



Instructions for Installation and Operation of the Ampgard Isolation Switch Remote Operator

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 **DANGER**

Read and understand this and other supplied instructions and drawings in their entirety before installing or operating device. **Adjustment, repair and maintenance of these controllers must be performed by qualified personnel. A qualified person is one who is familiar with the construction and operation of this equipment and the hazards involved.**

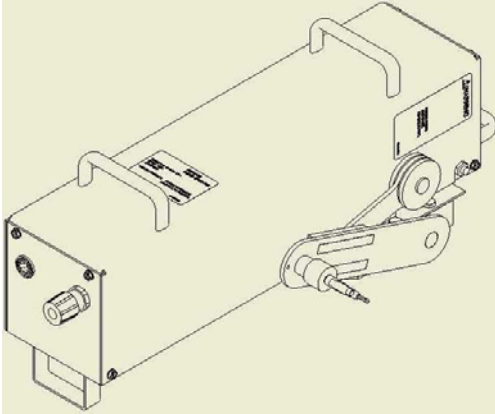
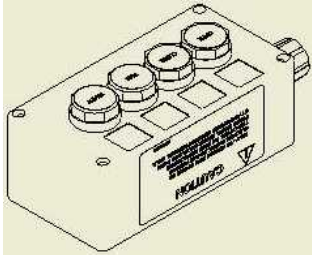
Section 1 – Introduction

1.1 Overview

The remote operator is a device which can open or close the isolation switch of an Ampgard starter, through the use of a pendant assembly at a distance of up to 30 feet away from the equipment being operated. The medium voltage doors of the Ampgard starters must be equipped with the appropriate mounting studs before the remote operator can be used. If these studs were not factory installed, they can be added through the use of the door modification kit described in section 1.3 below.

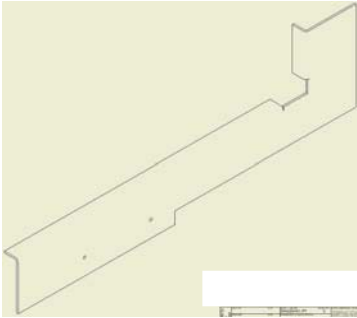

1.2 Included Items

The operator consists of two main components, the base operator assembly and the pendant assembly.

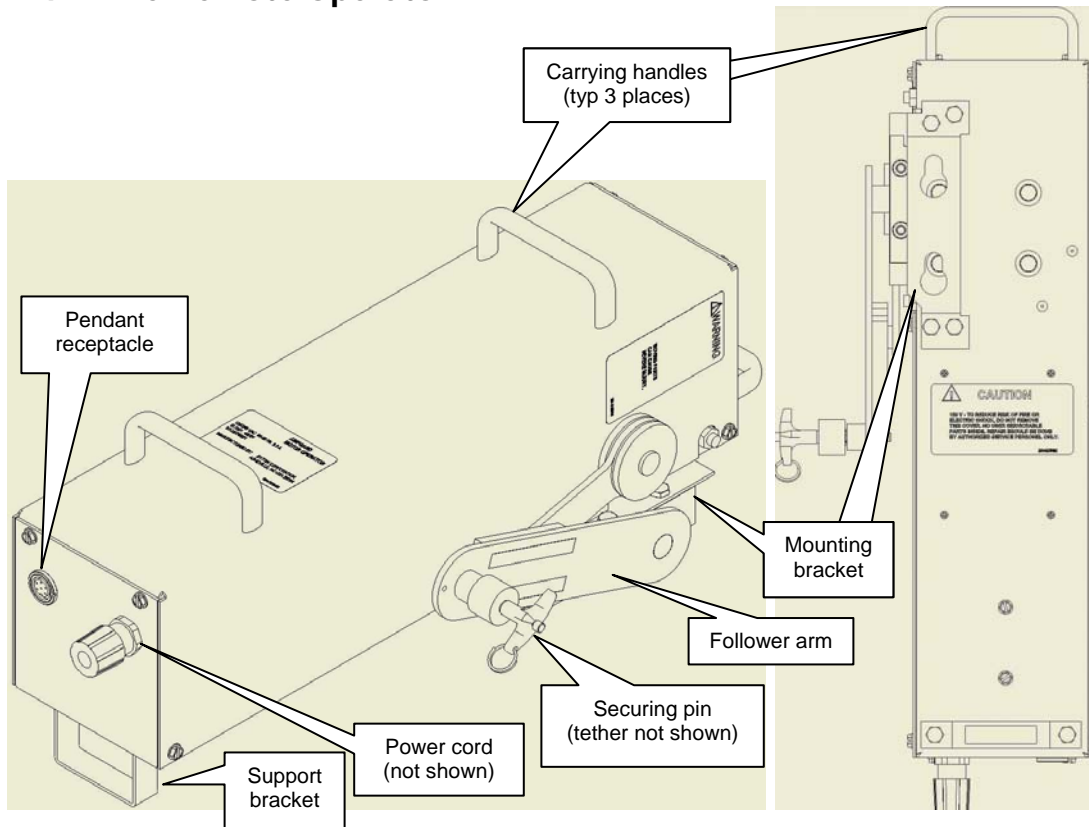
Part #	Description	Qty	Image
87C0576G01	Remote Operator (includes 6' power cord)	1	
87C0576G02	Pendant Assembly (includes 30' cord)	1	

1.3 Door modification kit (87C0576G03)

If your starters do not include the two required mounting studs, a door modification kit will be required. Each kit includes the following:

Part #	Description	Qty	Image
25A4294H01	Drilling Template	1	
25A4282H01	Mounting stud	2	
70045AB0CC	M8 X 16 mm hex screw	2	-
70550AB10T	8mm helical lock washer	2	-
70540AL10T	M8 x 16mm OD flat washer	2	-

1.4 The Remote Operator



1.5 The Pendant Controller

The pendant controller can be removed from the operator for ease of transportation or storage, but must be attached in order to operate the device.

READY (amber light) – Indicates if the device can be operated.

RUN (red light) – Indicates when the operator is in motion.

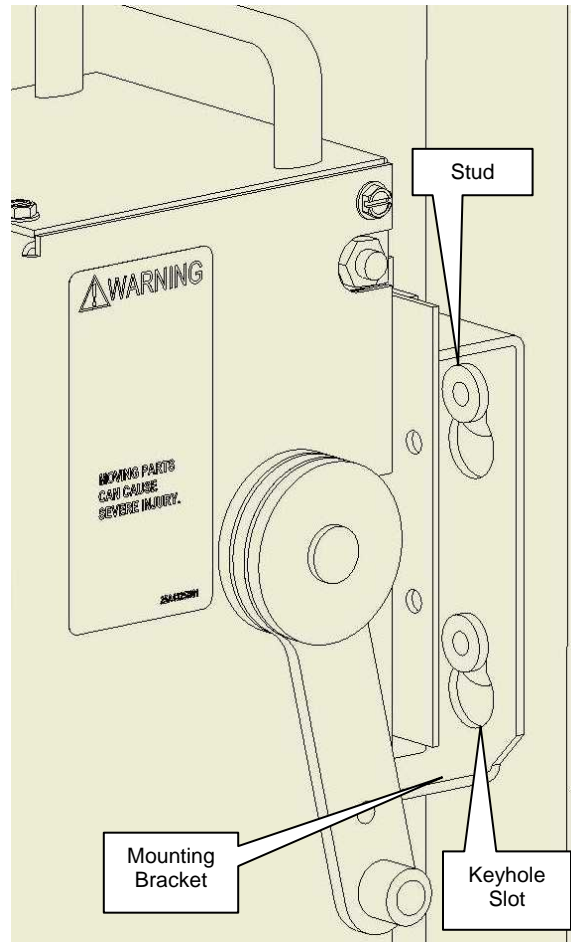
OPEN (green button) – Gives the operator the command to open the isolation switch.

CLOSE (red button) – Gives the operator the command to close the isolation switch.

Section 2 – Installation and Removal

2.1 Installation

1. Check that the follower arm of the motor operator is in either the “open” or “closed” position to match the isolation switch handle on which it is to be mounted. If it is not in the correct position, follow the operation instructions below to reposition it.
2. Ensure the operator is not plugged in
3. Check that the hole in the isolation switch handle is clear and the securing pin will fit easily. It may be necessary to remove some flash from the inside of the hole to ease installation.
4. Remove the securing pin from the follower arm
5. Using the grab handles, lift the operator into position, with the mounting bracket facing the door. When positioning the operator, take care to avoid interference between the end of the follower arm and the isolation switch handle.
6. Fit the large part of the keyhole slots over the studs, then slide the operator down so the studs are engaged in the slots. Ensure both studs are engaged with the bracket and the operator is seated fully down. The pivot of the follower arm should align with the pivot of the isolation switch handle.
7. Depressing the button at the center of the T handle, install the securing pin through the isolation switch handle and into the follower arm.
8. If the pendant is not already attached, install it by screwing its connector into the receptacle on the operator.
9. Plug in the operator to a standard household electrical outlet.
10. After a short delay, the READY light should illuminate. If not, see Troubleshooting section.



2.2 Removal

1. Remove the securing pin from the isolation switch handle and ensure that the follower arm is not snagged on the handle.
2. Unplug the remote operator's power cord.
3. If desired, detach the control pendant
4. Grasping the handles, lift the remote operator straight up to disengage the mounting bracket from the studs. It may be useful to press directly upwards on the bottom of the operator.
5. Pull the operator away from the door to remove.

2.3 Installing Mounting Studs

(Skip this section if your equipment is already equipped with mounting studs)

In order to use the remote operator with equipment that lacks mounting provisions, the two door studs must be installed in the correct location on the Starter door. Follow these instructions for locating and installing these studs. Carefully locating the mounting holes is critical for good alignment and smooth operation of the operator.

CAUTION: Because the Starter compartment door must be opened to install the studs, installation should only be performed by qualified personnel. A qualified person is one who is familiar with the construction and operation of this equipment and the hazards involved.

1. After ensuring that it is safe to do so, open the Starter compartment door.

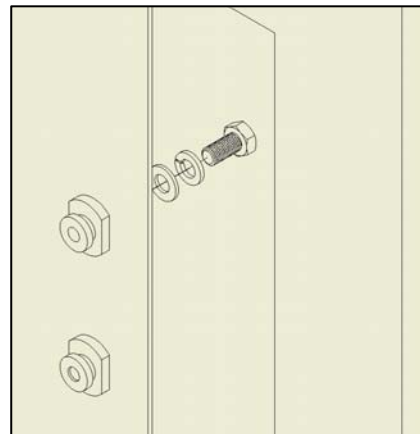
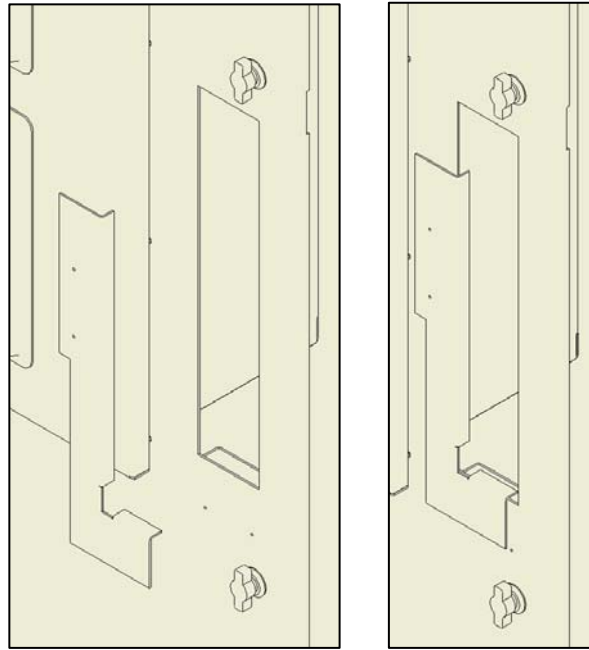
2. Place the drilling template (25A4294H01) into the rectangular hole for the isolation switch handle. Seat it securely in the opening, with the two flanges resting on the inner edges of the hole. You may wish to temporarily secure it in place with adhesive tape.

3. Insert a center punch into each of the two holes in turn and mark the hole location. DO NOT attempt to drill holes through the drill template. This is not a sufficiently accurate method of locating the holes.

4. With the hole locations marked, remove the template from the door.

5. Drill out the two holes with a 5/16" drill.

6. Using M8 hardware (70045AB0CC, 70045AB10T, 70045AL10T) install the two mounting studs (25A4282H01) on the outside of the door. The larger flange with wrench flats goes toward the door, with the smaller, round flange pointing away.



Section 3 - Operation

3.1 Operation

1. Install the operator with pendant per Installation instructions above.
2. Take the pendant to a safe location or distance from the equipment. The pendant cord is 30 feet long.
3. Ensure that no mechanical interlocks would interfere with the operation of the isolation switch handle, and that no personnel are in the vicinity of the equipment.
4. Press OPEN or CLOSE button on the pendant to initiate operation. The RUN light will illuminate and the READY light will go out. The operator will run until it fully reaches the opposite position unless it encounters an error. It is not designed to be stopped once it has been given an OPEN or CLOSE command.
5. When the operator has finished moving, the RUN light will go out and READY will illuminate.

3.2 Troubleshooting

CAUTION: The remote operator DOES NOT have the ability to protect against injury if body parts become entrapped in the operating linkages! Follow the safety labels on the unit and keep clear of it while it is running.

The remote operator is designed to avoid damage to the isolation switch caused by a mechanical obstruction, such as an engaged safety interlock:

Overload protection: When the motor encounters greater resistance than expected in the isolation switch mechanism, it will stop running. The READY light will flash, indicating an error condition. The unit will not be useable until it is reset (see below).

Friction clutch: If the overload protection circuit should somehow fail or be bypassed, the operator is constructed so that it will begin slipping when it encounters substantial resistance. In the event that the clutch begins slipping, the unit will continue to run until it is stopped by performing a RESET. The occurrence of this condition indicates a possible problem with the remote operator. If this condition occurs, discontinue use of the unit and contact your Eaton representative for assistance.

Resetting the remote operator:

To perform a manual reset, press and hold down both OPEN and CLOSE buttons until the READY light starts blinking. The unit does not reset until both buttons are released.

		RUN light		
		Steadily Lit	Blinking	Not Lit
READY light	Steadily Lit	Unit has power and is currently opening or closing. Light will remain lit until unit stops running. If this condition persists for more than 10 seconds, the friction clutch may be slipping. To stop the unit, perform a RESET operation.	n/a	Unit has power and is ready to operate
	Blinking	RESET command has been given. Release buttons to complete reset.	RESET command has been given. Release buttons to complete reset.	RESET command has been given. Release buttons to complete reset.

	Not Lit	n/a	Unit has stopped due to overload error. Clear overload by performing RESET. Check equipment for the cause of the overload before continuing.	Unit has inadequate power. Check that it is plugged in to an appropriate power supply.
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