

JB12 Series

MB-0396-1E

Apr.2024

RoHS Compliant

JB12 Series (M12-style X-code and D-code) are compact waterproof Ethernet connectors, which are compliant with IEC standards and ideal for a wide variety of connections within industrial applications.

These products are screw-mating connectors with lengths in the shortest class in the industry among in-line connectors, allowing for installation even in constricted spaces within industrial equipment. These connectors are designed with crimp terminals compatible with the conventional general-purpose tool, M22520/2-01.

Also, the X-code version can accommodate a wide range of cable sizes, improving wire installation of thicker wires (AWG 22 to 24) and allowing wiring within equipment in constricted spaces with fine wires (AWG 26 to 30).

Application

Robots, automated equipment, industrial equipment, such as numerical control machines, Semiconductor manufacturing equipment and general equipment.

Features

- Compact, waterproof jam nut type in-line connector
- Allows for highly-reliable shielded connections, as well as flexible connection of shielded wires of various thicknesses
- An expanded crimp termination range for X-code, AWG #22 to #30

General Specifications

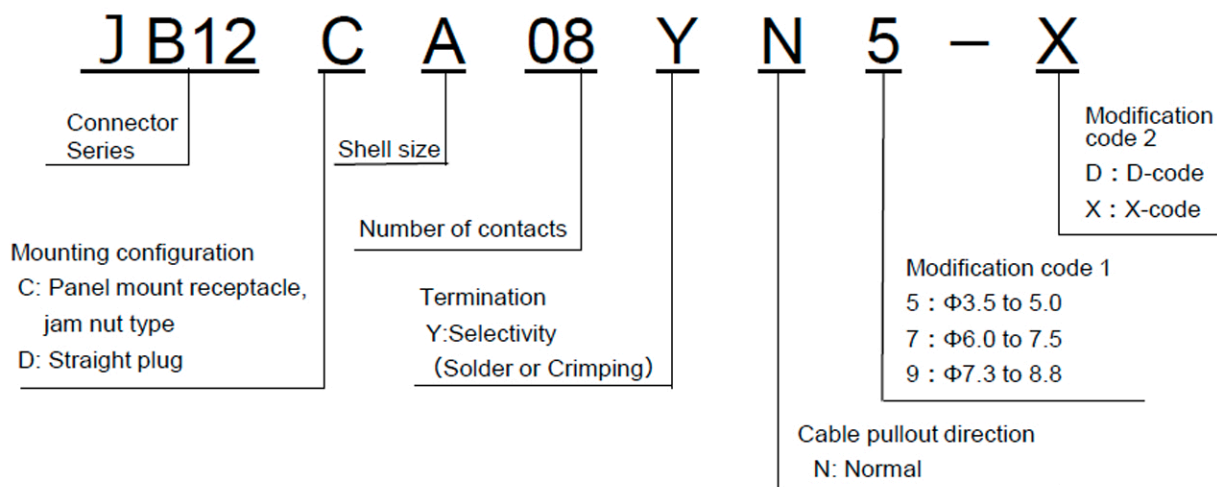
Contact arrangement	X-code	D-code
Transmission characteristics	Cat. 6A	Cat. 5e
Number of contacts	8 contacts	4 contacts
Rated current (per contact)	0.5 A/contact	4 A/contact
Rated voltage	48 V AC/DC	250 V AC/DC
Applicable wires (contacts)	AWG 22 to 24 AWG 26 to 30	AWG 22 to 24
External diameter of compatible wires (mm)	∅1.4 max.	∅1.7 max.
Connection method	Crimped	Crimped
External diameter of compatible cables (mm)	∅3.5 to ∅5.0 ∅6.0 to ∅7.5 ∅7.3 to ∅8.8	
Mating type	Screw-mating	
Protection class	IP67 (in mated condition)	
Standard certification	cUL / UL (UL2238)	
Shielded connection	Yes	
Operating temperature range	-40°C to +85°C (Including temperature rise)	

Materials and Finishes

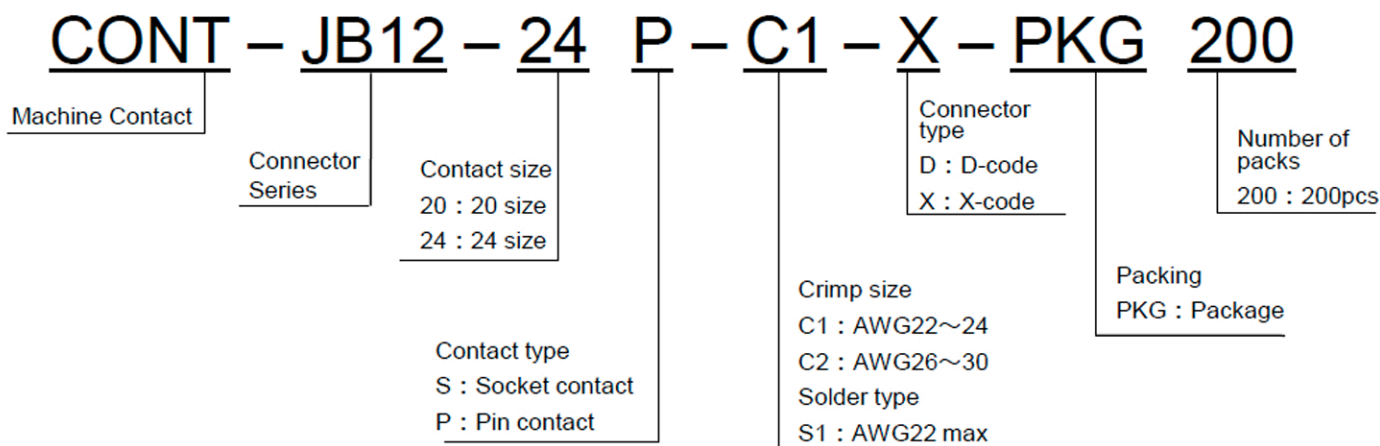
Components	Materials	Finishes
Contact	Copper alloy	Au plating
Insulator	Synthetic resin	—
Outer shell	Zinc alloy	Nickel plating
Bushing/Gasket	Synthetic rubber	—
Shield clip	Stainless steel	—
Cable clamp	Synthetic resin	—

Ordering Information

Connector



Contact

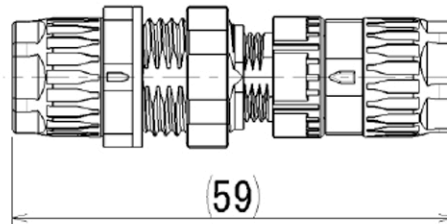


Outer Dimensions

X-code

In-line receptacle	Straight plug
Part number : JB12CA08YN※-X	Part number : JB12DA08YN※-X
Socket contact	Pin contact
Part number : CONT-JB12-24S-C※-X-PKG200	Part number : CONT-JB12-24P-C※-X-PKG200

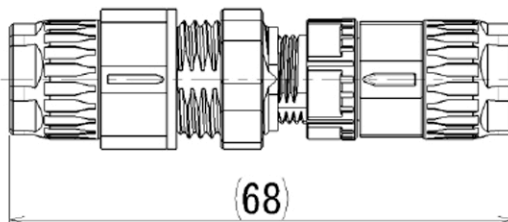
Mated length



D-code

In-line receptacle	Straight plug
Part number : JB12CA04YN※-D	Part number : JB12DA04YN※-D
Socket contact	Pin contact
Part number : CONT-JB12-22S-C※-D-PKG200	Part number : CONT-JB12-22P-C※-D-PKG200

Mated length



Part Numbers and Product Drawings

X-code

Type	Part number	Drawing number	Remarks (Cable O.D. Unit: mm)
In-line Receptacle	JB12CA08YN5-X	SJ126009	Cable Outer Dia. ø3.5~ø5.0
	JB12CA08YN9-X	SJ126010	Cable Outer Dia. ø7.3~ø8.8
Straight plug	JB12DA08YN5-X	SJ126011	Cable Outer Dia. ø3.5~ø5.0
	JB12DA08YN7-X	SJ126012	Cable Outer Dia. ø7.3~ø8.8
Pin contact	CONT-JB12-24P-C1-X-PKG200	SJ126118	Applicable wire size AWG#22~#24
	CONT-JB12-24P-C2-X-PKG200	SJ126119	Applicable wire size AWG#26~#30
Socket contact	CONT-JB12-24S-C1-X-PKG200	SJ126120	Applicable wire size AWG#22~#24
	CONT-JB12-24S-C2-X-PKG200	SJ126121	Applicable wire size AWG#26~#30

D-code

Type	Part number	Drawing number	Remarks (Cable O.D. Unit: mm)
In-line receptacle	JB12CA04YN9-D	SJ126551	Cable Outer Dia. : ø7.3~ø8.8
Straight plug	JB12DA04YN9-D	SJ126552	Cable Outer Dia. : ø7.3~ø8.8
Pin contact	CONT-JB12-22P-C1-D-PKG200	SJ126554	Applicable wire size AWG#22~#24
Socket contact	CONT-JB12-22S-C1-D-PKG200	SJ126120	Applicable wire size AWG#22~#24

Crimping Tools

Cord	Applicable Contact	Applicable Tool	
		Handling Tool	Locator
X-code	CONT-JB12-24P-C1-X-PKG200	M22520/2-01	JP-JB12-1
	CONT-JB12-24P-C2-X-PKG200		
	CONT-JB12-24S-C1-X-PKG200		
	CONT-JB12-24S-C2-X-PKG200		
D-code	CONT-JB12-22P-C1-D-PKG200	M22520/2-01	JP-JB12-2
	CONT-JB12-22S-C1-D-PKG200		

Technical Documents

Specification	JACS-50138
Handling Instruction	JAHL-50138

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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