

ATEX Compliance Overview

Woodward products can help you meet your compliance requirements. There are several factors and regulations to consider when using products in the European Economic Area (EEA). This application sheet provides an overview of one of the newest regulations relating to products used in explosive atmospheres.

What is ATEX?

The ATEX Directive 94/9/EC was adopted by the European Union (EU) to facilitate free trade in the EU and the EEA by aligning the technical and legal requirements in the member states for products intended for use in potentially explosive atmospheres. Harmonized design standards are used for conformity to this New Approach Directive. Other New Approach Directives that apply to Woodward products include: Low Voltage Directive 73/23/EEC, Electromagnetic Compatibility Directive 89/336/EEC, Machinery Directive 98/37/EC, and Pressure Equipment Directive 97/23/EC. Although the ATEX Directive was originally developed by the European Union, it is now being applied all over the world.

Is ATEX Needed?

The ATEX Directives covers both Equipment and Protective Systems used in potentially explosive atmospheres. In this Directive, Equipment is considered to be any device that contains a potential ignition source and requires special measures to be incorporated in its design or application to prevent ignition. This includes safety or control devices outside a hazardous area but having an explosion protection function. A Protective System is considered to be any device which is intended to halt an incipient explosion from spreading or causing damage.

Application of the ATEX Directive begins with an accurate definition of the atmosphere in which your products will be used. Zone 1 atmospheres drive greater costs and project schedule time than a Zone 2 environment. Similarly, specifying a Zone 2 environment where an explosive atmosphere is not present also increases product cost and time. Be sure to properly state the atmosphere, gas groups, and environmental and media temperatures for proper classification of your product.

Requirements for ATEX

Essential health and safety requirements of ATEX can be divided into three categories: Common Requirements, Requirements for Equipment, and Requirements for Protective Systems.

Common Requirements for ATEX:

- To prevent the formation of explosive atmospheres which may be produced or released by equipment and by protective systems themselves
- To prevent the ignition of explosive atmospheres, taking into account the nature of every electrical and non-electrical source of ignition
- To halt an explosion immediately and/or to limit the range of explosion flames and pressure to a sufficient level of safety
- Selection of Materials
- Potential Ignition Sources
- Hazards Arising from External Effects
- Requirements in Respect of Safety Devices
- Integration of Safety Requirements Relating to the System

Within each Equipment Category, the requirements cover:

- Prevention of ignition sources from becoming active
- Control surface temperatures
- Safe opening
- Prevention of dust ingress and egress

Requirements for Protective Systems

- Planning and Design

ATEX Equipment Groups and Categories

Group I = Mining Applications

- Category M1 = remains functional in an explosive atmosphere
- Category M2 = de-energizes in an explosive atmosphere

Group II = Non-mining explosive atmospheres

- Category 1 = continuously present explosive atmosphere, for use in Zone 0 atmospheres, (similar to Class I, Division 1)
- Category 2 = explosive atmosphere likely to occur, for use in Zone 1 atmospheres, (similar to Class I, Division 1)
- Category 3 = explosive atmosphere unlikely to occur or occurs infrequently or occurs for only a short period of time, for use in Zone 2 atmospheres, (similar to Class I, Division 2)

ATEX Marking Example



= The marking which reflects conformity with European Community Directives.

0359

= The identification number for an ATEX Notified Body [Note—Manufacturers can “self-declare” products for use in Group II, Category 3 environments, and in those cases no Notified Body identification number appears in the markings.]



= The “Epsilon-x” or “Hexagon-Ex” symbol for Explosive Atmospheres.

II

= This symbolizes Equipment Group II which is “Non-Mining”.

2

= Equipment Category 2 which means the equipment is suitable for an environment where an explosive atmosphere is likely to be present. You may also see a “3” here for some of our products.

G

= Means the product is safe in an explosive GAS atmosphere. The alternative is a “D” for Dusts.

Woodward Products Available with ATEX Compliance

(as of August 2005)

3103 Gas Valve	EM-35/EM-140	LQ-6 Liquid Fuel Valves
505/505E	EML	LQ 24 V Digital Driver
8” Shutoff Valve (GE)	EM/TM Resolvers	LQ Valves
828A Digital Control	Exciters	MGV Actuator
AtlasPC™	Gas Shutoff Valves (GSOV)	Pressure Transducers
AtlasSC™	GS-16 Gas Valves	Servo Position Controller
Bypass Control Valves	GS/LQ Digital Driver	SOGAV™
CPC	GS Valves	SonicFlo™ Gas Valves
EG-3Ps used in Hydraulic Amp	IBHCV	Stop/Ratio Valves
EG-10 Div 1&2	Ignition Controls	Stop Valves
EGCP-3	Inlet Bleed Heat Control Valve	Swift™ Gas Metering Valve
EGMV w/ LELA Actuator	LELA Actuator	Swift™ Valve Driver
Electric Globe Valve (EGV)	Liquid Fuel Valves	TG-13&17 Actuators
ELMV/ELBV/EWMV w/ LELA Act.	Liquid Shutoff Valves (LSOV)	TM-25&55
EM 24 & 120 V Digital Driver	LMS-100 VSVA & EHSV	VSV Actuator
EM-35 Analog & Digital Driver		



PO Box 1519, Fort Collins CO, USA 80522-1519
Tel.: +1 (970) 482-5811 • Fax: +1 (970) 498-3058

1000 East Drake Road, Fort Collins CO 80525

www.woodward.com

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