

Current Transducer Module Installation Instructions

Regulatory Compliance

Safety

This device has been tested and found to be in compliance with the requirements set forth in UL 916, Energy Management Equipment, and is listed by Underwriters Laboratories, Inc., for installations in the United States.

This device has been tested and found to be in compliance with the requirements set forth in C22.2, No. 205-M1983, Signal Equipment, and is Certified by Underwriters Laboratories, Inc., for installations in Canada.

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.

Disclaimer

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Novar Controls Corporation
6060 Rockside Woods Blvd., Cleveland, OH 44131
Tel: 800.348.1235 www.novarcontrols.com

Description

The Current Transducer Module (CTM) is a Logic One[®] module that provides eight analog current transformer inputs in a metal enclosure for system use and alarms. The CTM is connected directly to an executive module.

This document provides instructions for installing and wiring the CTM, setting the module address, and checking its operation.

Specifications

Agency Approvals

Listed device:	CUL/UL E90949
Standards used:	UL 916, Energy Management Equipment CSA C22.2, No. 205-M1983, Signal Equipment

Power Requirements

Uses DC <i>or</i> AC:	DC Class 2:	Voltage: 24 VDC Current: 28 mA
	AC Class 2:	Voltage: 24 VAC Current: 4.8 VA

Inputs

Eight	0–1.5 amps full scale For 0–30 amp reading using 100/5 current transformer (Novar Controls Part No. 7330800)
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Operating Environment

Temperature:	32° to 158°F (0° to 70°C)
Humidity:	0 to 95% Relative, noncondensing

Physical Dimensions

Length:	16.6 inches
Width:	2.75 inches
Depth:	1.1 inches
Weight:	1 lb, 5 oz.

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Precautions

Take the following precautions during installation:

- Observe all national and local electrical codes.
- Make sure the 24 volts is at ground reference if multiple CTMs are to be powered by a single 24-V DC power source.
- Make sure plus-to-plus (+ to +) and minus-to-minus (– to –) wiring is used if multiple units are to be powered by one isolated 24-V AC secondary transformer.

WARNING! Opening the secondary leads of a current transformer under load can cause hazardous voltages that can injure personnel or damage the current transformer.
De-energize the circuit before disconnecting the current transformer.

Mounting the CTM

The CTM can be mounted to a wall or in a control panel with other Logic One components. Use the following procedure and refer to Figure 1, as necessary, to mount the CTM.

Step	Procedure
1	Select a suitable, dry location for the module and place the metal enclosure against the mounting surface. <ul style="list-style-type: none"> ■ Although the CTM’s design protects it from some environmental conditions, it is not waterproof. Make sure the module is mounted in a dry location.
2	Mark the mounting surface to show the location of the two mounting “holes” on the side edges of the module.
3	Drill holes into the mounting surface in the locations marked. <ul style="list-style-type: none"> ■ Insert hollow-wall anchors if mounting the module against paneling or drywall.
4	Place the module against the mounting surface and insert and tighten screws to secure the module.

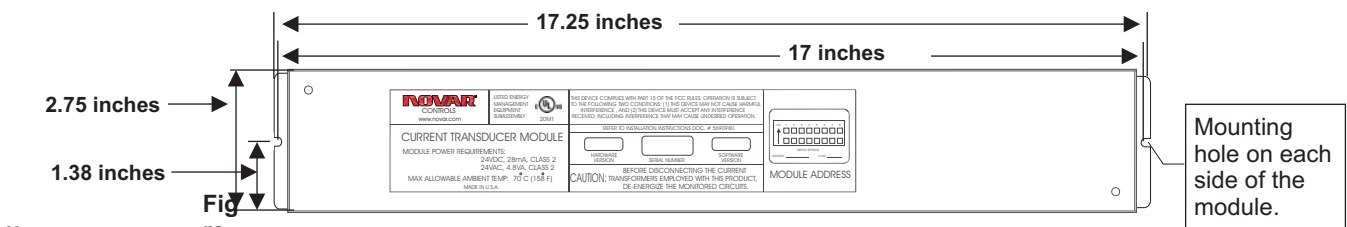


Figure 1. Mounting holes on the CTM

Wiring the CTM

The terminal strip can be removed, if necessary, to make the wiring connections. Use the following procedure to access the terminal strip and prepare to make the connections.

Step	Procedure
1	Remove the cover of the enclosure by removing the screws in the upper left and lower right corners of the cover (see Figure 1).
2	Remove the screw and clamp holding the foam rubber pads at the right end of the module and pull the cable between the two layers of foam rubber. <ul style="list-style-type: none"> ■ The screw, clamp, and foam rubber allow the wires to pass through but help protect the circuit board from environmental conditions.

NOTE! Return the foam rubber pads and clamp to their original position and reinsert the screw when the wiring connections have been completed.

Sensor Inputs

The CTM has eight inputs for connecting current transformers (see Figure 2) and is designed to be used with 100/5 current transformers. The maximum recommended wire length to a current transformer is 25 feet.

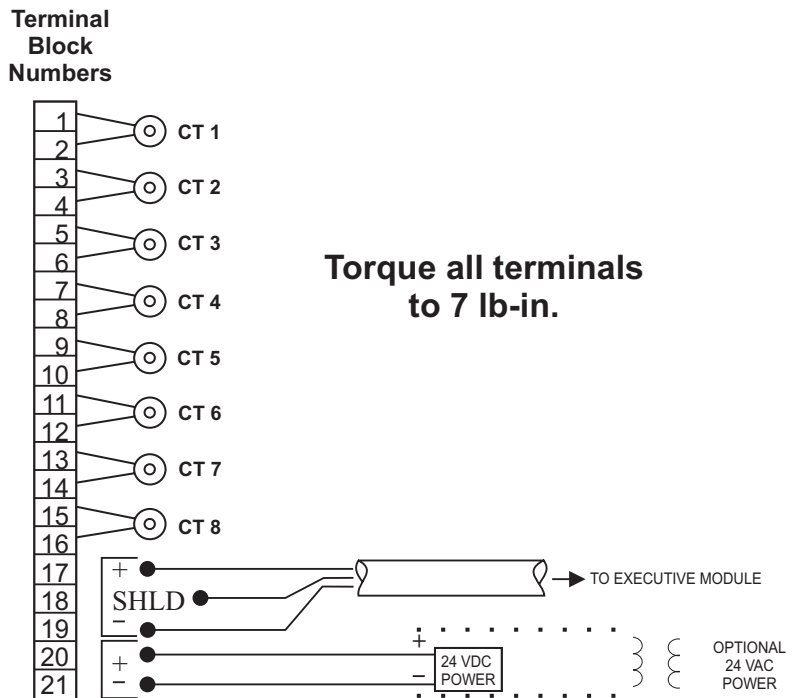


Figure 2. CTM wiring

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Connecting Network Communications

The power and communication network connections can be combined into a single four-conductor, shielded cable (Novar Controls Part No. WIR-1020 or equivalent recommended) to connect the CTM to the executive module. If separate cables are used, Novar Controls WIR-1010 is recommended for the communication wiring.

- Connect the CTM to one of the network communication ports on the EP/2, Savvy, or Lingo.
- Connect the CTM to the Module Network terminals on the EC.

The module communication connection on the CTM is labeled “Module Network” and is located in the upper right corner, next to the power connection (see Figure 3). A communication LED located in the lower left corner should blink on and off intermittently when the power is turned on and proper communication is occurring. If the LED does not blink, there is a loss of communication and/or power.

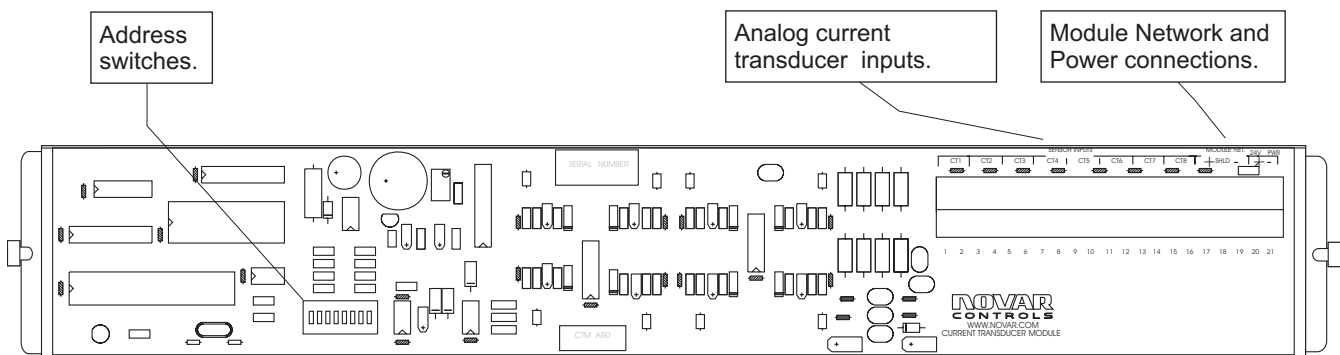


Figure 3. CTM circuit board

Setting the Address

Every Logic One module must have a unique address for the executive module to identify it. Addresses are assigned in the software during system programming. The system printout shows the address for the CTM being installed.

The address switches are located on the left side of the circuit board (see Figure 3). Set the switches to the correct address from 00 to 63 (see Figure 4) and record the setting on the module address label provided on the metal enclosure.

NOTE! Address 00 should not be used by the CTM when operating on an Executive Controller (EC) or Savvy. The IOM section uses address 00.

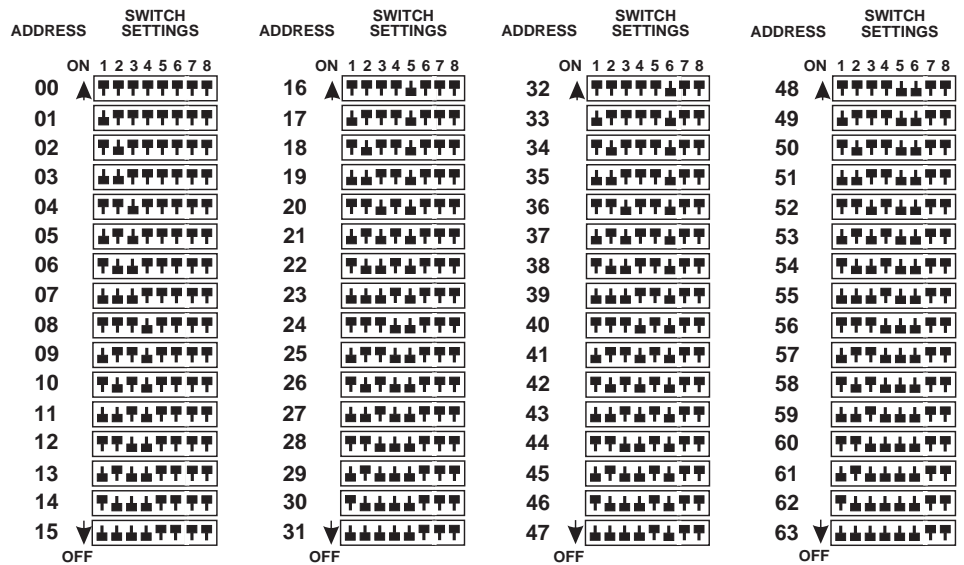


Figure 4. CTM address settings

Supplying the CTM with Power

The CTM can be powered with either 24-VAC or 24-VDC (refer to the “Specifications” section for details). Make sure the power supplies are properly sized to handle the load.

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Checking Operation

- Double-check all wiring before turning on the power.
 - Make sure the communication LED is blinking intermittently, indicating proper communication between the CTM and the executive module.
 - Check the executive module for alarm messages indicating faults, communications loss, or malfunctions.
 - Use the executive module's keypad and graphic display to monitor the system and alter the control settings to assure proper equipment response.
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Model Numbers

Use the model numbers shown in Table 1 to order the necessary products.

PRODUCT	MODEL NO.	PART NO.
Current Transducer Module	CTM	733033000
Four-conductor cable (Belden equivalent No. 9155)	WIR-1020	709002000
Two-conductor cable (Belden equivalent No. 8761)	WIR-1010	709001000
Current Transformers (8 required)	—	733080000
24-VAC Transformer 40 VA, Class 2	24V-XFR	730090000
