

7700 ION

Analog Input Card Retrofit Installation Instructions



Danger

During normal operation of this device, hazardous voltages are present which can cause severe injury or death. These voltages are present on the terminal strips of the device and throughout the connected potential transformer (PT), current transformer (CT), status input, relay, and control power circuits. Installation and servicing should be performed only by qualified, properly trained personnel. See the device's *Installation and Basic Setup Instructions* document for additional warnings.

Warning

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the operator will be required to take whatever measures may be required to correct the interference.

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Introduction

This document provides step-by-step instructions for installing an Analog Input Card into a 7700 ION. The Analog Input Card provides four analog inputs, based on the ordering options you specified.



It is important that all instructions provided in this document are performed exactly as described to avoid injury and ensure that the 7700 ION is protected from any damage.

Verifying Analog Input Card Versions

Before installing the Analog Input Card, ensure that the card you received has been configured with the appropriate inputs for your installation. On the card, each of the four AUX inputs are listed and will be marked with the type of inputs the card has been configured with. For example, in the diagram below, the 0-20mA input was configured for all four channels.



NOTE

If you are installing a replacement Analog Option card, the following steps must be performed in addition to the procedures detailed in this guide:

- ◆ Power down the 7700 ION.
- ◆ Remove the existing card.
- ◆ Power cycle the meter (turn it on and then off again).
- ◆ Insert the replacement card.

	1	2	3	4
0 - 1 V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0 - 10 V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0 - 1 mA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0 - 20 mA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

If the Analog Input Card sent to you does not have the correct configuration, contact Power Measurement or your local sales representative for replacement.

Installation Procedure

You will require the following tools to install the Analog Input Card:

1. One Philips screwdriver.
2. Anti-static wrist strap or equivalent protection.

Preparing the 7700 ION



During normal operation of the 7700 ION, hazardous voltages are present which can cause severe injury or death. These voltages are present on the terminal strips of the device and throughout the connected potential transformer (PT), current transformer (CT), status input, relay, and control power circuits. Installation and servicing should only be performed by qualified, properly trained personnel.

1. Open all PT fuses (or direct voltage input fuses) and close all CT shorting blocks.
2. Turn off all power to the 7700 ION and disconnect the Line and Neutral (or DC power) wires from the Supply Power inputs to the unit.
3. Disconnect all other wiring (or power off all other circuits) which may present potentially hazardous voltage levels to the unit, such as connections to the relay outputs, status inputs, etc.
4. Ensure that all cables still connected to the 7700 ION are **NOT** live.

Removing the Base Unit Cover



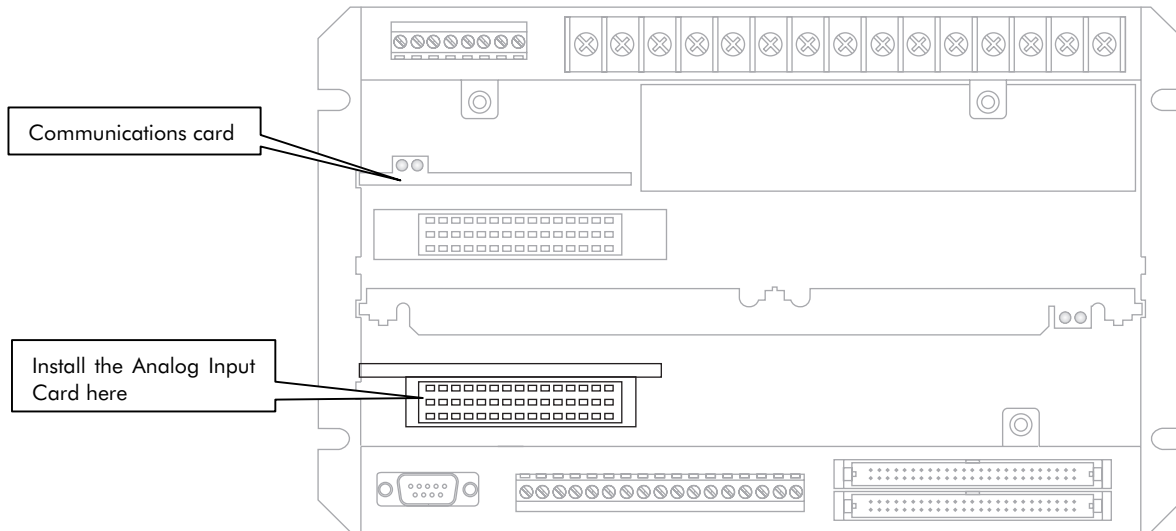
The components inside the 7700 ION are extremely sensitive to static-electric discharge. To prevent damage to the unit, wear an anti-static wrist strap at all times when working inside the unit. Failure to use proper equipment during servicing will void the 7700 ION warranty.

The cover of the 7700 ION can be removed while the unit is still mounted in its switchgear panel (or other mounting location).

1. Remove the four chassis screws on the top panel of the 7700 ION with the screwdriver.
2. Remove the cover from the 7700 ION and put it aside.

Locating the Analog Input Card Socket

Once the cover is removed, you will be able to see inside the base unit. Find the side of the 7700 ION that has the I/O Expansion Board connectors, the Auxiliary and Status inputs, and the MGT connector. There is a socket inside the base unit, parallel to the Communications Card. Refer to the following diagram.



Analog Input Card Installation

The Analog Input Card consists of a polarized connector attached to a circuit board. The connector protrudes from the component side.

CAUTION

Touch the CPU board only by the sides of the board to prevent damage to its components.

To install the Analog Input Card:

1. Make sure you are free of static electricity. (You should be wearing an anti-static wrist strap or using equivalent protection.)
2. Hold the Analog Input Card by the sides and lower it into the base unit with the component side facing away from the communications card.
3. Slide the edge of the card down the slot along the edge of the chassis.
4. Line up the connector with the socket and press the Analog Input Card firmly into place. The socket and the connector are polarized, so the pins in the card will not fit into the socket if the card is not oriented correctly.
5. Ensure that the Analog Input Card is securely inserted into the socket.

Final Steps

1. Place the rear cover back on the 7700 ION base unit. Use the Philips screwdriver to replace the four chassis screws with their lockwashers.
2. Reinstall the Line and Neutral (or DC power) wiring to the Control Power inputs of the unit.
3. Reconnect all other wiring (or re-enable all other circuits). Close the PT fuses (or direct voltage input fuses) and open the CT shorting blocks.
4. Turn on power to the 7700 ION and verify the correct operation.

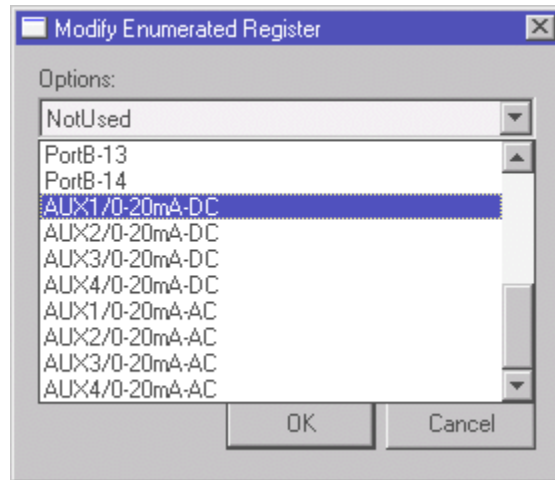
Verifying the Installation

To verify that the Analog Input Card was installed properly, run PEGASYS ION Designer, open the 7700 ION, and add an Analog Input module. Right-click the Analog Input module to display its setup registers, then double-click the Port setup register. Scroll to the bottom of the Options list; if the Analog Input Card was installed correctly, the Port setup register will include “AUX” entries near the bottom of the list.



NOTE

If the Analog Input Card was not installed properly, the AUX entries will not appear when you try to configure the “Port” setup register of an Analog Input Module.





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