Count (Parallel)	19	19	30	40	16, 22, 24	24	19	19
Signal Standard	HDMI	HDMI	USB 2.0	USB 2.0	USB Type-C® USB 3.2, USB4 Thunderbolt™ 4*	USB 3.2 Gen 2	HDMI 2.0	HDMI 2.1
Current Rating	0.5A	0.3A	Signal: 0.5A Power: 1.0A	Signal: 0.5A Power: 1.0A	Vbus / GND: 5A Vconn: 1.25A Signal: 0.25A	USB 3.2 Gen2: 5A USB 3.2 Gen1: 3A	0.5A	0.5A
Voltage Rating	40VAC	40VAC	30VAC	30VAC	48VAC	20VAC	40VAC	40VAC
Durability	5,000 cycles	5,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles
Operating Temp	-20 ~ +85 °C	-20 ~ +85 °C	-25 ~ +75 °C	-25 ~ +75 °C	-40 °C ~ +85 °C (general products) -30 °C ~ +85 °C (Vertical Receptacle) -40 °C ~ +125 °C (for products evaluated to automotive specifications, including temperature rise when energized)	PVC: +10 ~ +40 °C TPE: -20 ~ +50 °C	-20 ~ +85 °C	-20 ~ +85 °C
Locking	Friction	Friction	Latch	Latch	Friction	Friction	Friction	Friction
Features	Mini HDMI Type-C compatible. Requires HDMI adaptor status.	Micro HDMI Type-D compatible. Requires HDMI adaptor status.	Docking connector to combine various high-speed signals in a single connector.	Robust and compact design. Compatible with high speed signaling.	Reversible plug for easier insertion. Multiple receptacle mounting options available.	Reversible plug for easier insertion. Compatible with USB Power Delivery 3.0 and USB 3.2 Gen2	HDMI Type A compatible. Requires HDMI adaptor status.	HDMI Type A Category 3 compatible. Requires HDMI adaptor status.

\*Select part numbers only. Contact us for more information.

View all JAE connectors at [www.JAE.com](http://www.JAE.com)

**DC2 Series**Receptacle: **DC2R019JA4**

Hold Down Type      Modification  
J: T/H, H: SMT      code

Cable Harness: **DC1DC2ST2150B**

Restricted to HDMI Adapters  
Contact JAE for additional options

**DC3 Series**Receptacle: **DC3RX19JA2**

Top Mount

Modification Code  
Hold Down Type  
X, J: T/H  
O, H: SMT

Restricted to HDMI Adapters  
Contact JAE for additional options

**DD1 Series**Receptacle: **DD1R030HA1**

Standard mount

**DD1R030JA7**

Reverse mount

Docking Plug: **DD1B030VA1**

Vertical

**DD1B030HA1**

Right angle

Cable Plug: **DD1P030MA1****DD2 Series**Receptacle: **DD2R040HP2**Docking Plug: **DD2B040VP4**

Vertical

**DD2B040HA2**

Right angle

Cable Plug: **DD2P040MA1****DX07 Series**Receptacle: **DX07B024J J 1**

Board Mount Type

B: Mid-mount

S: On-board

W: Waterproof

J: Horizontal SMT

X: Horizontal Hybrid

W: Vertical dock

Modification Code

Contact Area Plating

J: Au over Pd-Ni over Ni

A: Au over Ni

Plug: **DX07P024A J 5**

Board Mount Type

P: Plug type

V: Vertical dock

A: Slim

M: Standard

F: Short

Modification Code

Contact Area Plating

J: Au over Pd-Ni over Ni

A: Au over Ni

Cable Harness: **DX07 5 18 S \*\* N \*\*\*\*\***

Series

Modification Code

5: Plug

C: Drawn shell Plug

Cable Spec (1)

18: USB3.1 C to C

19: USB3.1 C to A

50: USB3.1 C to C

w/ Screw lock

Cable Overmold/Jacket

S: Black (PVC)

B: Black (TPE)

Modification  
Code

Cable Spec (2)

K: Gen1 3A

L: Gen 2 3A

N: Gen2 5A

Cable Length

10: 1 meter

20: 2 meter

**DC1 Series**Receptacle: **DC1RS19JA7**Cable Harness: **DC1P019ST30200B**










Restricted to HDMI Adapters  
Contact JAE for additional options

**DC04 Series**Receptacle: **DC04S019JA1**

Modification Code

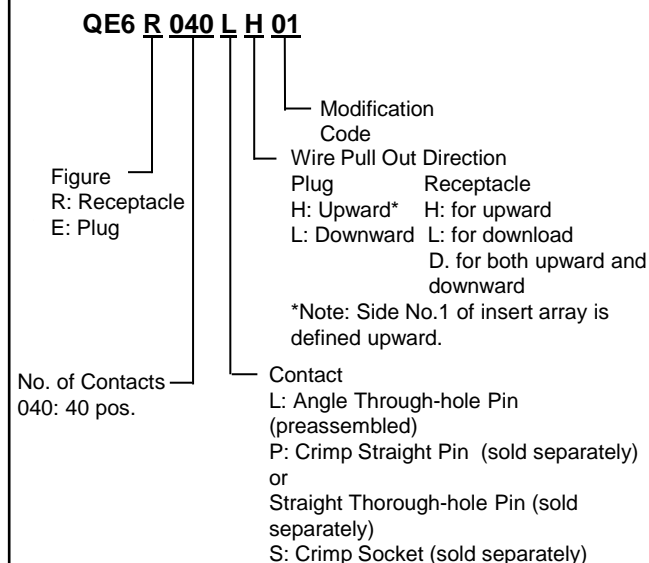
Restricted to HDMI Adapters  
Contact JAE for additional options

# Industrial I/O Connectors [Rectangular]

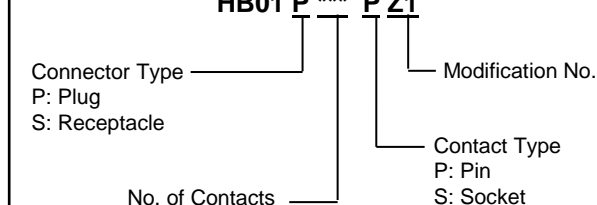
Series	QE6	DF02	DZ02	HB01	HB01(O/D)	HB03	KN01	KN02	KN06
Photo									
Pitch	3.8mm	1.27mm	1.27mm	N/A	N/A	N/A	N/A	N/A	N/A
I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O	Cable I/O
Pin Count	40	14, 20, 26, 36, 50	8 (2 rows x 4pos)	6 (4 power, 2 signal)	12,16	2, 4, 8	M size : MAX 64 pos. 4 x insulator blocks /unit #16×16, #20×16, #20×14 L size : MAX 300 pos. 6 x insulator blocks /unit #8×4, #12×12, #20×18, #22×42, #22×50	Type I : 28 pos. Type II : 46 pos. 3 x insulator blocks /unit	4, 12, 18, 18 with shielding, 42, 50 / 6 x insulator blocks /unit
Current Rating	5A	0.5A	0.5A	Power: 18 AWG: 9A 16 AWG: 11A 14 AWG: 13A Signal: 24 AWG: 2A 22 AWG: 3A 20 AWG: 4A	1A	28 ~ 30 AWG : 1A 24 ~ 26 AWG : 2A 22 AWG : 3A	M size Power : 16 pos. × 16A(#16) Signal : 14 pos. or 16pos. × 3A(#20) L size Power : 4 pos. × 30A(#8) or 12 pos. × 23A(#12) Signal : 18 pos. × 3A(#20) or 42 pos. × 2A(#22) or 50 pos. × 3A(#22)	4 pos. block: 4A 6 pos. block: 2A 8 pos. block: 13A 16 pos. block: 2A or 4A 24 pos. block: 2A	4 pos. block: 30A 12 pos. block: 23A 18 pos. block: 3A 42 pos. block: 2A 50 pos. block: 3A
Voltage Rating	AC 1500 Vrms for 1 minute (Dielectric withstanding voltage)	250VAC	30VAC	250VAC	50VAC	250VAC	M size 14 pos. : 24VDC 16 pos. : #16 250VAC, #20 24VDC L size 4 pos. : 500VDC 12 pos. : 250VAC 18, 42, 50 pos. : 24VDC	4, 6, 16 pos. blocks: 24VDC 8, 24 pos. blocks: 250VAC	4, 12 pos. blocks: 500VAC 18, 42, 50 pos. blocks: 24VDC
Durability	500 cycles	500 cycles	Plug: 1,500 Short-circuit Plug: 1,000	30 cycles	50 cycles	100 cycles	100 cycles	30 cycles	30 cycles
Operating Temp	-55 ~ +85 ° C	-20 ~ +80 ° C	-40 ~ +85 ° C	-25 ~ +85 ° C	-40 ~ +85 ° C	-25 ~ +105 ° C	-20 ~ +105 ° C	-10 ~ +85 ° C	-20 ~ +105 ° C
Termination	Crimp/Solder	IDC/Solder	Solder (SMT)	Crimp	Crimp	Crimp	Crimp	Crimp	Crimp
Locking	Lever Lock	One-touch, screw	Tab Lock	Tab Lock	Tab Lock	Tab Lock	Rack & Pinion Lever	Tab Lock	Rack & Pinion Lever
Features	Two types of connections – wire crimp and board through-hole types. Compatible with 3U4HP size cards for 19-inch sub-rack.	Half-pitch (1.27mm) interface compatible. Ni-plated plastic hood for lighter weight with EMI shielding.	IEC61076-3-122 (TYPE-I) compliant safety connector for Industrial applications. Single and tow end plug harness and short-circuit plug options.	Hybrid structure enables both power and signal. Terminals compatible with AWG#14-24. Mechanical lock for secure mating. IP67 rated.	IP67 rated waterproof construction eliminates the need for additional potting.	Miniature cable relay connector for compact servo motors. Simple, one-touch latch locking. Compact and Light-weight for ease of use in tight spaces.	Low force locking lever. Modular insulator structure for custom power and signal combination requirements, with EMI shielding option.	All-plastic outer shell, light-weight. EMI shielding with a metal plating applied to outer shell and internally shield components.	Capable of housing up to 6 modular insulator blocks for various combinations and multi-pole, single-engagement operation, lever engagement.



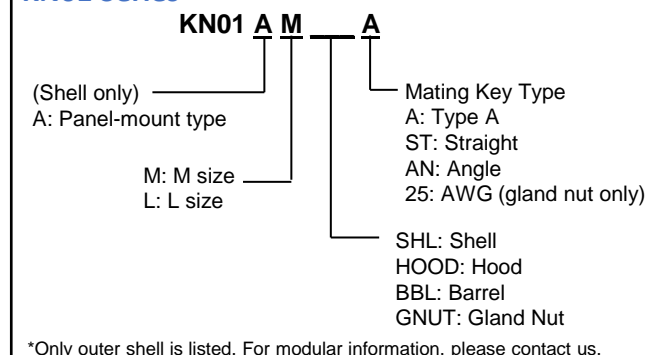
## QE6 Series



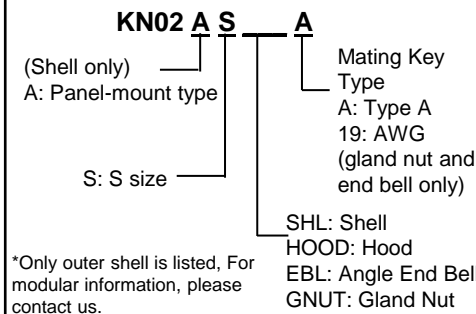
## HB01 Series



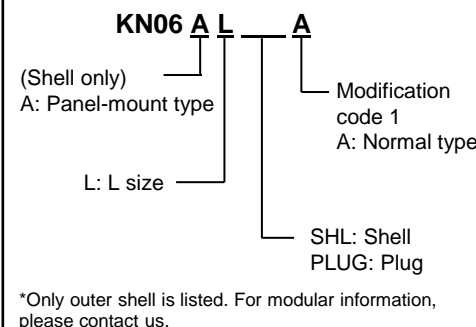
## KN01 Series



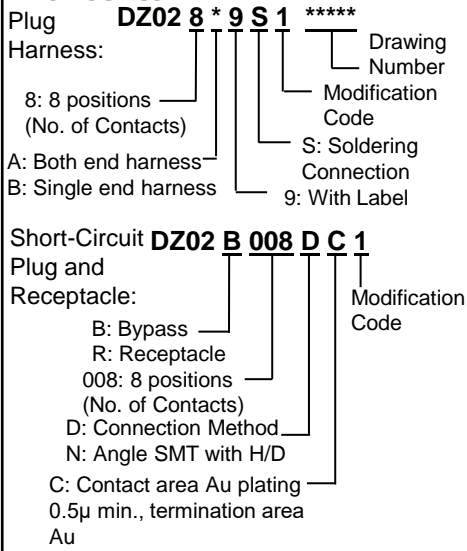
## KN02 Series



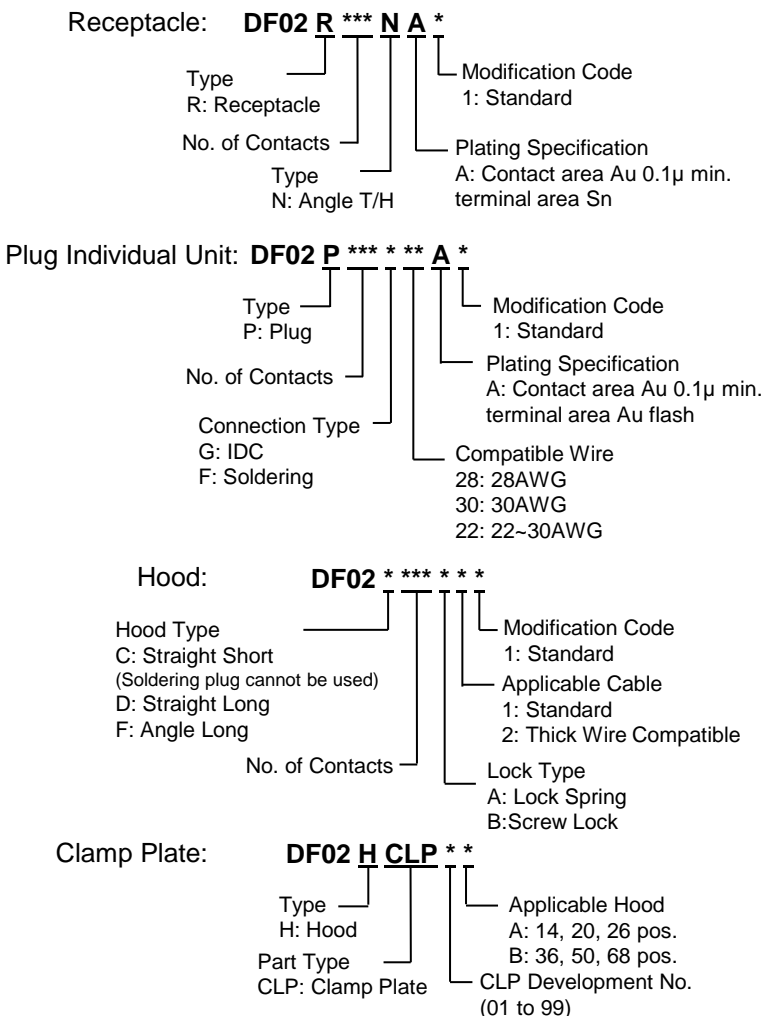
## KN06 Series



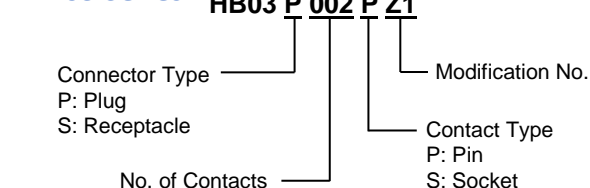
## DZ02 Series












## DF02 Series



## HB03 Series

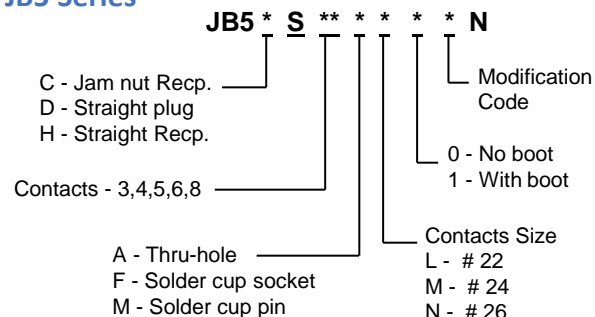


# Industrial I/O Connectors [Circular] (1/2)

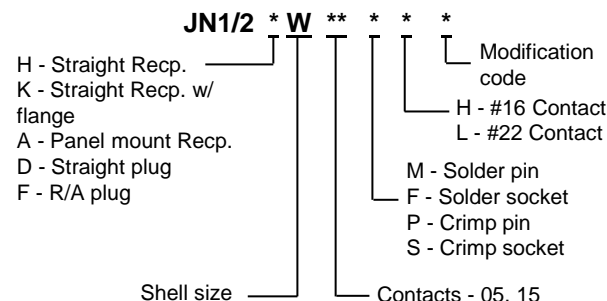
Series	JB5	JB10	JN1 / JN2	JN1W / JN2W	JN1V / JN2V	JN6	JN13	JN14	SRCN
Photo									
Plug Shell Diameter	ø11.0mm	ø33.5mm	JN1: ø19.0mm, JN2: ø 20.0mm	ø26.2mm	JN1: ø19.0mm, JN2: ø 20.0mm	2pos.: 21 × 12.5 4pos.: 24.5 × 18 7pos.: 21 × 12.5	6pos.: 31.8 × 20.2 9pos.: 23.5 × 16	2pos.: 19 × 17 4pos.: 22.1 × 17.6 9pos.: 22.1 × 17.6	ø21.2-33.2mm
Pin Count	3,4,5,6,8	26	4,10	5,15	10	2, 4, 7	6(2 + 4), 9	2, 4, 9	3,5,7,10,16,24
Shell Material	Metal	Plastic	JN1: Plastic JN2: Metal and Plastic	JN1W: Plastic JN2W: Metal and Plastic	JN1V: Plastic JN2V: Metal and Plastic	Plastic	Plastic	Plastic	Metal
Mated Condition	IP68	IP67 (mated)	IP67	IP67	IP67	IP67 (mated)	IP67 (mated)	IP67 (mated)	N/A
Current Rating	2 ~ 3A	1A	3 ~ 5A	3 ~ 13A	3A	2pos.: 1A 4pos.: 7A 7pos.: 1A	2pos.: 1.2A 4pos.: 7.4A 9pos.: 1A	2pos.: 1A 4pos.: 7A 9pos.: 1A	5 ~ 10A
Voltage Rating	200VAC ~ 320VAC	100VAC	200VAC	200VAC ~ 400VAC	230VAC	2pos.: 100VAC 4pos.: 200VAC 7pos.: 100VAC	2pos./6 : 30VDC 4pos./6 : 230VAC(TÜV) 400VAC(UL) 9pos.: 100VAC	2pos.: 100VAC 4pos.: 240VAC 9pos.: 100VAC	250VAC
Durability	5,000 cycles	500 cycles	500 cycles	500 cycles	500 cycles	100 cycles	100 cycles	50 cycles	500 cycles
Locking	Push-pull	One-touch (push-and-twist)	Push on, twist off	Push on, twist off	Push on, twist off	Screw	Screw	Screw	Threaded
Operating Temp	-55 ~ +85 ° C	-20 ~ +125 ° C	-20 ~ +125 ° C	-20 ~ +125 ° C	-20 ~ +125 ° C	-40 ~ +125 ° C	-40 ~ +125 ° C	-40 ~ +125 ° C	-25 ~ +85 ° C
Wire Size	AWG #22-28	AWG #20-28	AWG #20-28	AWG #14-28	AWG #20-28	2,7pos.: AWG #22-28 4pos.: AWG #18-20	6pos.: AWG #18-22 9pos.: AWG #22-28	2,9pos.: AWG #22-28 4pos.: AWG #18-22	AWG #16-20
Termination	Solder	Crimp	Crimp / Solder	Crimp / Solder	Crimp	Crimp	Crimp	Crimp	Solder
Features	Compact connector, individually rated IP68 waterproof in unmated condition.	Internal EMI shielding. One-touch, push-and-twist for easy locking and unmating.	Single operation push to mate, twist to unmate mechanism. JN2, metal/plastic housing is 3x durable.	Single operation push to mate, twist to unmate mechanism. JN2, metal/plastic housing is 3x durable.	Increased socket contact points to withstand 25G vibration. Mates with conventional JN1/JN2 receptacle. One-touch locking.	Plastic, waterproof connector ideal for small servo motors. Mating secured by screws. 4pin receptacle is mold-in; 2pin/7pin receptacles are press-fit.	The 6-position connector combines power and brake with reinforced insulation. TÜV & UL Certified.	Screw grounded 4pin receptacle. Spring lock 2pin/9pin receptacles. Plastic, waterproof ideal for compact servo motors.	JIS C 5432 compliant UL recognized, 5 insert guide keys.

View all JAE connectors at [www.JAE.com](http://www.JAE.com)

## JB5 Series

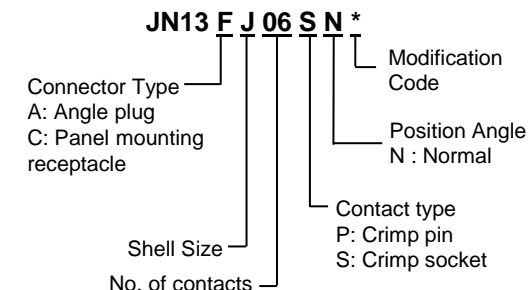


## JN1W/2W Series

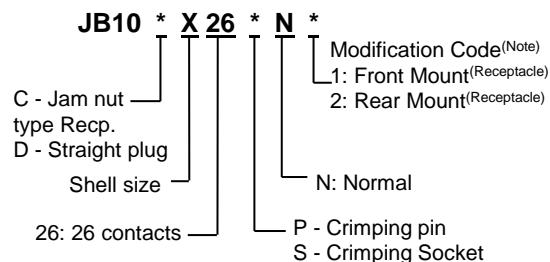


Crimp contacts sold separately

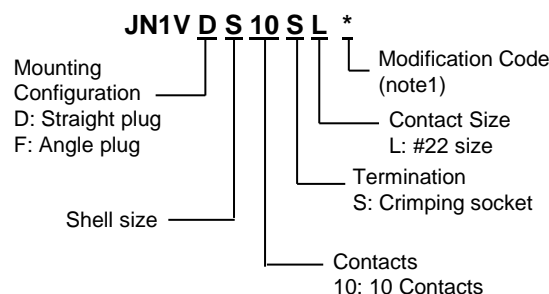
## JN13 Series



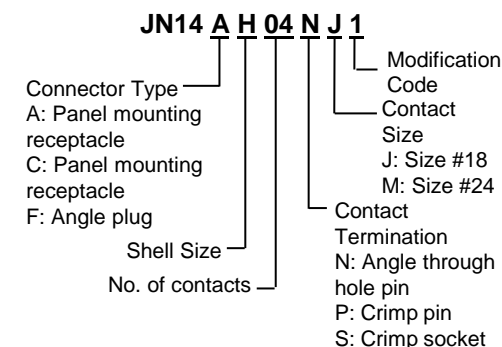
## JB10 Series



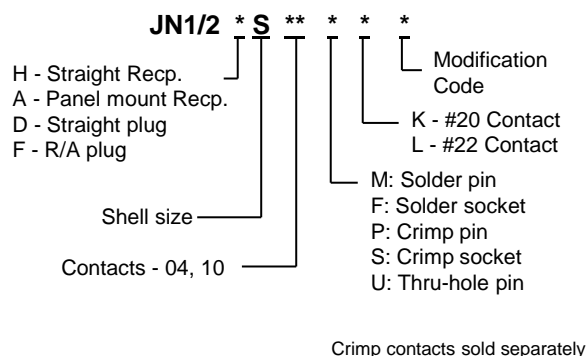
## JN1V/JN2V Series



## JN14 Series

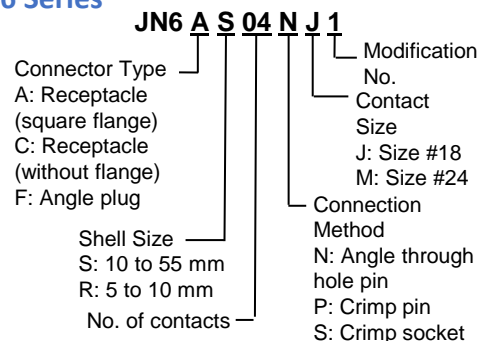


## JN1/2 Series

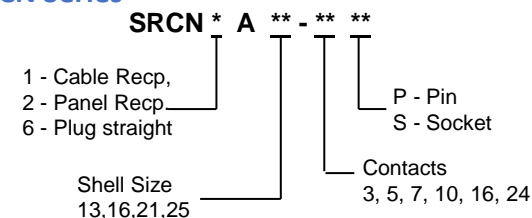


Crimp contacts sold separately

## JN6 Series



## SRCN Series



# Industrial I/O Connectors [Circular] (2/2)

Series	JL02	JL04V	JL05	JL10	JL10/W	JK06	JK06 Ethernet	N/MS	JB12
Photo									
Plug Shell Diameter	ø34.1-62.7mm	ø22-56.3mm	ø35.9-51.7mm	ø35.9-58.6mm	Ø42.2mm	ø36.5-66.3	ø59.8	ø22.2-81.8mm	ø16.2
Pin Count	10,17,19,24,37,48,54	3,4,6,7,8,9,22	4,5,7,8,9,10,17,19,24,30,36,37, 52,73	4,6,9,17,19,22,37	3,4	3,4,6,7,10,19,37,48	20 (for Cat.5) 4E (for Cat.6A)	1~11,14,16,17,19,22,24,26,35,37,48,54	8 (X-code for Cat.6A) 4 (D-code for Cat.5e)
Shell Material	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal
Mated Condition	N/A	IP67	IP67	IP67	IP67	IP67	IP67	N/A	IP67 (mated)
Current Rating	1.5 ~ 13A	13 ~ 80A	2 ~ 46A	13 ~ 80A	46A	13 ~ 367.9A	20pos: 13A 4pos: 3A (per inner contact)	13 ~ 150A	X-code 0.5A / contact D-code 4A / contact
Voltage Rating	200VAC ~ 500VAC	100VAC ~ 500VAC	200VAC ~ 900VAC	100VAC ~ 500VAC	100VAC ~ 500VAC	220VAC	20pos: 220VAC 4pos: 110VAC	200VAC ~ 3,000VAC	X-code 48VAC D-code 250VAC
Durability	500 cycles	500 cycles	500 cycles	500 cycles	500 cycles	500 cycles	500 cycles	500 cycles	500 cycles
Locking	Threaded	Threaded	Bayonet	Bayonet and Threaded	Bayonet	Bayonet	Bayonet	Threaded	Threaded
Operating Temp	-55 ~ +85 ° C	-55 ~ +125 ° C	-55 ~ +125 ° C	-55 ~ +125 ° C	-55 ~ +125 ° C	-40 ~ +100 ° C	-40 ~ +100 ° C	-55 ~ +125 ° C	-40 ~ +85 ° C
Wire Size	AWG #14-28	AWG #4-18	AWG #8-26	AWG #4, 8-18	AWG #8-10	AWG #4-22	AWG #12-24	AWG #0-16	AWG #22-30
Termination	Crimp	Solder	Crimp / Solder	Solder	Crimp / Solder	Crimp	Crimp	Solder	Crimp
Features	Compatible with MIL-DTL-5015 standard.	TÜV approved UL recognized Compatible w/ MIL-DTL-5015	JIS B 9960-1 compatible.	TUV and UL approved. Compatible w/ MIL-DTL-5015.	Outdoor Environment water and dust-proof connector	Panel-to-cable connector, VG95234 design. Compatible w/ MIL-DTL-5015.	Cat.5 and Cat.6A compliant Ethernet data transmission connector. VG95234 design, compatible with MIL-DTL-5015 standard	UL approved. Compatible with MIL-TL-5015 standard.	IEC standard. M12-style X-code D-code cUL / UL (UL2238)

View all JAE connectors at [www.JAE.com](http://www.JAE.com)



## JL02 Series

**JL02 - \*\* \*\* - \*\* \* - F0 - R**

Connector Type  
1B: Straight Recp.  
2A: Panel mount Recp.  
6B: Straight plug  
8B: Right angle plug

Shell size

Contact arrangement

Crimp contacts

P - Pin  
S - Socket

## JL10 Series

**JL10 - \* E \*\* - \*\* P E - \*\***

Connector Type  
2: Recp.  
6: Straight plug  
8: Angle plug

Shell Size

E: Waterproof  
A: Waterproof only when mated

E: Earth contact

P: Pin  
S: Socket

Contact arrangement

EB - w/ end bell

## JK06 Ethernet Series

**JK06 A L 20 P N \* - FO**

Connector Type  
A: Panel mount Recp.  
K: In-line Recp. (Conduit Compatible)  
D: Straight plug (Conduit Compatible)

Shell Size  
L - Size 32

No. of Contacts  
20: 20 positions (for Cat. 5)  
4E: 4 positions for Ethernet (for Cat. 6A)

Contact Type  
P: Pin Contact  
S: Socket Contact

Angle of Insertion (Note 2) N, W, X

Modification Code (Note 1)

FO: Without Contact

## JL04V Series

**JL04V - \* A - \*\* - \* \* E - B - \*\* - R**

2 - Recp.  
6 - Plug  
8 - Plug, R/A

E - Waterproof  
A - Waterproof only when mated

Shell Size

Contact arrangement

E - Earth contact

P - Pin  
S - Socket

EB - w/ end bell

## JL10/W Series

**JL10 /W - \* A \*\* - \*\* P E - \*\***

W: Weather resistance Type

Connector Type  
2: Recp.  
6: Straight plug

E: Waterproof  
A: Waterproof only when mated

Shell Size

EB: With end bell  
B: With solder- cup on earth contact

E: Earth contact

P: Pin  
S: Socket  
SC: Socket (Crimp)

Insert arrangement

## N/MS Series

**N/MS 310\* \* \*\* - \* \***

Connector Type  
0: Straight Recp.  
2: Panel mount Recp.  
6: Straight plug  
8: R/A plug

Shell Size

Contact arrangement

A: Integrated Shell  
B: Separate Shell

Alternate insert position

P: Pin Contact  
S: Socket Contact

## JL05 Series

**JL05 \*\* - 24 - 10 PC \* \*\* - R**

6A: Straight plug  
2A: Panel mount Recp.  
2L: Waterproof unmated Recp.

Shell Size

Contact Arrangement

Blank: with contacts  
F0: without contacts

Alternate insert position

P - Solder pin, S - Solder socket  
PC - Crimp pin, SC - Crimp socket

## JK06 Series

**JK06 \* \* \*\* \* \***

Connector Type  
A - Panel mount Recp.  
K - In-line Recp.  
D - Straight plug (with Endbell)

Shell Size  
F - Size 18  
H - Size 22  
K - Size 28  
M - Size 36

Modification Code

Angle of Insertion  
N, W, X, Y, Z

P: Pin  
S: Socket

No. of Contacts  
3, 4, 6, 7, 10, 19, 37, 48

## JB12 Series

**JB12 \* \* \*\* \* \* - \***

Mounting configuration  
C: Panel mount receptacle, jam nut type  
D: Straight plug

Shell size

Number of contacts





Termination  
Y: Selectivity (Solder or Crimping)

Modification code 2  
D: D-code  
X: X-code

Modification code 1  
5:  $\Phi 3.5$  to 5.0  
7:  $\Phi 6.0$  to 7.5  
9:  $\Phi 7.3$  to 8.8

Cable pullout direction  
N: Normal

# Industrial I/O Connectors [Optical]

Series	FO-BD2	FO-BD6	FO-BD7	FO-BD7D
Photo				
Shell Material	Zinc alloy/ chromium plating	Weather Resistant Plastic	Zinc alloy/ Cr plating over Ni over Cu	Zinc alloy/ chromium plating
Mated Condition	IP67	IP67	IP67	IPx7
Corrosion Resistance	720 hours of salt spray	1000 hours of salt spray	1000 hours of salt spray	1000 hours of salt spray
Durability	500 cycles	500 cycles	Mating area: 50 cycles LC Connector area: 100 cycles	500 cycles
Locking	Threaded	Push-pull lock	Push-slide lock	Push-slide lock
Operating Temp	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C (Depends on harness)	-40 ~ +85 ° C (Depends on harness)
Wire Size	ø7.0mm, ø5.86mm ~ ø7.2mm, ø8.5mm ~ ø10.0mm	ø5.0mm	ø5.0mm	ø5.0mm
Features	Connects directly to an on-board SFP transceiver and modular jackets. On-site assembly capable with plug built into existing harnesses. Compatible with TE manufactured FullAXS..	One-touch mating through three-axis floating structure. Space-saving compact design, and light weight plastic connector housing.	Optical module slot within plug connector and mounted to outdoor environment provides optimal thermal countermeasure. IP67 rated water & dust ingress protection.	Optical module slot within plug connector and mounted to outdoor environment provides optimal thermal countermeasure. Optical module compatible with standard LC fiber optic connector



**FO-BD2 Series**

Receptacle : **FO-BD2-R**

Plug : **FO-BD2-P (ø7.0mm)**  
**FO-BD2-P-V2 (ø5.86mm ~ ø7.2mm)**  
**FO-BD2-P-V4 (ø8.5mm ~ ø10.0mm)**

Waterproof Cap without wire rope :  
**FO-BD2-RCAP**

Waterproof Cap with wire rope :  
**FO-BD2-RCAP/WR**

**FO-BD7 Series**

Receptacle : **FO-BD7-R**

Plug : **Available as harnessed product only. Please contact us for details**

Cage : **FO-BD7-C**

Waterproof Cap : **FO-BD7-R-DC**

**FO-BD6 Series**

Jam Nut Mounted Type Receptacle :  
**FO-BD6-R-B-F**

4-point Screw Type Receptacle :  
**FO-BD6-R-S**

Plug : **FO-BD6-P-S**

Waterproof Cap : **FO-BD6-R-DC**

**FO-BD7D Series**


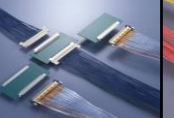
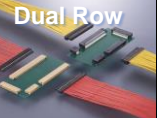
Receptacle : **FO-BD7-R**

Plug : **FO-BD7D-P**

Cage : **FO-BD7-C**

Waterproof Cap : **FO-BD7-R-DC**

# Board-to-Cable Connectors

Series	FI-J	FI-JW	IL-G	IL	LY	HD	FI-R	FI-X	FI	
Photo										
Pitch	0.4mm	0.3mm	2.5mm	2.5mm	2.0mm	0.5mm	0.5mm	1.0mm	1.25mm	1.25mm
Discrete Wire AWG	N/A	N/A	#22-28	#22-28	#22 to #30	#32,34,36	#30,32,36	#30,32,36	#28,30,32	#28,30,32
Coax Wire AWG	#42,44	#42,44	N/A	N/A	N/A	#36-44	#40	#32,40	N/A	N/A
FPC/FFC	N/A	N/A	N/A	N/A	N/A	N/A	JF08 Assembly	0.14 ± 0.03mm	0.14 ± 0.03mm	N/A
Pin Count	40	34	2 to 15	2 to 10, 12	4 to 44 (Even numbers)	30,40	21,31,41,51	30	2-6,8,10,15, 20, 25,30	5,7,9,11,13,15,17, 19,21, 31,41
Mated Height	1.58mm	1.65mm	6.0mm	7.73mm	5.3mm	1.0mm	3.8mm	1.6-2.35mm	1.8mm	3.7mm
Locking	Friction	Friction	Friction	Friction	Latches	Friction/Pull Bar	Latches	Latches	Latches	Latches
Durability	30 cycles	30 cycles	100 cycles	100 cycles	Tin: 50 Gold: 500	30 cycles	50 cycles	50 cycles	50 cycles	50 cycles
Current Rating	0.3A	0.25A	3A	3A	3A	0.1A to 1.0A	0.8A	1.0A	1.0A	1.0A
Voltage Rating	50V	50V	500V	AC 300 V, DC400V	250V	100V	200V	200V	200V	200V
Features	Thin wire coaxial connector for small portable devices.	Vertical mating. Small footprint.	Friction locking mechanism, allowing lower height and higher density mounting.	Crimp type cable-side easy to terminate.	Dual row, crimp, high-density, low-profile.	Compatible with VESA standard for LED backlit panels. LICENSED BY DAI-ICHI SEIKO CO., LTD.	VESA standard for LCD interface of HD TV. Vertical mount available.	VESA standard for 1.0mm pitch LVDS interface.	Single row for low profile. Standard interface for LCD. (20 pin)	Dual row for smaller footprint.



**FI-J Series**

Receptacle: **FI - J40S - VF15N-R3000**

Orderable in reels

Cable Plug: **FI - J40C5 - T3000**

Only orderable in trays

Plug Shell: **FI - J40C2 - SH - D - 10000**

Only orderable in reels

**FI-JW Series**

Receptacle: **FI - JW##S - VF16**

Orderable in reels

Cable Plug: **FI - JW##C - R3000**

Only orderable in reels

Plug Shell: **FI - JW##C - SH 1 - 9000**

Only orderable in reels

Ground Bar: **FI - JW##C - BGB - S - 6000**

Cover: **FI - JW##C - CGB - S - 9000**

Only orderable in reels

**IL-G Series**

Receptacle: **IL - G - ##S - S3C2 - SA**

Cable Plug: **IL - G - ##P - S3T2 - SA - # - 1**

Crimp Contacts: **IL - G - C2 - SC - 10000**

Hand Crimp Tools: **CT150-2C-ILG** (AWG #24 to #22)

**CT150-2B-ILG** (AWG #26 to #24)

**CT150-2-ILG** (AWG #28 to #26)

**IL Series**

Receptacle: **IL - ##S - S3L - (N)**

Cable Plug: **IL - ##P - S3**

EN: Straight  
FP: Right angle  
UX: Bottom-entry

Crimp Contacts: **IL-C2-1-10000**

Hand Crimp Tools: **CT150-2-IL** (AWG #22 to #28)

**CT150-2B-IL** (AWG #24 to #26)

**CT150-2C-IL** (AWG #20)

Semi-Auto: **3502-IL-2B**

**LY Series**

Receptacle: **LY10 - DC - ##**

Cable Plug: **LY20 - ##P - D**

**1P#**

T: Straight  
LT: Right angle

Crimp Contacts: **LY10-C1-A1-10000**

**LY10-C2-\*-10000**

Hand Crimp Tools: **CT150-4-LY1** (AWG #22 to #26)

**CT150-4-LY2** (AWG #26 to #30)

Semi-Auto: **CT350-2**

**HD1 Series**

Receptacle: **HD1S040HA1R6000**

Cable Plug: **HD1P040MA1R6000**

Cover Shell: **HD1P040-CSH1-10000**

1: Discrete wire  
2: Coax wire

Pull Bar: **HD1P040-PB1**

**HD2 Series**

Receptacle: **HD2S030HA1R6000**

Modification Code

\*Licensed by I-PEX, Co., Ltd.

Orderable in reels

**FI-X Series**

Receptacle: **FI - X**

B: Mid mount

S: Stronger shell

Modification Code

R: Reverse

Cable Plug: **FI - X30H**

H: Discrete wire crimp

C: Coax wire

MA1: FPC/FFC

L: Locking latches

Crimp Contacts: **FI-XC3B-1-15000**

Hand Crimp Tool: **CT150-4C-FIX**

Semi-Auto: **3502-FI-2B**

**FI-R Series**

Receptacle: **FI - R**

E: EMI shell

H: Horizontal  
V: Vertical

Cable Plug: **FI - R**

E: EMI shell

L: Locking Latches  
H: Discrete wire crimp  
C: Fine-wire coaxial

Cover Shell: **FI - RE ## CL- SH2 - 3000**

Only for coax cable plug

FFC Harness: **JF08R0R0##0##UA**

Pin Count  
41, 51

Cable length  
in cm

Crimp Contacts: **FI-RC3-1A-1E-15000 (upper)**

**FI-RC3-1B-1E-15000 (lower)**

Hand Crimp Tool: **CT150-4C-FIR**

Semi-Auto: **3502-FI-2B**

**FI Series****Single Row**

Receptacle: **FI - S**

Cable Plug: **FI - S**

E: EMI Shell  
(Only for 20 pos, FPC)

S: Discrete wire crimp  
ME: FPC/FFC  
MRE: Rev. FPC/FFC

**Dual Row**

Receptacle: **FI - W**

Right angle

Cable Plug: **FI - W**





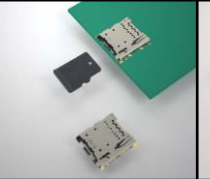
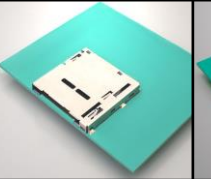
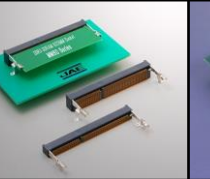
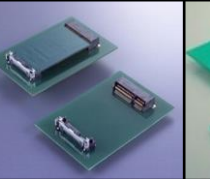

E: EMI Shell

Crimp Contacts: **FI-C3-A1-15000**

Hand Crimp Tool: **CT150-4C-FI**

Semi-Auto: **3502-FI-2B**

# Card Connectors 1 (microSD, nano SIM, SD, SODIMM, PCI-SIG Mini Card, PCI-SIG M.2)

Series	ST1	ST11	ST19	ST50	ST12	SG50	MM80	MM60	SM3
Photo									
Card	microSD™	microSD™	microSD™ and nano SIM combo	microSD™ (UHS-II)	microSD™ (UHS-I)	SD (UHS-I,UHS-II)	DDR3 SDRAM SODIMM	PCI Express Mini Card	PCI-SIG M.2
Mounted Height	1.9mm,1.4mm	1.25mm	1.3mm	1.35mm	1.4mm	3.15mm	5.2mm	4.0mm, 5.9mm	1.2mm, 2.15mm, 3.1mm, 4.1mm
Pin Count	8, 8+1	8+2	20+2	17+4	10+2	9+3 (UHS-I) 17+3 (UHS-II)	204	52	67
Voltage Rating	10V	10V	10V	10V	10V	10V	200V AC rms	50VAC rms	50V AC rms
Current Rating	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A	0.3A	0.5A	0.5A
Durability	10,000 cycles	5,000 cycles	2,500 cycles	5,000 cycles	20,000 cycles	10,000 cycles	25 cycles	50 cycles	60 cycles
Style	Hinged	Push-Push	Push Eject Tray	Push-Push	Push-Push	Push-Push	Card Edge	Card Edge	Card Edge
Features	Available with card detection switch. Smallest footprint & lowest height for hinged type.	Strong mechanical lock to prevent card from popping out from vibration and shock.	3 in 2 combo connector can house a nano SIM and either an additional nano SIM or a microSD.	Compatible with ultra high-speed data transmission standard UHS-II for transferring large files quickly.	Automotive specifications available, including for use in high temperature environments up to 105Deg. C. ※Operating Temperature Range - 25 Deg. C to + 85 Deg. C (General Item) - 40 Deg. C to + 105 Deg. C (Automotive spec tested product)	Each terminal has 2 points of contact to prevent discontinuity in environments with foreign debris as well as high vibration and shock. UHS-II compatible product for future high-speed applications.	DDR3 SO-DIMM connector compatible with JEDEC standard MO-268C.	Retention latch or screw hold downs available to fix module to connector and main PCB.	Multiple key and heights variations available.

View all JAE connectors at [www.JAE.com](http://www.JAE.com)

### ST1 Series

MicroSD: **ST1W008S4 A R1500**  
Hinged type  
Modification code

MicroSD: **ST1W008S4 G R2000**  
Low profile  
Hinged type  
G: W/out detect switch  
T: With detect switch  
X: Cover detect switch

### ST11 Series

MicroSD: **ST11S008V4HR2000**  
Push-push type

### ST19 Series

MicroSD nano SIM: **ST19S020VCAR1400**  
Combo tray type

### ST50 Series

MicroSD (UHS II): **ST50S017VCAR1800**  
Push-push type

### ST12 Series

MicroSD (UHS I): **ST12S010VBAR1800**  
Push-push type

### SG50 Series

SD: **SG50S017VCAR500**  
Push-push type  
No. of contacts  
A: UHS-II Support  
B: UHS-I Support

### MM80 Series

DDR3 SDRAM SO-DIMM

Connector: **MM80 - 204B1 - E1R**  
Blank: Standard  
R: Reverse

### MM60 Series

PCI Express Mini Card

Connector : **MM60 - 52 - B1 - E1**  
No. of contacts  
Socket type  
B: Top mount  
Key type  
Contact finish  
Height modification code  
Latch : **MM60 - EZ - H059 - B5**  
Latch type  
Connector height  
With boss  
5: Sn plating

Nut : **NT1R3000** 4.0mm height connector  
**NT4R1600** 5.9mm height connector




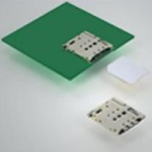




### SM3 Series

M.2 (NGFF)

Connector: **SM3 Z S 067 U 310 \*\***  
No. of contacts  
Mounting Type:  
U: On-board  
B: Mid mount  
Connector Height:  
120: 1.20mm  
215: 2.15mm  
310: 3.10mm  
410: 4.10mm  
Polarizing key:  
A/B/E/M  
Contact finish:  
(Au plating)  
A: 0.13um  
B: 0.25um

Nut : **SM3ZS067U215-NUT1** 2.15mm connector  
**SM3ZS067U310-NUT1** 3.1mm connector  
**SM3ZS067U410-NUT1** 4.1mm connector

# Card Connectors 2 (SIM, Micro SIM, Nano SIM)

Series	SF7	SF15	SF53	SF56K	SF58	SF70	SF72	SF78
Photo								
Card	SIM	micro SIM	micro SIM	micro SIM	micro SIM	nano SIM	nano SIM	Dual nano SIM
Mounted Height	2.5mm/2.3mm	1.55mm	1.45mm	1.27mm	1.3mm	1.25mm	1.25mm	1.3mm
Pin Count	6, 6+2	6	6	6+2	6+2	6+2	6+2	12+2
Card/Tray Detect Switch	Available	Without switch	Without Switch	With Switch	With Switch	With Switch	With Switch	With Switch
Current Rating	10µA to 1A	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A
Durability	5,000 cycles	1,500 cycles	1,500 cycles	5,000 cycles	5,000 cycles	5,000 cycles	5,000 cycles	2,500 cycles
Style	Hinged	Hinged	Push-Pull	Push-Push	Pin Eject Tray	Pin Eject Tray	Push-Push	Pin Eject Tray
Features	Reliable locking structure. Positioning boss, metal cover available.	Small footprint and height. Clear click feeling to indicate when cover is locked.	Unique contact design to prevent damage from angled insertion and use with card adapters.	Smallest in class height. Long eject length for ease of use. Bridged contact to prevent damage from adapter cards.	Low profile and narrow design. Strong lock design for high tray retention.	Small size for compact portable devices. Strong lock design for high tray retention.	Low profile; Special contact shape for enhanced reliability. Long card eject length for ease of use.	Low profile dual SIM connector can house 2 nano SIM cards at the same time.



### SF7 Series

SIM: **SF7W 006 S 1 A**  
Hinge type

006: 6 position  
008: 6 signal + 2 switch

A: Positioning boss  
B: No boss  
E: Low profile

1: Standard  
4: Low profile

### SF15 Series

Micro SIM: **SF15W006S4BR2000**  
Hinge type

### SF53 Series

Micro SIM: **SF53S006VCBR2000**  
Push-Pull type

### SF56 Series

Micro SIM: **SF56K006VBAR2000**  
Push-Push type

### SF58 Series

Micro SIM: **SF58S006VBAR2000**  
Tray type

Please contact JAE for recommended dimensions of the tray.

### SF70 Series

Nano SIM: **SF70S006VBAR2000**  
Tray type

Please contact JAE for recommended dimensions of the tray.

### SF72 Series




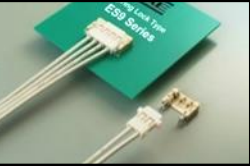

Nano SIM: **SF72S006VBDR2500**  
Push-Push type

### SF78 Series

Nano SIM: **SF78S012VBAR1400**  
Tray type

Please contact JAE for recommended dimensions of the tray.

# LED Lighting Connectors

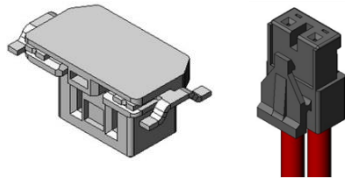
Series	ES3 (WF2)	ES5	ES6	ES9	ES10
Photo					
Applicable Wire Size	#22,24,26	#22,24,26	N/A	#22,24,26	#24,26 (solid)
Pin Count	2	1	2	2,4	1
Height	1.65mm (above board)	1.6mm	1.55mm (above board)	3mm	2.2mm
Locking	Latch	Latch	Friction	Friction	Friction
Durability	20 cycles	20 cycles	20 cycles	10 cycles	5 cycles
Current Rating	2.0A	4.0A	1.0A	3.0A (4 pos.) 4.0A (2 pos.)	2.0A
Voltage Rating	200V	N/A	250V	300V	N/A
Operating Temperature	-40 ~ +105 °C	-40 ~ +105 °C	-40 ~ +105 °C	-40 ~ +105 °C	-40 ~ +105 °C
Features	Mechanical lock included for use in applications with vibration and shock.	Special lock structure that has a clear "click" feeling for secure mating.	Smallest size. Card edge connector design to reduce components and labor.	Spring lock structure provides high vertical and horizontal retention strength.	Compact structure with no insulator allows design flexibility. Easy single wire insertion.

### ES3-WF2 Series (Board-to-Wire type)

Receptacle: **ES3B002WF2R1000**

Housing: **ES3S002SZA**

Contact: **IL-Z-C1-A-7000**



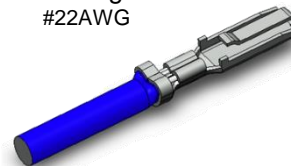
### ES5 Series

Receptacle: **ES5S001JFAR5500**



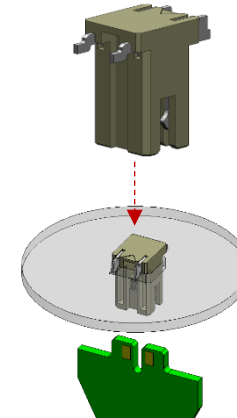
Cable Plug: **ES5P09K5FA**  
#24-26AWG

Cable Plug: **ES5P09K4F2**  
#22AWG



### ES6 Series

Receptacle: **ES6B002WF1R1000**



### ES9 Series

Receptacle: **ES9P 00# VF1R1600**

No. of contacts:

002: 2

004: 4

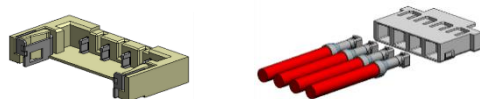
Plug (housing): **ES9S 00# SZA**

No. of contacts:

002: 2

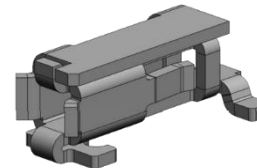
004: 4

Contact: **ES9S06K4FA**








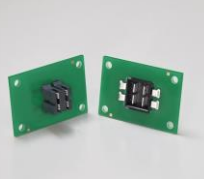


### ES10 Series

Receptacle: **ES10S001JF1R5500**



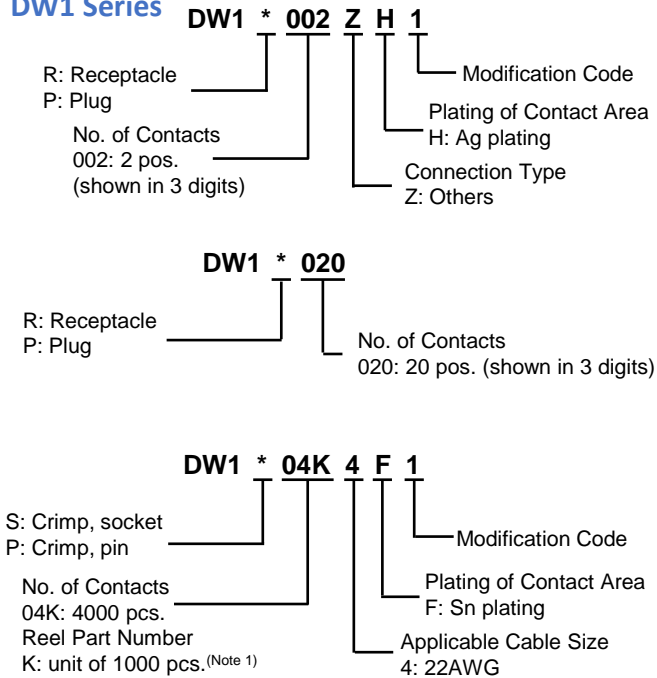
# High-Power Connectors

Series	DW1	DW2	DW3	DW4	DW05	DW07	JK11	DW11
Photo								
Type	Rack-and-Panel	Rack-and-Panel	Rack-and-Panel	Bus bar-to-Cable	Cable-to-Cable	Bus bar-to-Bus bar	Lever Locking	Board to Board
Pin Count	Power: 2 Signal: 20	Power: 2 Signal: 20	Power: 2 Signal: 24	1	1	1	4	4
Current	Power: 500A Signal: 2A	Power: 200A Signal: 2A	Power: 150A Signal: 2A	100A	150A	Up to 413A (Varies by bus bar thickness and allowable temp rise. Scalable for added current)	150A (38mm <sup>2</sup> wire); 60A (14mm <sup>2</sup> wire)	20A DC
Voltage Rating	Power: 600V Signal: 100V	Power: 600V Signal: 100V	Power: 600V Signal: 100V	600V	600V	N/A	Varies by usage.*	250V DC
Durability	20 cycles	100 cycles	100 cycles	50 cycles	100 cycles	100 cycles	500 cycles	30 cycles
Floating Range	+/- 2.75mm	+/-2.75mm	+/-2.0mm	N/A	N/A	+/-2.5mm	N/A	+/-0.8mm
Operating Temp	-40 ~ +95 °C	-25 ~ +115°C	-25 ~ +105°C	-40 ~ +75°C	-40 ~ +85°C	-25 ~ +105°C	-55 ~ +85°C	-40 ~ +85°C
Features	Robust high-power and signal hybrid for large battery modules. Floating for easy and blind mating.	200A for mid-range power solutions. Signal and power hybrid. Floating for easy and blind mating.	Low-profile to fit 1U form-factory battery rack. Power plus signal. Floating for easy and blind mating.	Secure cable connector for high-power. Color-coded and keyed to prevent mating errors. Offered as harness.	Keyed cable-to-cable connector for safe high-power mating. Screw holes for easy mounting.	Innovative busbar clip connector, without requiring screw, housing, nor tools for assembly.	Horizontally arranged high-current contacts provide a slimmer profile compared to conventional circular connectors.	Unique ±0.8mm, X & Y-direction, floating structure for misalignment compensation during automated mating. Ideal to supply power between boards in various industrial applications.

View all JAE connectors at [www.JAE.com](http://www.JAE.com)

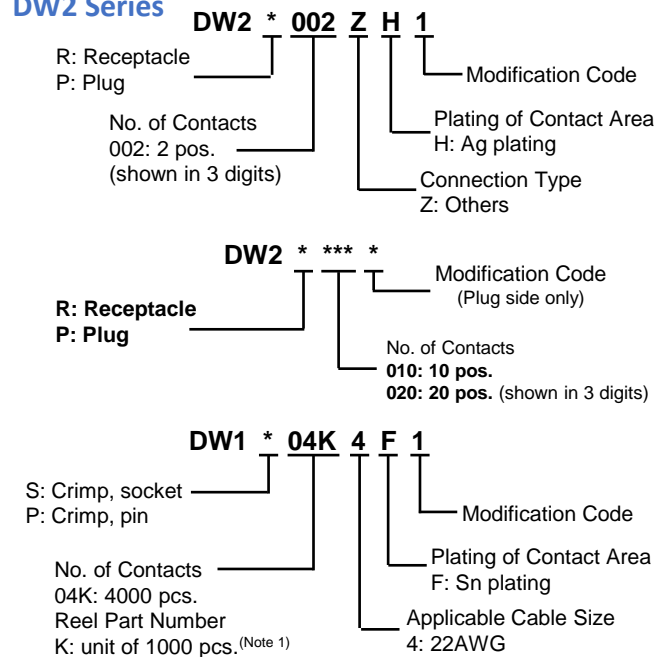
\*Please consult with JAE representative.

## DW1 Series



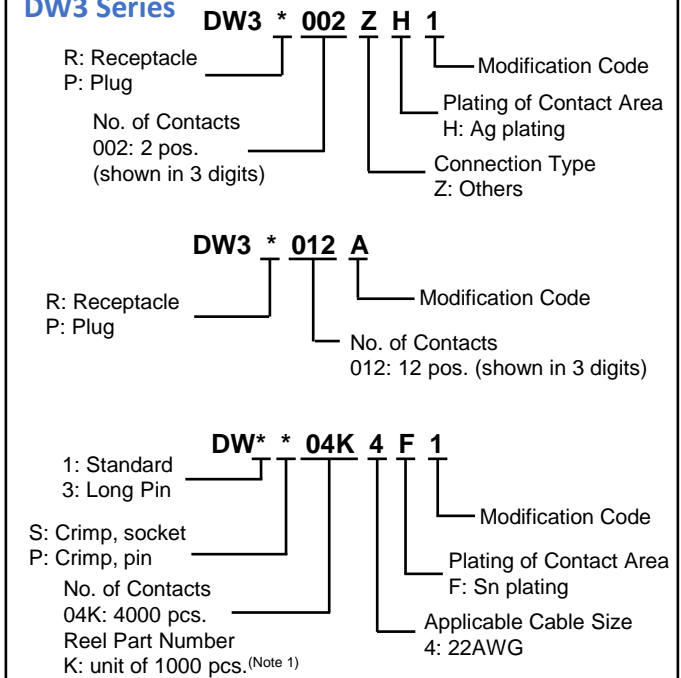
**Note 1: An embossed reel contains 4,000 pcs.**

## DW2 Series



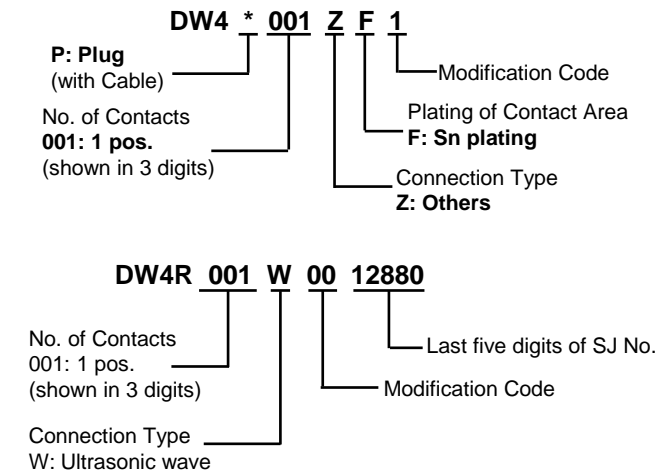
**Note 1: An embossed reel contains 4,000 pcs.**

## DW3 Series

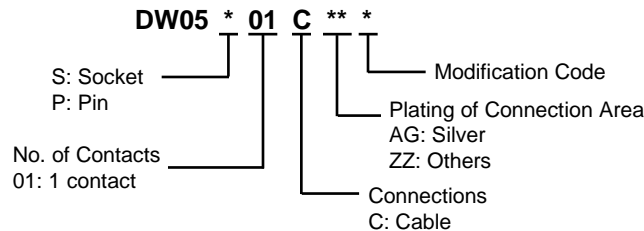


**Note 1: An embossed reel contains 4,000 pcs.**

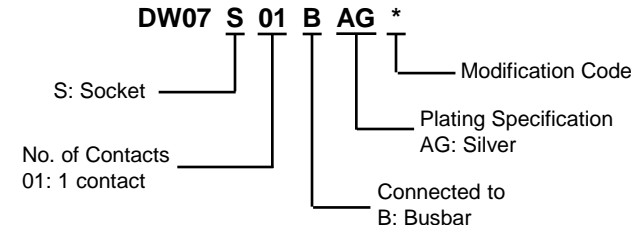
## DW4 Series



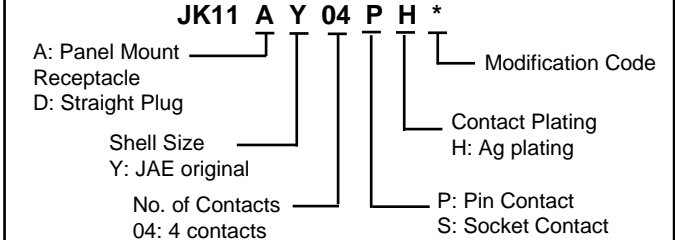
## DW05 Series



## DW07 Series



## JK11 Series



## DW11 Series

Plug: **DW11P04PSN2R280**  
Socket: **DW11S04PSN2R180**

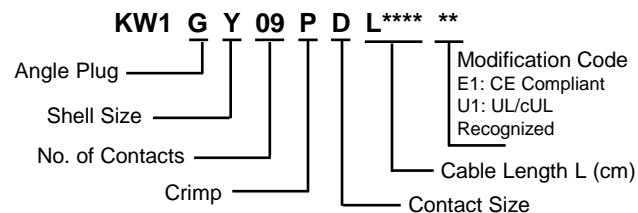


# EV Charging Connectors

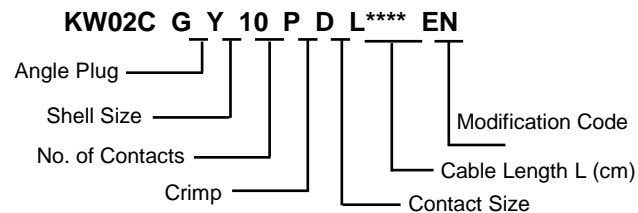
Series	KW1	KW1C	KW02	KW02C	KW03	KW03C	KW07C	KW11
Photo								
Type	Plug + Cable	Plug + Cable	Plug + Cable	Plug + Cable	Plug + Cable	Plug + Cable	Plug + Cable	Plug + Cable
Pin Count	Power: 2 Signal: 7	Power : 2 pos. 12V Power: 2 pos. Signal: 6 pos.	Power : 2 pos. 12V Power : 1pos. Signal : 6 pos.	Power : 2 pos. 12V Power: 2 pos. Signal: 6 pos.	Power : 2 pos. 12V Signal: 2 pos. Signal: 6 pos.	Power: 2 pos 12V Signal: 2pos Signal: 6pos	Power: 2 pos Signal: 7 pos	Power: 2 pos Protective Earth : 1 pos Signal: 2 pos
Current	Power: 125A Signal: 2A	Power : 150A max. 12V Signal : 6.4A Signal : 2A	Power : 25A 12V power 6.4A signal: 2A	Power: 37A max. 12V Power: 6.4A Signal: 2A	Power: 80A 12V Signal: 6.4A Signal: 2A	Power: 80A 12V Signal: 6.4A Signal: 2A	Power: 200A Signal: 2A	Power: 150A / 200A Signal: 2A
Voltage Rating	DC500V	DC500V	DC450V	DC500V	DC500V	DC750V	DC750V	DC1000V
Durability	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles	10,000 cycles
Floating Range	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operating Temp	-30 ~ +40°C (modification U1) -30 ~ +50°C (modification E1)	-30 ~ +50 °C (Rated current: 125A) -30 ~ +45°C (Rated current: 135A) -30 ~ +40°C (Rated current: 150A)	-30 ~ +50 °C	-30 ~ +50°C (Rated current: 30 A) -30 ~ +40°C (Rated current: 37 A)	-30 ~ +50°C	-30 ~ +50°C	-30~+40°C	-30~ +50°C
Features	CHAdeMO standard. Highly durable diecast housing, with one- touch operation and easy to handle. CE certified and UL recognized (as separate part numbers). Weather and impact resistant.	CHAdeMO standard. One-touch operation and light-weight for easy handling. CE certified and UL recognized (as separate part numbers). Weather and impact resistant.	CHAdeMO standard. One-touch operation and light-weight for easy handling.	CHAdeMO standard. One-touch operation and light-weight for easy handling. CE certified and UL recognized (as separate part numbers). Weather and impact resistant.	CHAdeMO standard. One-touch operation and light-weight for easy handling. CE certified and UL recognized (as separate part numbers). Weather and impact resistant.	CHAdeMO standard. One-touch operation and light-weight for easy handling. UL recognized. Weather and impact resistant.	CHAdeMO standard. One-touch operation for easy handling. UL recognized. Weather and impact resistant.	Metal core reinforced locking latch. Easy-to- grip and operate handle design, even while wearing wearing thick gloves.

\*Please consult with JAE representative.

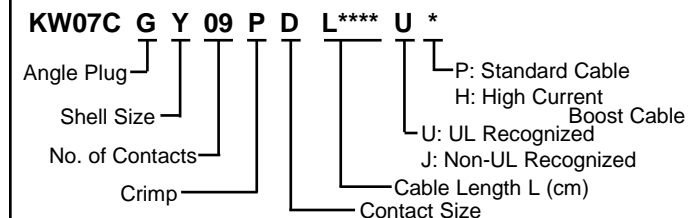
## KW1 Series



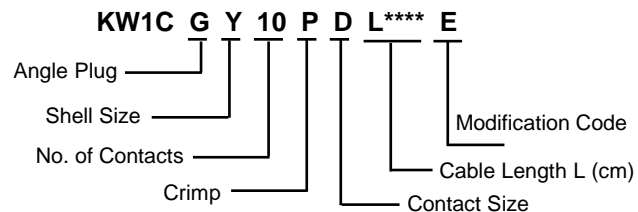
## KW02C Series



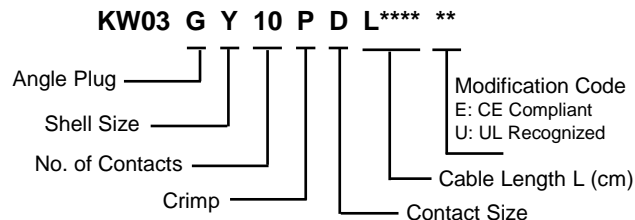
## KW07C Series



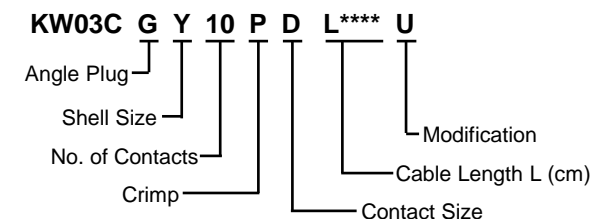
## KW1C Series



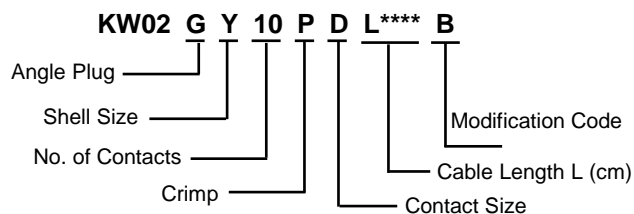
## KW03 Series



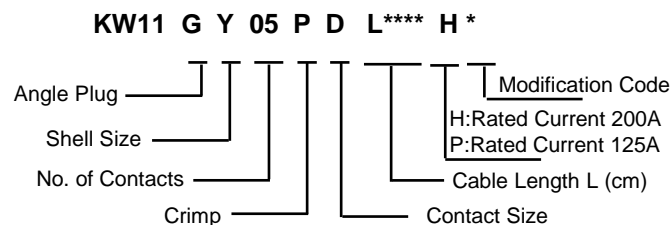
## KW03C Series









## KW02 Series



## KW11 Series



# Transportation (1/4)

Series	MX19	MX80	MX23A	MX36	MX37	MX44	MX47	MX57	MX60A	MX67A	MX72 A/B/C/D
Photo											
Pitch	2.5mm	2.54 mm	2.5mm	2.5mm	2.2mm	3.5mm	2.5mm	2.2mm	Signal: 2.4mm Power: 2.7mm	2.2mm	3.2 mm
Wire Size	AWG #22-20 CAVS: 0.3 to 0.5mm <sup>2</sup> AVSS: 0.5mm <sup>2</sup>	AWG #26-17 FLRY-A, FLRY-B, AESSX 0.13 to 1.0mm <sup>2</sup>	AWG #22-16 AVSS, AVS: 0.3 to 1.25mm <sup>2</sup>	AWG #20 AVSS 0.5, AVSSC 0.5f, AVSSX 0.5f, TVSSX 0.5f	AWG #20 AVSS 0.5, AVSSC 0.5f, AVSSX 0.5f, TVSSX 0.5f	AWG #22-20 AVSS 0.3 to 0.5mm <sup>2</sup>	AWG #22-16 AVSS 0.3 to 1.25mm <sup>2</sup>	AWG #22-20 AVSS 0.3, AVSS 0.5, AVSSX 0.5f	AWG #22-16 Signal: AVSS 0.3 to 0.5mm <sup>2</sup> Power: AVSS 0.5 to 1.25mm <sup>2</sup>	AWG #22-20 AVSS 0.3 to 0.5mm <sup>2</sup>	AWG #22-20 FLRY-A, FLRY-B 0.35, 0.5mm <sup>2</sup>
Pin Count	2,3*,4	2,3,4,6*	12,18,26,34,36,40	2,4	4	2,4,6	39	MX57A: 30 MX57B: 48	177 (2 blocks)	100 (2 blocks)	2
Current Rating	5A	3.6A – 10.3A Varies by wire size*	3A	3A	3A	3A	3A	Varies by cable type	Varies by cable type	3A	Varies by cable type
Operating Temp	-40 ~ +85 ° C	-40 ~ +125 ° C	-40 ~ +125 ° C	-40 ~ +120 ° C	-40 ~ +105 ° C	-40 ~ +125 ° C	-40 ~ +125 ° C	-40 ~ +80 ° C	-40 ~ +105 ° C	-40 ~ +120 ° C	-40 ~ +100 ° C
Application	Cable-to-Cable	Cable-to-Cable	Board-to-Cable	Cable-to-Cable	Cable-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable
Features	Waterproof. Mechanical lock system. Terminals have low insertion force and stress dispersion. Rear cover protects the included grommet from damage. *	Compact waterproof inline automotive connector. Supports extended wire size ranges. Integrated bracket support vehicle fastening clips.	Waterproof. Low profile. Available in reverse mount type. Retainer detects incomplete insertion of socket contact.	Waterproof. Spring separates connectors if not fully mated. Shorting contact eliminates static discharge. Retainer detects incomplete insertion of contact.	Spring separates connectors if not correctly mated. Shorting contact eliminates static discharge. Retainer detects incomplete insertion of contact.	Individually sealed pin cavities. Compact size. Improved vibration resistance by vibration absorption function of rubber. Secondary contact lock mechanism.	Waterproof. Different key option available. Retainer detects incomplete insertion of socket contact.	For small and low-cost SRS ECU for light and compact cars has been developed. Features a short circuit function to prevent accidental air-bag inflation and rupture.	High pin count waterproof IPX9K connector with a lever structure that reduces the force required to mate and unmate.	Achieves a high pin count of 100 positions in two blocks, while being compact in size. Press-fit type contact design that does not require soldering.	Next generation self rejecting AK2 and ABX-5 squib ,Extremely high reliability for use with SRS airbag applications. Different key options available.

**MX19 Series**Socket housing: **MX1900#S51**Pin housing: **MX1900#P51**

\*3 pin version

Socket housing: **MX19A003S51**

Contacts: MX19S10K451 (socket)  
MX19P10K451 (pin)  
Dummy pin: MX19000XD1

Hand Tool: CT150-4C-MX19  
Semi auto: 3502-MX19-2B

1: Black  
2: Gray

**MX80 Series**

Female and Male Inline Housing:

**MX80 A 02 S Z1 A**

A: No clip  
B: With clip

No. of Contacts

S: Female Socket  
P: Male Pin

Key Code: A, B, C  
Number of "unused cavity"

Female and Male Crimp Terminal:

**MX80 S 08K 5 F1**

S: Female / Socket  
P: Male / Pin

Wire size:  
3: 0.75 – 1.0 mm<sup>2</sup>  
4: 0.3 – 0.5 mm<sup>2</sup>  
5: 0.13 – 0.22 mm<sup>2</sup>

Package size:  
08K: 8,000 per reel  
10K: 10,000 per reel

Hand Tool for  
\*K5F1 Terminal: CT150-19E-MX80  
\*KF41 Terminal: CT150-19D-MX80  
\*K3F1 Terminal: CT150-19C-MX80

Semi auto: 3502-MX80-2

**MX23A Series**Socket housing: **MX23A##SF1**Pin header: **MX23A##NF1**Front cap: **MX23A##XF1**

1: Standard  
2: Reverse

Contacts: M23S05K351  
Dummy pin: M120-55780

Hand tool: CT170-14B-MX23  
Semi auto: 3502-MX23-2

**MX36 Series**Socket housing: **MX3600#SQ3**Pin housing: **MX3600#PQ3**Front cap: **MX3600#XF3**

Contacts: M36S08K4Q3 (socket)  
M36P08K4Q3 (pin)

Semi auto: 350-MX36-2  
Automatic: 350-MX36-3B

**MX37 Series**Socket housing: **MX37004SP3**Pin housing: **MX37004PP3**

	Socket	Pin
Contacts:	M37S07K4P3	M37P75C4P3
Semi Auto:	350-MX37S-2	350-MX37P-2
Automatic:	350-MX37S-3B	350-MX37P-3B

**MX44 Series**Socket housing: **MX44###SF1**Pin header: **MX44###NF1**Retainer: **MX44###XR1**Wire seal: **MX44000XP1**

Wire O.D.  
1: 1.4-1.5mm  
2: 1.6-1.7mm

Contacts: M44S05K4F1

Hand Tool: CT150-2-MX44  
Semi Auto: 3502-MX44-2

**MX47 Series**Socket housing: **MX47039SF1**Pin header: **MX47039NF1**Front cap: **MX47039XF1**

Key code: 1,2

Hand Crimp Tools	CT170-14C-MX47	CT170-14B-MX47	CT170-14-MX47
Contacts	M47S65H2FA	M47S65H3FA	M47S65H4FA
Wire Size (AWG)	#22-20	#18	#16

**MX57 Series**Socket housing: **MX570##SF#**Pin header: **MX57B48NF1**Sockets

Contacts: M37S07K4F3 M37S07K4F4

Semi Auto  
Automatic: 3502-MX37S-2

**MX60A Series**Socket Housing: **MX60A###SFK**Pin header: **MX60A177NF2**Front retainer: **MX60A###XF2**

Contacts: MX60S05K2FA  
(power supply 0.75sq~1.25sq)  
MX60S05K3FA  
(power supply 0.5sq~0.75sq)  
MX60S65H4F1  
(signal 0.3sq~0.5sq)  
Dummy pins: MX60A000XD2 (power supply)  
MX60A000XD3 (signal)

**MX67 Series**Socket housing: **MX67S0##SQA**Pin header: **MX67A###ZPA**Pins

Contacts: MX67S75C4P1 MX67S75C4P2

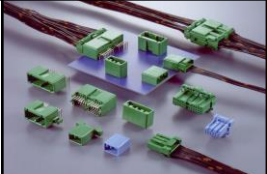
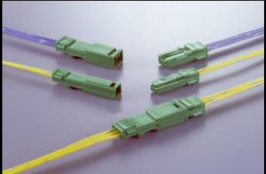
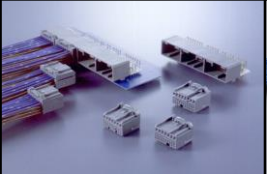



**MX72 Series****MX72A 1 F####**

Connector Type

Key Code

**JAE will supply the complete mating harness designed  
to customer specifications.**

# Transportation (2/4)

Series	IL-AG5	IL-AG9	MX31	MX77	MA01	MX81
Photo						
Pitch	2.5mm	2.5mm	Signal: 2.2mm Power: 3.2mm	Signal: 1.8mm Power: 2.1mm	0.635mm	2.54mm
Wire Size	AWG #22-20 AWG #18 AV, AVS, AVSS: 0.3 to 0.5 mm <sup>2</sup> AVS, AVSS: 0.85 mm <sup>2</sup>	AWG #22-20 AWG #18 AV, AVS, AVSS: 0.3 to 0.5 mm <sup>2</sup> AVS, AVSS: 0.85 mm <sup>2</sup>	Signal: AWG #22-20 Power: AWG #22-16 Signal: AVS, CAVS, CAVUS 0.3 to 0.5 mm <sup>2</sup> Power: AVS, CAVS, CAVUS 0.3 to 1.25 mm <sup>2</sup>	AWG #26-22 CHFUS, CIVUS: 0.13 to 0.35 mm <sup>2</sup> AVSS: 0.3 mm <sup>2</sup>	8,10,14, 16,18,20, 22, 24, 30mm	FLRY-A, FLRY-B, AES SX, FLCUSNRY 0.13 to 1.0 mm <sup>2</sup>
Pin Count	1 row: 4,5,6,7,10 2 rows: 14,16,18,22,30	2,3	Pin: 70,98,104,135 Socket: 31,34,35	4,8,12,16,20,24,32,40	30,40,60,80,90,100,120,140	2, 4
Current Rating	3A	3A	Signal: 2.2A Power: 5.7A	3A	0.5A	4.1-9.7A
Operating Temp	-40 ~ +85 ° C	-40 ° C ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +125 ° C	-40 ~ +125 ° C
Application	Cable-to-Cable/ Board-to-Cable	Cable-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Board	Board-to-Cable
Features	Mechanical lock system enabling complete mating. Secondary lock mechanism to ensure correct terminal retention. Simplified crimp type termination.	Mechanical lock system enabling complete mating. Double hook mechanism to prevent contacts from being inserted or removed incompletely.	Mechanical lock system with audible click. Socket side contact designed with secondary lock. Simplified crimp type termination.	Extreme height reduction for slimmer ECU. SMT reflow compatible. Secondary lock mechanism to ensure terminal position. MX77D additional height reduction.	Compatible with PCIe Gen3 high-speed transmission. Floating feature for easy blind mating, and dual contact structure for high reliability. This connector is suitable for use in the automotive industry.	Low profile design while maintaining compatibility with a wide range of wire sizes. A secondary terminal lock is molded with main housing. Multiple colored key codes are available.



### IL-AG5 Series

Socket Housing: **IL-AG5-#S- S3C1**

Pin housing: **IL-AG5-#P- S3C1**

Pin header: **IL-AG5-#P- S3L2**

S: single row  
D: double row

L: right angle  
T: straight

Contacts: IL-AG5-C1-5000 (socket)  
IL-AG5-PC1-5000 (pin)

Hand tool: CT150-2-AG5  
Semi auto: 3502-AG5-2  
Automatic: 350-AG5-3B

### IL-AG9 Series

Socket Housing: **IL-AG9-#S- S3C1**

Pin housing: **IL-AG9-#P- S3C1**

Pin header: **IL-AG9-#P- S3L1-B**

S: single row  
D: double row

L: right angle  
T: straight

Contacts: IL-AG5-C1-5000 (socket)  
IL-AG5-PC1-5000 (pin)

Hand tool: CT150-2-AG5  
Semi auto: 3502-AG5-2  
Automatic: 350-AG5-3B

### MX31 Series

Socket housing: **MX31 ### SGA**

31, 34, 35 pos

Modification code

Pin header: **MX31 ### N F D**

70, 104, 135 pos

Modification code

F: All Sn plated contacts  
Q: Selective gold plated contacts

Contacts	Wire Size (AWG)
M31S07K4FA (Sn, signal)	#22-20
M31S07K4QA (Au, signal)	#22-20
M31S07K4FB (Sn, signal)	#24
M31S05K4FA (Sn, power)	#18-16
M31S05K4FA (Sn, power)	#22-18
M31S05K4QA (Au, power)	#22-18

### MX77 Series

SMT Pin header: **MX77A0##HF1**

H: Angled  
Modification Code

Socket housing: **MX77A0##SF1**

A: Height of 13.5mm  
D: Height of 9.5mm  
No. of Contacts

Contacts	MX77S13K5F1	MX77S13K4F2	MX77S13K4F1
Wire Size	0.13mm <sup>2</sup>	0.22mm <sup>2</sup>	0.3, 0.35mm <sup>2</sup>

### MX81 Series

Pin header: **MX81A###NF1**

Key Code

Socket housing: **MX81A###SF1**

Key Code

\*Socket contacts are in common with MX80 Series.

### MA01 Series

**MA01 F ### V A C B**

Series:  
MA01

Connector Type  
F: Floating Type

Mounting Type  
V: SMT, Straight

Modification Code  
B: With Positioning Boss

Connector Height  
C: Tall

Contact Plating  
A: Gold

**MA01 R ### V A B B**

Series:  
MA01

Connector Type  
R: Rigid Type


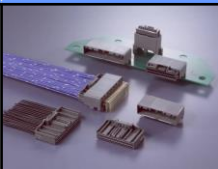


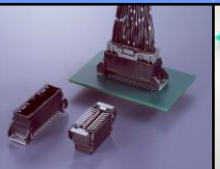



Mounting Type  
V: SMT, Straight  
H: SMT, Horizontal

Modification Code  
B: With Positioning Boss

Connector Height  
C: 6.6mm

Contact Plating  
A: Gold

# Transportation (3/4)

Series	MX34						MX84B		
	Inline	Right Angle Flow T/H	Vertical Flow T/H	Vertical Reflow T/H	Vertical SMT	Right Angle SMT	Inline	Right Angle Flow	
Photo									
Pitch	2.2mm	2.2mm	2.2mm	2.2mm	2.2mm	2.2mm	2.2mm	2.2mm	
Wire Size	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #26-18 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #22-20 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>	AWG #22-20 AVSS: 0.3-0.85mm <sup>2</sup> CHFUS: 0.13-0.75mm <sup>2</sup> CAN SD: 0.35mm <sup>2</sup> CAVS: 0.5-0.85mm <sup>2</sup>
Pin Count	12,16,20	3,5,7,8,12,16,20,24,28,32, 36,40	3,5,7,8,12,16,20,24,28,32,36,40	20,32	12,20,32	3,5,7,8,12,16,20,24,28,32,36	7,12,16,20,24,28	12,16,20,24,28,32,36,40	
Current Rating	3A	3A	3A	3A	3A	3A	3A	3A	
Operating Temp	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	
Application	Cable-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Board-to-Cable	Cable-to-Cable	Board-to-Cable	
Features	Strong mechanical lock for high connector retention. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination.	Strong mechanical lock for high connector retention. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination. Through hole terminals	Strong mechanical lock for high connector retention. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination. Through hole terminals.	Strong mechanical lock for high connector retention. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination. Through hole reflow terminals.	Vertical mount SMT header. Strong mechanical lock for high connector retention. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination.	Horizontal mount SMT header. Mechanical lock system. Secondary lock mechanism to ensure terminal position. Simplified crimp type termination.	Insulator with UL94 V-0 flammability rating. Same connector shape as MX34.	Insulator with UL94 V-0 flammability rating. PCB footprint compatible with MX34.	

### MX34 Series

Flow T/H Pin header:

**MX340##UF1**  
 U: Straight  
 N: Angled  
 Modification Code

Socket housing:

**MX340##SF1**  
 Modification Code

SMT Pin header:

**MX34R##VF1 \***  
 V: Straight  
 H: Angled  
 Blank: tube  
 T: tray  
 1: Straight  
 4: Angled

Reflow T/H Pin header:

**MX34Q##ATF1**  
 Terminal Length  
 A : 1.9mm  
 B : 2.4mm  
 Modification Code  
 Termination Type  
 Plating Specification

Contacts :

**M34S75C4F#**  
 Contact Type  
 P: Pin  
 S: Socket  
 Compatible Wire Size:  
 1: 0.22-0.35mm<sup>2</sup>  
 2: 0.5-0.75mm<sup>2</sup>  
 3: 0.35mm<sup>2</sup> \*  
 4: 0.85mm<sup>2</sup> \*  
 3: 0.13mm<sup>2</sup>

Hand Crimp Tool  
 CT150-2-MX34  
 CT150-2B-MX34  
 CT150-2C-MX34

Contact  
 M34\*75C4F1  
 M34\*75C4F2  
 M34S75C4F3, M34S75C4F4

\*Only available for socket

### MX84B Series

Pin connector:

**MX84B0##NF1**  
 N: Angled Header  
 P: Relay Housing  
 Key Code

Socket housing:

**MX84B0##SF1**  
 Key Code













Male Crimp Terminal:

**MX84 P 75 H 4 F2**  
 P: Male / Pin  
 Contacts per reel: 7,500  
 Wire size:  
 4: 0.22 – 0.35 mm<sup>2</sup>  
 3: 0.5 – 0.75 mm<sup>2</sup>

Hand Tool: CT150-2-MX34  
 CT150-2B-MX34

\*Socket terminals in common with MX34 Series. Reference MX34 ordering information

# Transportation (4/4)

Series	MX38	MX48	MX49	MX50 / MX53	MX55J	MX62	MX65	MX66	MX68	MX79A	MX74	MA07
Photo												
Pitch	2.2mm	2.0mm	2.0mm	1.5mm	2.2mm	2.0mm	2.0mm	N/A	2.0mm	2.0mm	2.2mm	0.5mm
Wire Size	AWG #28 (Twin Ax)	AWG #28 (Twin Ax)	Signal: AWG #26 (Twin Ax) Power: AWG #20	AWG #28 (Twin Ax)	AWG #26 (STQ)	Signal: AWG #26 (Twin Ax) Power: AWG #22	0.14mm <sup>2</sup> x4, 0.22mm <sup>2</sup> x4 (STQ)	1.5D equiv coax	AWG 28 (STP)	AWG #26 (STQ)	AWG #26 (UTP)	AWG #30 STP (4 pairs for high speed)
Pin Count	2	2	4	19	4	10	4, 4+2, 8	1	2, 4, 8	4	2, 4	24
Current Rating	Varies by cable type*	Varies by cable type*	Signal: 0.5A	0.5A	Varies by cable type*	Power: 3A	1.5A	1A	Varies by cable type*	Signal: 2A Power: 2A	3A	0.25A
Operating Temp	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +105 ° C	-40 ~ +85 ° C	-40 ~ +105 ° C	-40 ~ +105 ° C	-40 ~ +85 ° C	-40 ~ +85 ° C	-40 ~ +105 ° C	-40 ~ +105 ° C
Application	Cable-to-Cable/ Board-to-Cable	Board-to-Cable	Cable-to-Cable/ Board-to-Cable	Cable-to-Cable/ Board-to-Cable	Board-to-Cable	Cable-to-Cable/ Board-to-Cable	Cable-to-Cable/ Board-to-Cable	Board-to-Cable	Board-to-Cable	Cable-to-Cable/ Board-to-Cable	Board-to-Cable	Board-to-Cable
Features	Excellent in transmission of high-speed signals such as LVDS and GVIF. Different key options available.	Excellent in transmission of high-speed signals such as LVDS and GVIF. Different key options available. Extremely compact design.	Compatible with USB 2.0 signal speeds. Different key options available. Extremely compact design.	HDMI Type E compatible connector and harnesses. Cable mounted receptacle for mating with consumer HDMI cables is available.	Waterproof connector for LVDS transmission from digital cameras. Right angle and straight plug available.	Compatible with USB 3.0 signal transmission. Mechanical lock included. Double metal shield for improved EMI.	Mating compatible with HSD connectors. Waterproof and non waterproof variations available. Pin headers not provided by JAE.	Waterproof connectors conformed to FAKRA standard. IPX9K water sealing. Pin headers not provided by JAE.	Excellent in transmission of high-speed signals such as LVDS and GVIF. USB 2.0 compatible. Sold as complete harness.	Compatible with LVDS or USB 2.0 signal speeds. Different key options available. Extremely compact design.	IEEE802.3 100BASE-T1 Automotive Ethernet in-vehicle networking, such as Infotainment, ADAS, Gateway applications.	Compatible with USB 3.2 and DisplayPort 1.4 signal transmission. Robust locking mechanism included. Different key options available.

### MX38 Series

Board Mounting Receptacle: **MX38002FQ1**  
 Pin header: **MX38002NQ1**

Different key code: 1,2,3,4

**JAE will supply the complete mating harness designed to customer specifications.**

### MX48 Series

Board Mounting Receptacle: **MX48002NQ1**

Different key code: 1,2,3,4

**JAE will supply the complete mating harness designed to customer specifications.**

### MX49 Series

Board mounting receptacle: **MX49004 # Q 1**

N: T/H  
H: SMT

Different key code: 1,2 (T/H)  
1,2,3,4 (SMT)

**JAE will supply the complete mating harness designed to customer specifications.**

### MX50/MX53 Series

Board mounting receptacle: **MX50019NQ1**

**JAE will supply the complete mating harness designed to customer specifications.**

### MX55J Series

Board mounting header: **MX55004KBDR900**  
 Camera back housing connector: reference design available

**JAE will supply the complete mating harness designed to customer specifications.**

### MX62 Series

Board mounting header: **MX62010HQ1R100**

**JAE will supply the complete mating harness designed to customer specifications.**

### MX65 Series

#### MX65 Series Harness

**JAE will supply the complete harness designed to customer specifications.**

### MX66 Series

#### MX66 Series Harness

**JAE will supply the complete harness designed to customer specifications.**

### MX68 Series

#### MX68 A 0# H Q 1 R150

A: LDVS/GVIF  
B: USB2.0

No. of Contacts  
2: 2 pos.  
4: 4 pos. (2 pos. + 2 pos.)  
8: 8 pos. (2 pos. + 6 pos.)

1: Key Type A  
2: Key Type B  
3: Key Type C  
4: Key Type D

H: Angle pin header  
V: Straight pin header

Emboss reel packaging

**JAE will supply the complete mating harness designed to customer specifications.**

### MX79A Series

#### MX79A 04 H Q 1 R150

4 Positions  
Horizontal

Emboss reel packaging

1: Key Code 1  
2: Key Code 2  
3: Key Code 3  
4: Key Code 4

**JAE will supply the complete mating harness designed to customer specifications.**

### MX74 Series

#### MX74 B 002 HF A

Modification Code

Number of positions

A: Key code A  
B: Key code B

HF: Right angle header  
VF: Straight header  
XG: Socket outer housing  
XN: Socket inner housing

**Supplied as individual connectors (Contact us for cable harness options).**

### MA07 Series

#### MA07 S 024 XD \* R100

S: Receptacle  
Number of positions

Emboss reel packaging

XD: Angle, T/H&SMT hybrid  
Contact area Au0.76µm min.

**JAE will supply the complete mating harness designed to customer specifications.**



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# JAE Global Network





## Considerations Before Selecting Connectors

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.

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