Allen-Bradley

1756 ControlLogix Controllers

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.
- If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Equipment designated as 'XT' is certified for use only within surrounding air temperature range of -25…70 °C (-13…158 °F). Equipment designated as 'LXT' is certified for use only within a surrounding air temperature range of -25…60 °C (-13…140 °F) even when used with other 'XT' equipment. Non-XT equipment is certified for use only within surrounding air temperature range of 0…60 °C (32…140 °F).The equipment must not be used outside its range.
- 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.

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.

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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 considered Group 1, Class A industrial equipment according to IEC/CISPR 11. Without appropriate precautions, there may be difficulties with electromagnetic compatibility in residential and other environments due to conducted and radiated disturbances.

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 5VA 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 different types of enclosure

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.

European Hazardous Location Approval

The following applies to products marked Ⓔx 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- or Ex nC IIC T-" according to EN 60079-15. The specific temperature code is marked on the product.
- 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.

WARNING: Special Conditions for Safe Use:
- This equipment must be installed in an enclosure providing at least IP54 protection when applied in Zone 2 environments.
- This equipment shall be used within its specified ratings defined by Rockwell Automation.
- Provision shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 40% when applied in Zone 2 environments.
- This equipment must be used only with ATEX certified Rockwell Automation backplanes.
- 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.

Battery Removal



This product may contain a lithium battery that needs to be replaced during the life of the product. For instructions on the removal and replacement of the battery, see the ControlLogix® System User Manual, publication 1756-UM001. At the end of its life, the battery contained in this product should be collected separately from any unsorted municipal waste. The collection and recycling of batteries helps protect the environment and contributes to the conservation of natural resources as valuable materials are recovered.

Energy Storage Module

This product may contain an energy storage module (ESM).



WARNING: If your application requires an ESM to deplete its residual stored energy to 40 µJ or less before you transport it into or out of the application, use only the 1756-ESMNSE(XT) module for the primary controller and the 1756-SPESMNSE(XT) for the safety partner. In this case, complete these steps before you remove the ESM:

1. Turn off power to the chassis.

After you turn off power to the chassis, the controller's OK status indicator transitions from Green to Solid Red to OFF.

2. Wait at least 20 minutes for the residual stored energy to decrease to 40 µJ or less before you remove the ESM.

There is no visual indication of when the 20 minutes has expired. You must track that time period.

Additional Resources

To view or download product publications, go to http://www.rockwellautomation.com/literature. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

Resource	Description
ControlLogix Controllers Specifications Technical Data, publication 1756-TD001	Provides technical specifications for ControlLogix controllers.
ControlLogix System User Manual, publication 1756-UM001	Provides information on how to install, configure, program, and use ControlLogix controllers.
Logix5000 Controllers General Instructions Reference Manual, publication 1756-RM003	Provides information about each available instruction for a Logix-based controller.
Using ControlLogix in SIL2 Applications Reference Manual, publication 1756-RM001	Provides information about typical SIL2 implementations using certified ControlLogix equipment.
Guidelines for Handling Lithium Batteries Technical Data, publication AG-5.4	Provides guidelines for storing, handling, installing, and disposing of lithium batteries.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.rockwellautomation.com/products/certification	Provides declarations of conformity, certificates, and other certification details.

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