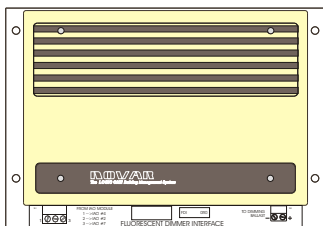


Fluorescent Dimmer Interface Installation Instructions

Description

Novar's Fluorescent Dimmer Interface (FDI) is a dedicated interface device that is connected to Novar's IOM Analog Output module (IAO-1010) to allow the operation of industry-standard 0- to 10-volt control-input fluorescent dimming ballasts.



Following installation, the FDI helps the IAO drive the dimming ballasts through their entire range of light levels. Both of these devices are components of Novar's Logic One® Building Management System.

Novar's IAO converts a single, pulsing input/output module (IOM) output into a 4- to 20-mA signal. For information concerning the IAO, refer to Novar's *IOM Analog Output Module Installation Instructions* shipped with the IOM Analog Output Module.

This document provides instructions for mounting the Fluorescent Dimmer Interface, wiring it to the IAO and the dimmer ballasts, and checking the installation.

Specifications

Input/Output Ranges

Input Control Range:	4–20 mA from the IOM Analog Output Module
Output Range:	0–10 volts (sinking current from dimming fluorescent ballasts)
Maximum Sinking Current:	1500 mA (allowing control of several thousand ballasts depending on ballast manufacturer specifications)

Operating Environment

Temperature:	32 to 158 F (0 to 70 C)
Humidity:	0 to 99% Relative, noncondensing

Physical Dimensions

Height:	5.5 inches
Width:	8 inches
Depth:	1.875 inches
Weight:	1 lb

Precautions

The following precautions should be taken during installation:

- Observe all national and local electrical codes.
- Observe voltage and current limits.
- Make sure that the Fluorescent Dimmer Interface is connected to the dimmer ballasts low voltage 0–10 VDC control wiring.



Mounting the FDI

The Fluorescent Dimmer Interface should be mounted within easy access of the IAO. It must not interfere with the proper operation of other equipment. It is *not* intended for outdoor use.

The following procedure should be used to mount the FDI (refer to Figure 1, as necessary).

Step	Procedure
1	Position the unit against the wall where it is to be mounted and mark the location of the four mounting holes.
2	Drill holes at the locations marked on the mounting surface.
3	Position the module over the holes and insert and tighten screws to secure the module.

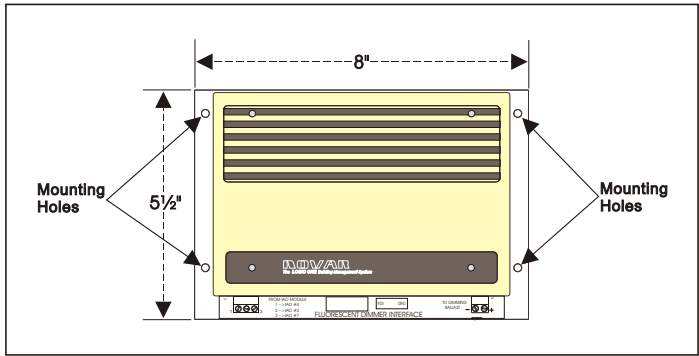


Figure 1. Mounting holes for the Fluorescent Dimmer Interface

NOTE! If the signal from the ballasts is not isolated from ground, the FDI device must be isolated from ground.

Wiring the FDI to the IAO

The Fluorescent Dimmer Interface should be wired to the IOM Analog Output Module with two-conductor cable (Novar WIR-1010, Belden 8761, or equivalent). Table 1 and Figure 2 show the proper wiring connections.

WIRE FDI TERMINAL	TO IAO TERMINAL
No. 1	No. 4
No. 2	No. 2
No. 3	No. 7

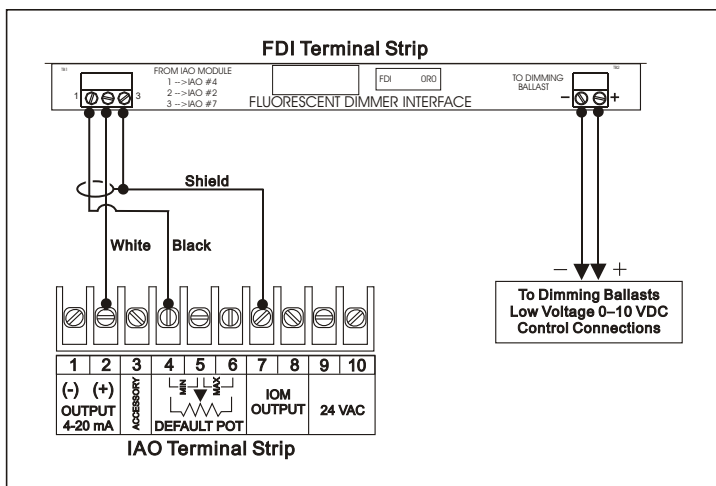


Figure 2. Wiring connections between the FDI and the IAO

Wiring the FDI to the Dimmer Ballasts

Before the Fluorescent Dimmer Interface is connected to the low-voltage 0- to 10-VDC control wiring of the dimming ballasts, the ballasts and lamps should be checked with a voltmeter.

Step	Procedure
1	Turn the power to the ballasts and lamps to full brightness and check the two control wires from the ballast. <ul style="list-style-type: none"> ■ The reading should be 10–20 VDC.
2	Put the voltmeter on the high-amps scale (2- or 20-amps DC) and check the current reading from the two control wires. <ul style="list-style-type: none"> ■ It should be less than 1.5-amps DC with the lamps dimming fully during the reading.

If the ballasts and lamps check out successfully, connect the wiring between the dimming ballasts and the Fluorescent Dimmer Interface, observing correct polarity.

Checking Installation

When installation is complete, the following items should be checked to make sure the module operates correctly.

- Make sure that the Fluorescent Dimmer Interface unit is securely mounted to the wall.
- Make sure that all wiring connections are tight.
- Drive the IAO to 100% and to 0% to make sure that the brightness of the lamps changes.

Model and Part Numbers

The part numbers shown in Table 2 should be used to order the necessary Novar parts.

PRODUCT	MODEL NO.	PART NO.
Fluorescent Dimmer Interface	—	724150000
IOM Analog Output Module	IA0-1010	724000000
Two-conductor, shielded cable (Belden 8761 equivalent)	WIR-1010	709001000

Regulatory Compliance

Electromagnetic Compatibility (EMC)

Federal Communications Commission (FCC)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE! This device has been tested and found to comply with the limits established for Class A digital devices. It is intended to be used in a commercial environment. Operation of this equipment in residential environments may cause harmful interference, in which case the user may be required to correct the interference at his own expense.

CAUTION! Any changes or modifications not expressly approved by Novar Controls Corporation could void your authority to operate this equipment.

Industry Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled *Digital Apparatus*, ICES-003, of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouiller: *Appareils Numériques*, NMB-003, édictée par l'Industrie Canada.

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