# WOODWARD

## Installation Procedure Supplement

### Manual 26903 (Revision NEW, 5/2015) LESV Large Electric Sonic Valve

See manual 26419 for complete installation, operation, maintenance, and certification information. Publications can be found on our website at <a href="http://www.woodward.com/publications">www.woodward.com/publications</a>.

### **Important Definitions**



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- **DANGER**—Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- WARNING—Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION**—Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- NOTICE—Indicates a hazard that could result in property damage only (including damage to the control).
- IMPORTANT—Designates an operating tip or maintenance suggestion.



The engine, turbine, or other type of prime mover should be equipped with an overspeed shutdown device to protect against runaway or damage to the prime mover with possible personal injury, loss of life, or property damage.

The overspeed shutdown device must be totally independent of the prime mover control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.



Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment. Practice all plant and safety instructions and precautions. Failure to follow instructions can cause personal injury and/or property damage.



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Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.

# NOTICE

To prevent damage to a control system that uses an alternator or battery-charging device, make sure the charging device is turned off before disconnecting the battery from the system.



To prevent damage to electronic components caused by improper handling, read and observe the precautions in Woodward manual **82715**, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*. Go to www.woodward.com/publications for complete instructions (manual 26419).

**Replacement/Exchange:** Replacement/Exchange is a premium program designed for the user who is in need of immediate service. It allows you to request and receive a like-new replacement unit in minimum time (usually within 24 hours of the request), providing a suitable unit is available at the time of the request, thereby minimizing costly downtime.

This option allows you to call your Full-Service Distributor in the event of an unexpected outage, or in advance of a scheduled outage, to request a replacement control unit. If the unit is available at the time of the call, it can usually be shipped out within 24 hours. You replace your field control unit with the like-new replacement and return the field unit to the Full-Service Distributor.

**Flat Rate Repair**: Flat Rate Repair is available for many of the standard mechanical products and some of the electronic products in the field. This program offers you repair service for your products with the advantage of knowing in advance what the cost will be.

**Flat Rate Remanufacture:** Flat Rate Remanufacture is very similar to the Flat Rate Repair option, with the exception that the unit will be returned to you in "like-new" condition. This option is applicable to mechanical products only.

### **Returning Equipment for Repair**

If a control (or any part of an electronic control) is to be returned for repair, please contact your Full-Service Distributor in advance to obtain Return Authorization and shipping instructions.

When shipping the item(s), attach a tag with the following information:

- return number;
- name and phone number of contact person;
- name and location where the control is installed;
- complete Woodward part number(s) and serial number(s);

• description of the problem;

### • instructions describing the desired type of repair.

### Contacting Woodward's Support Organization

For the name of your nearest Woodward Full-Service Distributor or service facility, please consult our worldwide directory published at <u>www.woodward.com/directory</u>.

You can also contact the Woodward Customer Service Department at one of the following Woodward facilities to obtain the address and phone number of the nearest facility at which you can obtain information and service.

Products Used In Electrical Power Systems	Products Used In Engine Systems	Products Used In Industrial Turbomachinery Systems
Facility Phone Number	<u>Facility</u> <u>Phone Number</u>	Facility Phone Number
Brazil +55 (19) 3708 4800	Brazil +55 (19) 3708 4800	Brazil +55 (19) 3708 4800
China +86 (512) 6762 6727	China +86 (512) 6762 6727	China +86 (512) 6762 6727
Germany:	Germany +49 (711) 78954-510	India+91 (129) 4097100
Kempen +49 (0) 21 52 14 51	India+91 (129) 4097100	Japan+81 (43) 213-2191
Stuttgart - +49 (711) 78954-510	Japan+81 (43) 213-2191	Korea+82 (51) 636-7080
India+91 (129) 4097100	Korea+82 (51) 636-7080	The Netherlands+31 (23) 5661111
Japan+81 (43) 213-2191	The Netherlands+31 (23) 5661111	Poland+48 12 295 13 00
Korea+82 (51) 636-7080	United States+1 (970) 482-5811	United States+1 (970) 482-5811
Poland+48 12 295 13 00		
United States+1 (970) 482-5811		

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Email and Website—www.woodward.com

# **Regulatory Compliance & Declarations**

### **European Compliance for CE Marking:**

These listings are limited only to those units bearing the CE Marking.

Low Voltage Directive (Motor):	Declared to 73/23/EEC COUNCIL DIRECTIVE of 10 February 1973 on the harmonization of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits.
EMC Directive:	Declared to 2004/108/EC COUNCIL DIRECTIVE of 15 December 2004 on the approximation of the laws of the Member States relating to
	electromagnetic compatibility and all applicable amendments.
Pressure Equipment Directive:	Certified to Pressure Equipment Directive 97/23/EC of 29 May 1997 on the approximation of the laws of the Member States concerning pressure equipment, Category II and III TUV Rheinland Module H Certificate 01 202 USA/Q-11 6617
ATEX – Potentially Explosive Atmospheres Directive:	Declared to 94/9/EEC COUNCIL DIRECTIVE of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres. Zone 2, Category 3, Group II G, Ex nA IIC T3 X Gc IP55

### **Other European and International Compliance:**

Compliance with the following European Directives or standards does not qualify this product for application of the CE Marking:

Machinery Directive:	Compliant as partly completed machinery with Directive 2006/42/EC of the European Parliament and the council of 17 May 2006 on machinery.
GOST R:	Certified for use in explosive atmospheres within the Russian Federation per GOST R certificate POCC US.МЛ14.В00192 as ExnAIIT3 X

### North American Compliance:

These listings are limited only to those units bearing the CSA Marking.

CSA (Actuator):	CSA Certified for Class I, Division 2, Groups A, B, C, & D, T3 at 93 °C Ambient
	For use in Canada and the United States Certificate 1635932

Actuator is certified for North America as on-engine systems component connected to the certified Digital Valve Positioner.

Wiring must be in accordance with North American Class I, Division 2, or European Zone 2, Category 3 wiring methods as applicable, and in accordance with the authority having jurisdiction.

### **Special Conditions for Safe Use**

- Connect the ground terminal to earth ground.
- Maximum ambient temperature 93 °C (200 °F).
- Use supply wires suitable for 10 °C (18 °F) above surrounding ambient.

Compliance with the Machinery Directive 2006/42/EC noise measurement and mitigation requirements is the responsibility of the manufacturer of the machinery into which this product is incorporated.



EXPLOSION HAZARD—Do not remove covers or connect/disconnect electrical connectors unless power has been switched off or the area is known to be non-hazardous.

Substitution of components may impair suitability for Class I, Division 2 or Zone 2.

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RISQUE D'EXPLOSION—Ne pas enlever les couvercles, ni raccorder / débrancher les prises électriques, sans vous en assurez auparavant que le système a bien été mis hors tension; ou que vous vous situez bien dans une zone non explosive.

La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 2 ou Zone 2.

## **DECLARATION OF CONFORMITY**

Manufacturer's Name:	WOODWARD, INC.
Manufacturer's Address:	1000 E. Drake Rd. Fort Collins, CO, USA, 80525
Model Name(s)/Number(s):	Large Electric Sonic Valve (LESV), Sizes 2", 3", 4" and 6", Class 300 and 600
Conformance to Directive(s):	97/23/EC COUNCIL DIRECTIVE of 29 May 1997 on the approximation of the laws of the Member States concerning Pressure Equipment 94/9/EC COUNCIL DIRECTIVE of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres
	For models with ID Module or Position Sensor: 2004/108/EC COUNCIL DIRECTIVE of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and all applicable amendments.
Marking(s):	🐼 Category 3 Group II G, Ex nA IIC T3X Ge IP55
Applicable Standards:	<ul> <li>ASME B31.3 Process Piping, 2008</li> <li>ASME Boiler and Pressure Vessel Code VIII, Div. 1, 2007/A08</li> <li>ASME Boiler and Pressure Vessel Code VIII, Div. 2, 2010</li> <li>EN 1503-2 : 2000 Valves – Materials for bodies, bonnets, and covers – Part 2 : Steels other than those specified in European Standards</li> <li>EN 60079-0, 2012: Electrical apparatus for explosive gas atmospheres – Part 0: General Requirements</li> <li>EN 60079-15, 2010: Electrical apparatus for explosive gas atmospheres – Part 15: Type of protection 'n'</li> <li>EN 61000-6-4, 2007: EMC Part 6-4: Generic Standards - Emissions for Industrial Environments</li> <li>EN 61000-6-2, 2005: EMC Part 6-2: Generic Standards - Immunity for Industrial Environments</li> </ul>
Conformity Assessment:	PED Module H – Full Quality Assurance, Certificate 01 202 USA/Q-11 6617
Notified Body For Pressure Equipment:	TUV Rheinland Industrie Service GmbH (0035) Am Grauen Stein, D-51105 Köln

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

	MANUFACTURER
	CLPL
Signature	
	Christopher Perkins
Full Name	
	Engineering Manager
Position	an a
	Woodward, Inc., Fort Collins, CO, USA
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Date	Na maka da da kana na mana mana ang kana na na mana na na mana na mana na mana na mana na mana na na na na na m

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### DECLARATION OF INCORPORATION Of Partly Completed Machinery 2006/42/EC

Manufacturer's Name:	WOODWARD, INC (WWD)	
Manufacturer's Address:	1000 E. Drake Rd. Fort Collins, CO, USA, 80525	3800 N. Wilson Ave. Loveland, CO, USA 80538
Model Names:	Large Electric Sonic Valve (LESV) Sizes 2", 3", 4" and 6", Class 300 and 6	500
This product complies, where applicable, with the following Essential Requirements of Annex I:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7	

The relevant technical documentation is compiled in accordance with part B of Annex VII. Woodward shall transmit relevant information if required by a reasoned request by the national authorities. The method of transmittal shall be agreed upon by the applicable parties.

The person authorized to compile the technical documentation:

Name:Ralf Friedrich, Group Director, Quality, EPSAddress:Woodward GmbH, Handwerkstraße 29, 70565 Stuttgart, Germany

This product must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

The undersigned hereby declares, on behalf of Woodward Governor Company of Loveland and Fort Collins, Colorado that the above referenced product is in conformity with Directive 2006/42/EC as partly completed machinery:

MANUFACTURER
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Signature
Suhail Horan
Full Name
Quality Manager
Position
WGC, Fort Collins, CO, USA
Place
04-Dec-2012
Date

5-09-1182 (REV. 10)

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