

Installation Procedure Supplement

Manual 35180 (Revision -, 5/2020) F-Series Actuator and Integrated Throttle Body (RoHS Compliant)

See Manual 35143 for complete installation, operation, maintenance, and certification information.

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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.

∴WARNING

Overspeed /
Overtemperature /
Overpressure

The engine should be equipped with an independent fuel shut-off device to protect against fuel leakage or damage to the engine with possible personal injury, loss of life, or property damage. The fuel shut off device must be totally independent of the engine control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.



General Precautions

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.



Revisions

This publication may have been revised or updated since this copy was produced. To verify that you have the latest revision, check manual 26455, Customer Publication Cross Reference and Revision Status & Distribution Restrictions, on the publications page of the Woodward website:

www.woodward.com/publications

The latest version of most publications is available on the *publications page*. If your publication is not there, please contact your customer service representative to get the latest copy.



Proper Use

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

Electrostatic Precautions

Electronic controls contain static-sensitive parts. Observe the following precautions to prevent damage to these parts:

- Discharge body static before handling the control (with power to the control turned off, contact a grounded surface and maintain contact while handling the control).
- Avoid all plastic, vinyl, and Styrofoam (except antistatic versions) around printed circuit boards.
- Do not touch the components or conductors on a printed circuit board with your hands or with conductive devices.

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.

NOTICE

Battery Charging Device

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.



Regulatory Compliance & Declarations

European Compliance for CE Marking:

These listings apply to stationary industrial markets only and are limited only to those units bearing the CE Marking.

EMC Directive: Declared to Directive 2014/30/EU of the European Parliament and of the Council of

26 February 2014 on the harmonization of the laws of the Member States relating to

electromagnetic compatibility (EMC)

RoHS Directive: Declared to 2011/65/EC COUNCIL DIRECTIVE of the European Parliament and of

the Council of 8 June 2011 on the restriction of the use of certain hazardous

substances in electrical and electronic equipment.

Exemptions in use: 7(c)-I

Other European and International Compliance:

Compliance with the following European Directives or standards does not qualify this product for application of the CE Marking. These listings only apply to stationary industrial markets.

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.

Pressure Equipment Exempt per Article 1.2(j) of 2014/68/EU where pressure is not a significant design

Directive: factor.

Other International Compliance:

These listings are limited only to those units bearing the appropriate marking. These listings only apply to vehicular markets.

UNECE: Type approved to UNECE Regulation 110 (14 pin versions only)

North American Compliance:

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

CSA: CSA Certified for Class I, Division 2, Groups A, B, C, & D, T3 at 105 °C Ambient for

use in Canada and the United States.

Certificate 1975931

Type 4 Enclosure Watertight





Special Conditions for Safe Use

This product is certified as a component for on-engine use. The final assembly is subject to acceptance by authority having jurisdiction.

Field Wiring must be suitable for at least 105 °C.

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

Connect the ground lug of the F-Series to earth ground.

The Type 4 enclosure rating on the F-Series Actuator is ONLY APPLICABLE on units marked "Type 4 Enclosure – Watertight"

The Ingress Protection rating of the control depends on the use of proper mating connectors. Refer to Table 3-1 in the Installation section of this manual for information on the proper mating connectors for use with this control.

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.

MARNING

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.

Do not clean equipment unless power has been switched off or the area is known to be non-hazardous.



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.

Ne pas nettoyer l'équipement 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.

NOTICE

Do not connect any cable grounds to "instrument ground", "control ground", or any non-earth ground system. Make all required electrical connections based on the product wiring diagram.



EU DECLARATION OF CONFORMITY

EU DoC No.:

00336-04-EU-02-01

Manufacturer's Name:

WOODWARD INC.

Manufacturer's Contact Address:

3800 Wilson Avenue Loveland, CO 80538 USA

Model Name(s)/Number(s):

F-Series Actuators and Integrated Throttle Body (ITB) Valves

The object of the declaration described above is in conformity with the following relevant Union harmonization legislation:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating

to electromagnetic compatibility (EMC)

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and

electronic equipment

Exemptions in use: 7(c)-I

Applicable Standards:

EN61000-6-2, 2005: EMC Part 6-2: Generic Standards - Immunity for Industrial

Environments

EN61000-6-4, 2011: EMC Part 6-4: Generic Standards - Emissions for Industrial

Environments

Conformity Assessment: Woodward EMC Conformity Assessment 00336-04-EU-EMC-06-02

This declaration of conformity is issued under the sole responsibility of the manufacturer We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

MANUFACTURER

Signature

Mike Row

Full Name

Compliance Engineering Supervisor

Position

Woodward, Fort Collins, CO, USA

26-Feb-20ai

Place

Date



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

File name: 00336-04-EU-02-03

Manufacturer's Name: WOODWARD INC.

Manufacturer's Address: 3800 Wilson Avenue

Loveland, CO 80538 USA

Model Names: F-Series Actuators and Integrated Throttle Bodies

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: Dominik Kania, Managing Director

Address: Woodward Poland Sp. z o.o., ul. Skarbowa 32, 32-005 Niepolomice, Poland

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

Signature
Mike Row

Full Name

Compliance Engineering Supervisor

Position

Woodward Inc., Fort Collins, CO, USA

Place

25-Feb-2020

Date

Document: 5-09-1182 (rev. 16)



Contacting Woodward

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
- Description of the Problem

- Name And Location Where The Control Is Installed
- Complete Woodward Part Number(S) and Serial Number(S)
- 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 www.woodward.com/directory.

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.

| | g , |
|--------------------------|-----------------------|
| Facility Phone Number | Facility Phone Number |
| | |
| Electrical Power Systems | Engine Systems |
| Products Used In | Products Used In |

Brazil -----+55 (19) 3708 4800

| China +86 (512) 6762 6727 |
|---------------------------------|
| Germany: |
| Kempen +49 (0) 21 52 14 51 |
| Stuttgart - +49 (711) 78954-510 |
| India+91 (129) 4097100 |
| Japan+81 (43) 213-2191 |
| Korea+82 (51) 636-7080 |
| Poland+48 12 295 13 00 |
| United States+1 (970) 482-5811 |
| |

Products Used In Engine Systems

| Brazil+55 | (19) 3708 4800 |
|--------------------|-----------------|
| China +86 | (512) 6762 6727 |
| Germany +49 (| 711) 78954-510 |
| India+9 | 1 (129) 4097100 |
| Japan+8 | 1 (43) 213-2191 |
| Korea+8 | 2 (51) 636-7080 |
| The Netherlands +3 | 31 (23) 5661111 |
| United States+1 | (970) 482-5811 |
| | |

Products Used In Industrial Turbomachinery Systems

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| United States+1 (970) 482-5811 |



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