

FLEX™ I/O and FLEX I/O-XT™ Modules



- ATTENTION:**
- Before installing, configuring, operating or maintaining this product, read this document and the documents listed in the Additional Resources section for installing, configuring, or operating equipment. Users should familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.
 - Installation, adjustments, putting into service, use, assembly, disassembly, and maintenance shall be carried out by suitably trained personnel in accordance with applicable code of practice. In case of malfunction or damage, no attempts at repair should be made. The module should be returned to the manufacturer for repair. Do not dismantle the module.
 - Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls, publication SGI-1.1, available from your local Rockwell Automation sales office or online at <http://www.rockwellautomation.com/literature> describes some important differences between solid state equipment and hard-wired electromechanical devices.
 - Secure DIN rail approximately every 200 mm (7.87 in). Maintain at least 25.4 mm (1.0 in) air space around your FLEX I/O system installation.

IMPORTANT Any illustrations, charts, sample programs, and layout examples shown in this publication are intended solely for the purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability for actual use based upon the examples shown in this publication.

North American Hazardous Location Approval

The following information applies when operating this equipment 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 be changed only in an area known to be nonhazardous.

Informations sur l'utilisation de cet équipement 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.

Environment and Enclosure



- ATTENTION:** This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.
- This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments.
- This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of SVA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.
- In addition to this publication, see the following:
- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 for additional installation requirements.
 - NEMA 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures.

European Hazardous Location Approval

This equipment is intended for use in potentially explosive atmospheres as defined below.

- The following applies to products marked   II 3 G: Such modules:
- Are Equipment Group II, Equipment Category 3, and comply with the Essential Health and Safety Requirements relating to the design and construction of such equipment given in Annex II to Directive 94/9/EC. See the EC Declaration of Conformity at <http://www.rockwellautomation.com/products/certification> for details. The type of protection used is "Ex nA IIC T-Gc" or "Ex nA nC IIC T-Gc" according to EN 60079-15.
 - May have catalog numbers that end in "K" to indicate conformal coating.
 - Are intended for use in areas in which explosive atmospheres caused by gases, vapors, mists, or air or dust mixtures are unlikely to occur, or are likely to occur only infrequently and for short periods. Such locations correspond to Zone 2 classification according to ATEX directive 1999/92/EC.
 - Comply to Standards: EN 60079-0:2009, EN 60079-15:2010, reference certificate number LCIE 01ATEX6020X, ITS 08ATEX45932X, EN 60079-0:2012, EN 60079-15:2010, reference certificate number DEMKO 007ATEX0710505X, DEMKO 007ATEX072424X, EN 60079-0:2012+A11:2013, EN 60079-15:2010, reference certificate number DEMKO 14ATEX1342501X.



- WARNING: Special Conditions for Safe Use:**
- This equipment shall be mounted in an ATEX certified enclosure with a minimum ingress protection rating of at least IP54 (as defined in IEC60529) and used in an environment of not more than Pollution Degree 2 (as defined in IEC 60664-1) when applied in Zone 2 environments. The enclosure must utilize a tool removable cover or door.
 - This equipment shall be used within its specified ratings defined by Rockwell Automation.
 - Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
 - Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.
 - The USB port is intended for temporary local programming purposes only and not intended for permanent connection and do not use the USB port in hazardous locations.
 - Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140% of the rated voltage when applied in Zone 2 environments.
 - Enclosure must be marked with the following: "Warning - Do not open when energized." After installation of equipment into the enclosure, access to termination compartments shall be dimensioned so that conductors can be readily connected.
 - This equipment must be used only with ATEX certified Rockwell Automation backplanes.
 - Earthing is accomplished through the mounting of modules on rail.
 - The modules are for operation in Ambient Temperatures ranging from -20...+55 °C (-4...131 °F) or -20...+70°C (-4...158 °F).
 - For use in Zone 2 Hazardous Locations, modules 1794-0W8 and 1794-0W8XT must be used at or below 60V AC or 75V DC.



- ATTENTION:** Do not install this product until you read the documentation in your local language. Go to <http://www.rockwellautomation.com/literature> or contact your local sales office or Rockwell Automation representative.
- ATENÇÃO:** Não instale este produto antes de ler os documentos em sua língua. Clique <http://www.rockwellautomation.com/literature> ou entre em contato com o escritório ou representante da Rockwell Automation regional.
- ATTENTION:** N'installez pas ce produit tant que vous n'avez pas lu la documentation dans votre langue locale. Rendez-vous sur le site <http://www.rockwellautomation.com/literature> ou contactez votre agence commerciale ou votre représentant Rockwell Automation local.
- ATTENZIONE:** Non installare questo prodotto senza prima avere letto la documentazione nella propria lingua. Consultare la pagina web <http://www.rockwellautomation.com/literature> oppure contattare l'ufficio commerciale o il rappresentante Rockwell Automation di zona.
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- ATTENTION:**
- Do not remove or replace a Terminal Base unit while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.
 - Do not remove or replace an Adapter Module while power is applied. Interruption of the backplane can result in unintentional operation or machine motion.
 - When using 240V power to a relay, you must connect a snubber across the load. Failure to connect a snubber across the load (relay contacts) can result in generation of electromagnetic noise which could disrupt nearby electrical equipment, including your 1794 FLEX I/O chassis. Use Allen-Bradley part number 599-KA04 or 1401-NX1.
 - To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a source compliant with the following:
Safety Extra Low Voltage (SELV) or Protected Extra Low Voltage (PELV).

Torque and Wire Size Specifications (see publication 1794-TD019)

Modules	Torque	Wire Size
FLEX I/O and FLEX I/O-XT modules (where applicable)	0.5...0.8 Nm (5...7 lb-in.)	0.21 ... 1.3 mm ² (24 ... 16 AWG) solid or stranded copper wire rated @ 115 °C (239 °F) or greater, 1.2 mm (3/64 in.) insulation max