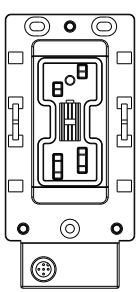
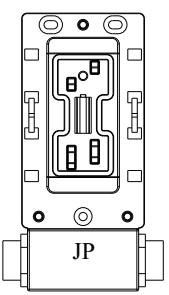
Installation Instructions

ArmorBlock MaXum I/O Cable Bases DeviceNet Powered Outputs Series B

(Cat. No. 1792D-CB12JP and -CB18JP)



CB12JP



CB18JP 42273

This version of the ArmorBlock MaXum™ cable base lets you provide power to outputs using DeviceNet™ power. No additional auxiliary power cabling is needed. The ArmorBlock MaXum I/O cable bases mate with 4 or 8 connector modules, depending on your installation requirements. No modification is required. Modules are interchangeable with round media cable bases. This interchangeability provides plug and play block upgrade capability and easy field replacement. The completely assembled ArmorBlock module and base requires no enclosure.

These instructions describe the installation of each cable base. The catalog numbers for the cable bases are:

- 1792D-CB12JP for 12mm drop cable installation, see page 5
- 1792D-CB18JP for 18mm trunk or drop cable installation, see page 6

Publication 1792D-IN001B-EN-P - September 2000

(Please note: ArmorBlock MaXum modules and flat or round media cables are ordered and shipped separately.)

European Union Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC) and the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 50082-2 EMC - Generic Immunity Standard, Part 2 - Industrial Environment

This product is intended for use in an industrial environment.

Low Voltage Directive

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests.

For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the following Allen-Bradley publications:

- Industrial Automation Wiring and Grounding Guidelines For Noise Immunity, publication 1770-4.1
- Automation Systems Catalog, publication B113 Powering Outputs Using DeviceNet Power

Powering Outputs Using DeviceNet Power

You can power some output devices from the DeviceNet network. The application must allow the voltage to remain within the DeviceNet specification limits of 11-25V dc. Most actuators need to be powered by a separate power supply. They usually require more power than is practically available from DeviceNet. Also, the large voltage variation of 11-25V that DeviceNet allows is typically beyond the range over which most available actuators or output devices can safely operate.

You can use DeviceNet power to operate output devices such as hydraulic and pneumatic solenoid valves, pilot and stack lights, and motor starter coils with the following caution:

ATTENTION

Do not let DeviceNet voltage at the relevant node exceed the output device's acceptable voltage range. Output devices rated 24V dc rarely are specified to operate below 19.2V dc or -20% of their 24V dc rating. Many only operate down to 20.4V dc or -15% of the rated voltage. This means that the DeviceNet network design must not let the available voltage drop below 19.2 volts, for example, instead of the 11 volts that the DeviceNet specification allows. This higher lower voltage limit, which is within the DeviceNet specification, will actually restrict the distance of the DeviceNet network from what would be possible if actuators were not utilizing the DeviceNet power.

IMPORTANT

Design your network so that sufficient voltage is available to operate the output device wherever it is installed. This is especially important when it is connected at the farthest location from the power supply.

Noise or Transient Protection

The typical actuators used in DeviceNet control systems utilize inductive coils that generate transients when de-energized. Each ArmorBlock MaXum output contains a diode which is across the load device coil. As a precaution, also use an MOV varistor suppressor at the 24V dc coil.

ATTENTION

Do not use DeviceNet power on dc coil actuators that use economizing coils to operate. They have high inrush currents.

Package Contents for Cable Bases

Your package contains these installation instructions and the following contents, depending on the base used:

1792D-CB12JP	1792D-CB18JP
one ArmorBlock 12mm cable base	one ArmorBlock 18mm cable base
one 12mm protective cap	two 18mm protective caps

(Please note: ArmorBlock MaXum modules are ordered and shipped separately.)

Install Your ArmorBlock MaXum Cable Bases

To install the 1792-CB12JP and -CB18JP cable bases:

- Mount the cable base
- Attach the module to the base
- Attach the cables

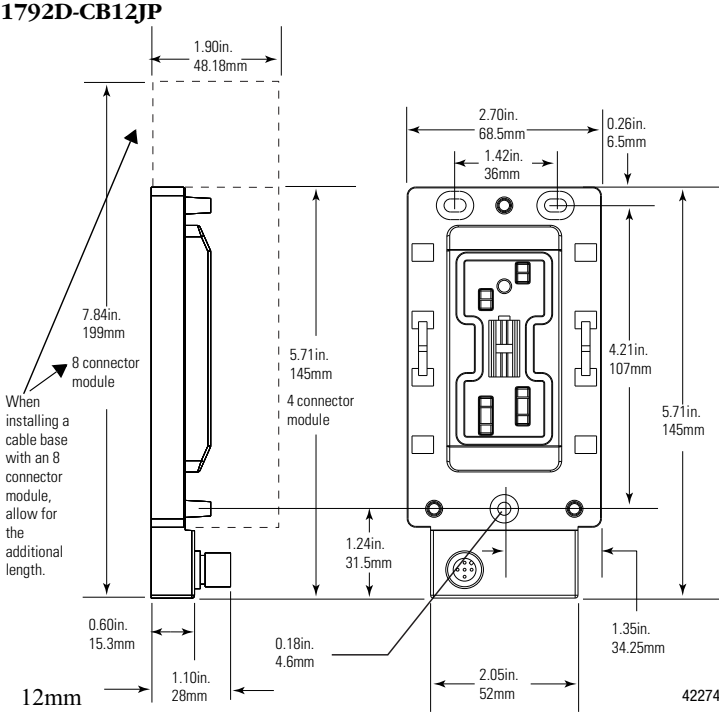
These steps are discussed in the following procedures.

Mount the Cable Base

The cable base can be mounted either vertically or horizontally, using 3 screws. Cable bases accommodate 4 or 8 connector ArmorBlock MaXum modules. You must allow additional space for installation of 8 connector ArmorBlock MaXum modules. They are longer than the 4 connector modules.

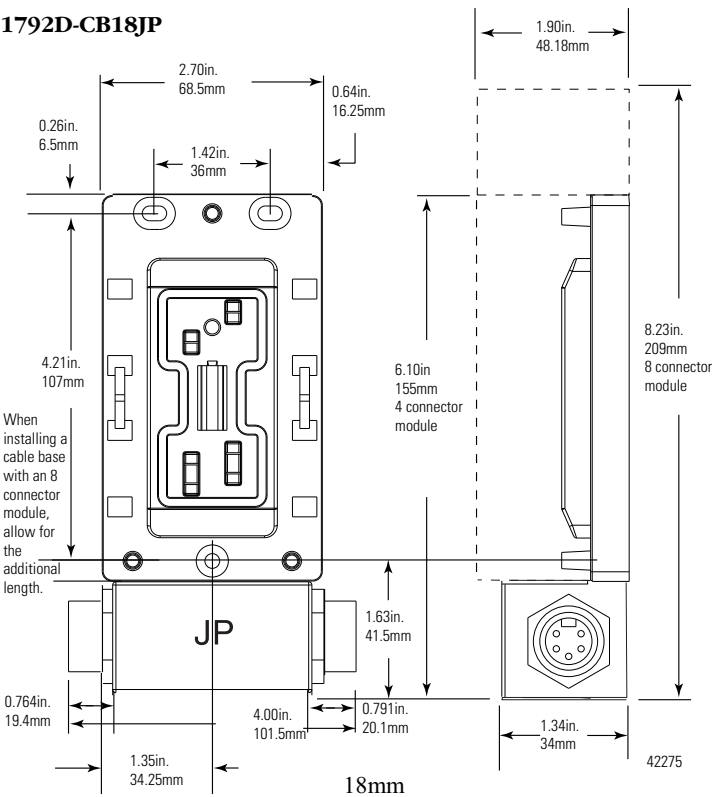
A mounting illustration for the 1792D-CB12JP is below.

1792D-CB12JP



A mounting illustration for the 1792D-CB18JP is below.

1792D-CB18JP



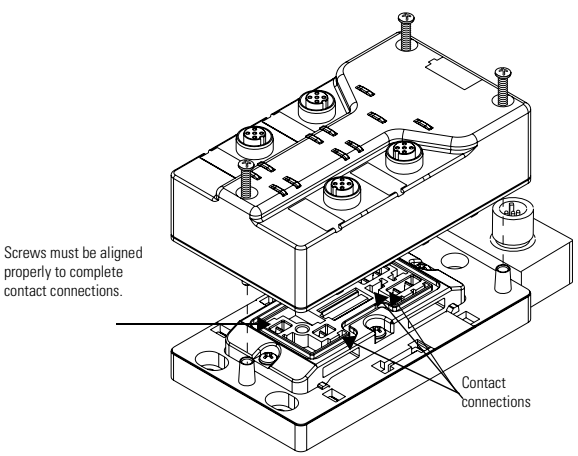
Attach the Module

IMPORTANT Make sure you properly align the screws to complete the connections between the module contacts and the cable contacts cafeteria.

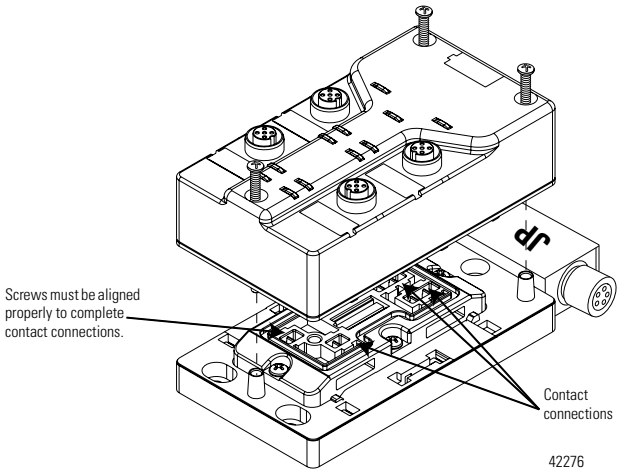
1. Position the module over the mounted cable base. Align the three captive screws in the module with the accepting receptacles in the base.

2. Tighten the screws with a torque of 8 inch-pounds to secure the module to the base.

   The 1792D-CB12JP module is shown below.



The 1792D-CB18JP module is shown below.



ArmorBlock MaXum I/O modules are described in the following publications:

- 1792D series of ArmorBlock MaXum Installation Instructions
- 1792-TD001B-EN-P - ArmorBlock Technical Data

The DeviceNet Network uses advanced network technology, producer/consumer communication, to increase network functionality and throughput. Visit our web site at http://www.ab.com/networks for producer/consumer technology information and updates.

Attach the Cables (1792D-CB12JP)

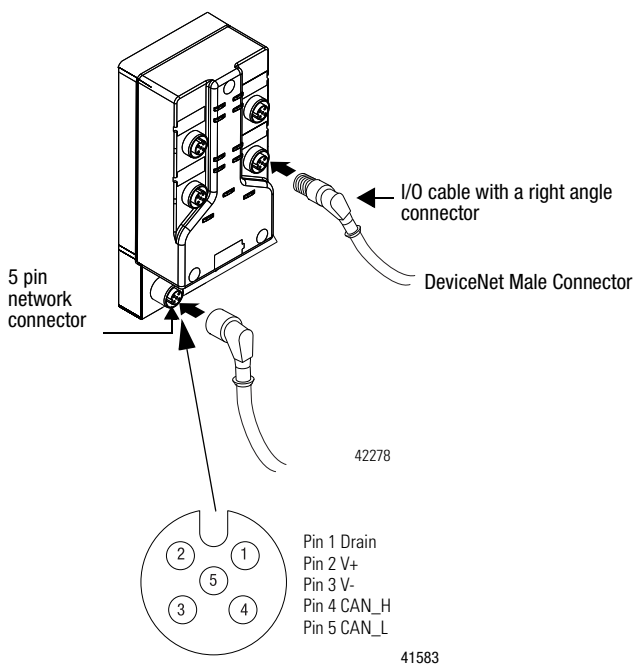
1. Attach your network cable to the connector.

   Note: The network cable drops straight down away from the module.

2. Attach your I/O cables.

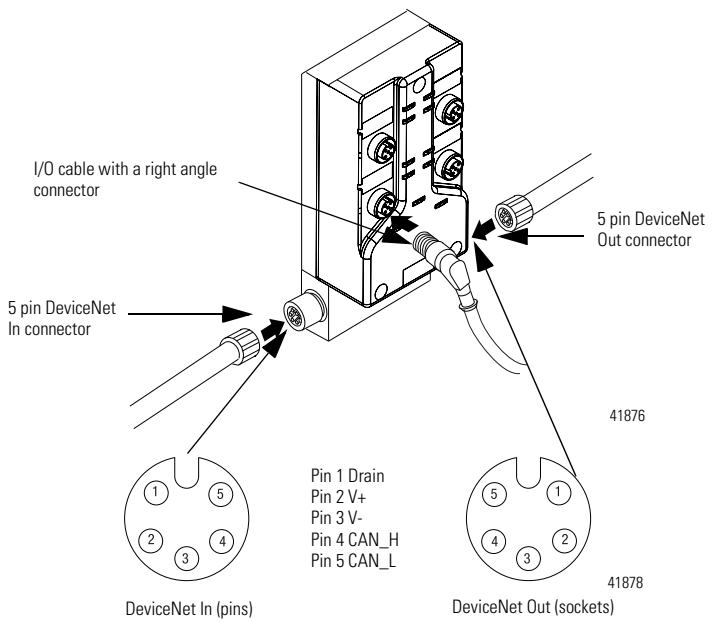
   Note: I/O cables drop at a 45 degree angle because of the pin settings, if you use a right angle connector.

3. Cover any unused point connectors with micro caps.



Attach the Cables (1792D-CB18JP)

1. Attach your network cables to the connectors.
2. Attach your I/O cables.



Specifications

ArmorBlock MaXum I/O Cable Bases - Cat. No. 1792D-CB12JP and -CB18JP
General Specifications
For general specifications, see the ArmorBlock MaXum module's documentation or the Technical Data, 1792-TD001B-EN-P. The specifications listed in these publications are for the assembled module and cable base.

Hazardous Location Approval

The following information applies only to products marked with Hazardous Location Approval, when operating in hazardous locations:

Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.

WARNING

EXPLOSION HAZARD -

- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.
- Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
- Substitution of components may impair suitability for Class I, Division 2.
- If this product contains batteries, they must only be changed in an area known to be nonhazardous.

WARNING

Use supply wires suitable for 30°C above surrounding ambient.

WARNING

When used in a Class I, Division 2, hazardous location, this equipment must be mounted in a suitable enclosure with proper wiring method that complies with the governing electrical codes.

Les informations suivantes ne concernent que les produits marqués pour une utilisation en environnements dangereux :

Les produits marqués « CL I, DIV 2, GP A, B, C, D » ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.

AVERTISSEMENT

RISQUE D'EXPLOSION -

- Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement.
- Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit.
- La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2.
- S'assurer que l'environnement est classé non dangereux avant de changer les piles.

AVERTISSEMENT

Utiliser des fils d'alimentation qui conviennent à une température de 30°C au-dessus de la température ambiante.

AVERTISSEMENT

Pour une utilisation en environnement de classe i, division 2 dangereux, cet equipement doit etre monte dans un boitier avec un cablage approprie conforme aux normes electriques en vigueur.

This product has been tested at an Open DeviceNet Vendor Association, Inc. (ODVA) authorized independent test laboratory and found to comply with ODVA Conformance Test. Please contact the ODVA website (http://www.odva.org) for listing of products tested by ODVA independent test labs for further details.

Notes:

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www.rockwellautomation.com

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