



Installation Procedure Supplement

Manual 35223 (Revision -, 12/2023) STExcite Industrial Gas Turbine Ignition System – Ignition Cables 5450-2267 and 5450-2268

This document contains the following information:

- Where to obtain the complete installation, operation, and maintenance technical manual for the STExcite Industrial Gas Turbine Ignition System
- Important definitions
- Contacting Woodward or a Woodward Channel Partner
- Regulatory compliance and declarations



See Manual 35220 for complete installation, operation, maintenance, and certification information. Publications can be found on our website at <http://www.woodward.com>

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

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 completely 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.



This publication may have been revised or updated since this copy was produced. The latest version of most publications is available on the Woodward website.

<http://www.woodward.com>

If your publication is not there, please contact your customer service representative to get the latest copy.



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.

NOTICE

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 <http://www.woodward.com> for complete instructions (Manual 35220).

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 is a flat-rate program and includes the full standard Woodward product warranty (Woodward Product and Service Warranty 5-09-0690).

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.

Charges for the Replacement/Exchange service are based on a flat rate plus shipping expenses. You are invoiced the flat rate replacement/exchange charge plus a core charge at the time the replacement unit is shipped. If the core (field unit) is returned within 60 days, a credit for the core charge will be issued.

Flat Rate Repair: Flat Rate Repair is available for the majority of standard 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. All repair work carries the standard Woodward service warranty (Woodward Product and Service Warranty 5-09-0690) on replaced parts and labor.

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 and carry with it the full standard Woodward product warranty (Woodward Product and Service Warranty 5-09-0690). 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 authorization number
- Name and location where the control is installed
- Name and phone number of contact person
- 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 at <https://www.woodward.com/support>, which also contains the most current product support and contact information.

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

<u>Facility</u>	<u>Phone Number</u>
Brazil -----	+55 (19) 3708 4800
China -----	+86 (512) 8818 5515
Germany -----	+49 (711) 78954-510
India -----	+91 (124) 4399500
Japan -----	+81 (43) 213-2191
Korea -----	+82 (32) 422-5551
Poland -----	+48 (12) 295 13 00
United States -----	+1 (970) 482-5811

Products Used in Engine Systems

<u>Facility</u>	<u>Phone Number</u>
Brazil -----	+55 (19) 3708 4800
China -----	+86 (512) 8818 5515
Germany -----	+49 (711) 78954-510
India -----	+91 (124) 4399500
Japan -----	+81 (43) 213-2191
Korea -----	+82 (32) 422-5551
The Netherlands -----	+31 (23) 5661111
United States -----	+1 (970) 482-5811

Products Used in Industrial Turbomachinery Systems

<u>Facility</u>	<u>Phone Number</u>
Brazil -----	+55 (19) 3708 4800
China -----	+86 (512) 8818 5515
India -----	+91 (124) 4399500
Japan -----	+81 (43) 213-2191
Korea -----	+82 (32) 422-5551
The Netherlands -----	+31 (23) 5661111
Poland -----	+48 (12) 295 13 00
United States -----	+1 (970) 482-5811

Regulatory Compliance & Declarations

NOTE: The information shown here is specific to Ignition Cables 5450-2267 and 5450-2268. See Manual 35220 for complete information on the entire STExcite ignition system.

European Compliance for CE Mark

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

ATEX – Potentially Explosive Atmospheres Directive: Directive 2014/34/EU on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres.

Ignition Cables
II 2 G Ex db IIB+H2 T2 Gb
ETL23ATEX0302X

Other European Compliance

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

RoHS Directive: Restriction of Hazardous Substances 2011/65/EU:
Woodward turbomachinery systems products are intended exclusively for sale and use only as a part of Large Scale Fixed Installations per the meaning of Art.2.4(e) of directive 2011/65/EU. This fulfills the requirements stated in Art.2.4(c), and as such, the product is excluded from the scope of RoHS2.

Other International Compliance

These listings are limited only to those units bearing the IECEx certificate number:

IECEx: Certified for use in explosive atmospheres per certificate:

Ignition Cables
II 2 G Ex db IIB+H2 T2 Gb
IECEx ETL 23.0027X

Special Conditions for Safe Use:

Wiring must be in accordance with International Zone 1 Category 2 wiring methods as applicable, and in accordance with the authority having jurisdiction.

Field wiring must be suitable for at least 90°C for operating ambient temperatures expected to exceed 70°C.

Connect ground terminal to earth ground before installing the input power.

Do not connect more than one main power supply to any one fuse or circuit breaker.

Equipment described in this instruction manual (enclosures, cables, ignitors) are intended to only be used as a complete certified system; no substitutions allowed.

**WARNING**

SHOCK HAZARD – Do not remove the cover of the STExcite™ while AC power is applied. Hazardous voltages exist within the unit when AC power is applied. Wait two minutes after AC power is removed to allow the hazardous voltages to bleed off before opening the cover. Remember to remove power from both power input ports.

Specific Conditions of Use for IECEx and ATEX:**STExcite System (Exciter and Cables)**

- The ignition system shall only be used with the certified Woodward Inc. 603P960 Igniter.
- The maximum process temperature at the mounting threads of the igniter to the turbine combustor shall be no more than 480°C.
- No modification or repair shall be made on the flame paths.
- A tightening torque of 14 Nm shall be used on the proprietary igniter connector nut.

**WARNING**

EXPLOSION HAZARD – Do not apply power to the STExcite™ without first connecting both igniter cable assemblies to both the STExcite and to the igniters.

**WARNING**

In locations where high external humidity and internal temperature variations (e.g., frequent on-off cycles) may cause condensation inside the equipment, the interior should be periodically inspected.

**WARNING**

EXPLOSION HAZARD—Do not connect or disconnect while circuit is live unless area is known to be non-hazardous.

Woodward reserves the right to update any portion of this publication at any time. Information provided by Woodward is believed to be correct and reliable. However, no responsibility is assumed by Woodward unless otherwise expressly undertaken.

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WOODWARD

PO Box 1519, Fort Collins CO 80522-1519, USA
1000 East Drake Road, Fort Collins CO 80525, USA
Phone +1 (970) 482-5811 • Fax +1 (970) 498-3058


Email and Website—www.woodward.com

EU DECLARATION OF CONFORMITY

EU DoC No.: 00662-EU-02-03
Manufacturer's Name: WOODWARD INC.
Manufacturer's Contact Address: 1041 Woodward Way
 Fort Collins, CO 80524 USA
Model Name(s)/Number(s): Ignition Cables P/Ns 5450-2267, 5450-2268
The object of the declaration described above is in conformity with the following relevant Union harmonization legislation: Directive 2014/34/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 equipment and protective systems intended for use in potentially explosive atmospheres
Markings in addition to CE marking:  II 2 G Ex db IIB+H2 T2 Gb
Applicable Standards:
ATEX: EN IEC 60079-0:2018 – Explosive atmospheres – Part 0: Equipment – General requirements
 EN 60079-1:2014 – Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures “d”
Third Party Certification: ETL23ATEX0302X
 Intertek Testing Services NA, Inc. (2903)
 14920-135 Ave, Edmonton, AB, T5V 1R9 CANADA
Conformity Assessment: ATEX Annex IV - Production Quality Assessment, 01 220 113542
 TUV Rheinland Industrie Service GmbH (0035)
 Am Grauen Stein, D51105 Cologne

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
 Joseph Driscoll
Full Name
 Engineering Manager
Position
 Woodward, Fort Collins, CO, USA
Place
 12/13/23
Date