



Infosystem Remote Touchscreen 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 brouilleur: *Appareils Numériques*, NMB-003, édictée par l'Industrie Canada.

Disclaimer

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Description

Novar Controls' remote touchscreen can be added to the Savvy[®] and Lingo[®] Energy Infosystems to provide user-friendly access to the Energy Infosystems. It can be mounted in an office or other convenient location and used to check equipment status, alter operating parameters, and view critical facilities management information.

This document provides instructions for mounting the installation bracket, wiring the module, installing the electronics assembly, and checking the installation.

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

Voltage & Consumption:	24 VAC, 10 VA, Class 2 or 24 VDC, 250 mA, Class 2
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Operating Environment

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

Physical Dimensions

Height:	7 inches
Width:	9 inches
Depth:	3 inches
Weight:	2 lb 1 oz

Precautions

Take the following precautions during installation:

- Observe all national and local electrical codes.
 - Turn off all power before installing and wiring this module.
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Mounting the Bracket

Preparing the Mounting Surface

NOTE! The last page of these instructions contains a template that can be removed and used to mark the mounting surface.

Use the following procedure to prepare the mounting surface for the bracket that will hold the remote touchscreen.

Step	Procedure
1	Position the template supplied with these instructions (see last page) against the mounting surface <i>with the arrow pointing upward.</i>
2	Mark the mounting surface to show the locations of the: <ul style="list-style-type: none">■ Four mounting holes.■ Area to be cut out (indicated on the template by a large “X” and the word “Cutout”).
3	Cut out the area marked on the mounting surface (see Step 2).
4	Drill a ¼-inch hole in each of the mounting hole locations marked on the mounting surface (see Step 2).

Positioning and Fastening the Bracket in Place

The mounting bracket consists of the section that will sit flat against the mounting surface and a section on each of the four sides of the cutout area that has been bent back to be inserted into the cutout area. The upper and lower sections that are bent back contain the pieces that will be used as the backing strips (see Figure 1) when the bracket is mounted.

Use the following procedure and refer to Figure 1, as necessary, to mount the bracket.

Step	Procedure
1	<p>Fold the backing strips (see Figure 1) back and forth until they break away from the bracket.</p> <hr/> <p>NOTE! Each backing strip is attached to one side of the bracket with a plastic tie to prevent it from getting lost once it is broken away from the bracket. Do not remove these ties.</p> <hr/>
2	<p>Position the bracket against the front of the mounting surface, arrow pointing up, so that the mounting holes align with the holes drilled in the surface.</p>
3	<p>Push the bracket gently into the cutout area.</p>
4	<p>Position the backing strips flat against the <i>back</i> (or inside) of the mounting surface, aligning the mounting holes on the strips with those in the surface and the bracket.</p> <ul style="list-style-type: none"> ■ The heads of the threaded screw holes on the strips should be on the outside of the strip, away from the mounting surface.
5	<p>Insert the 1-inch mounting screws (supplied) through the bracket, mounting surface, and backing strip screw heads and partially tighten.</p>
6	<p>Adjust the bracket to make sure it is level and finish tightening the screws to secure the bracket to the mounting surface.</p>

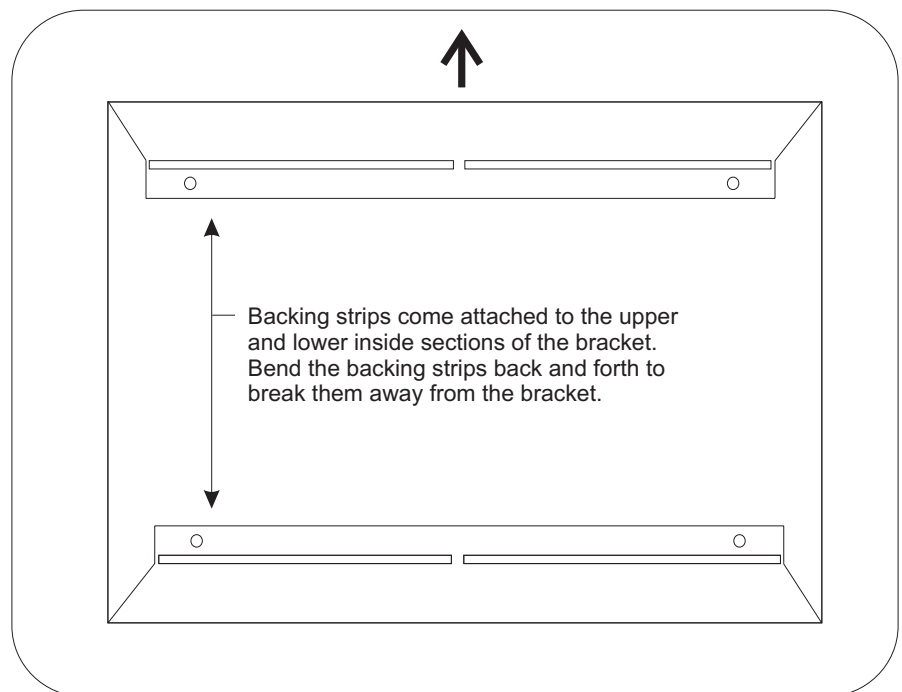


Figure 1. Remote touchscreen bracket with backing strips still attached

Wiring the Remote Touchscreen

The Infosystem Remote Touchscreen can be wired to a Savvy or a Lingo. Instructions for wiring each are provided below.

Savvy Wiring

The touchscreen can communicate to a Savvy via a standard Category 5 Ethernet cable or an RS-485 communications cable.

- Ethernet must be used if the system contains *more* than one touchscreen, integral or remote. The connections are as follows:
 - Power
Connect 24 volts AC or DC power to the remote touchscreen at Terminals 4 and 5. For DC power, Terminal 4 is positive and Terminal 5 is negative or ground.
 - Ethernet
Connect the 10Base-T Ethernet connection of the touchscreen and the 10Base-T connection of the Savvy to Ethernet hubs. If the touchscreen and the Savvy are within 330 feet of each other, connect them directly using an Ethernet crossover cable in place of the hubs.
- RS-485 or Ethernet can be used if the system contains just one touchscreen, integral or remote. The Ethernet connections would be the same as those listed above. The RS-485 connections are as follows:
 - Power
Supply 24 volts AC or DC power to the remote touchscreen. The Savvy panel can supply 24VDC power via a four conductor cable (Belden 9155, Novar Controls WIR-1020, or equivalent). Use the following procedure to connect the wiring between the remote touchscreen and the Savvy. Refer to Figure 2, as necessary.

Step	Procedure
1	Turn off all power to the main module and the remote touchscreen before making any wiring connections.
2	Connect the wires to the remote touchscreen terminal strip and the main module as indicated in Table 1 below. <ul style="list-style-type: none">■ If necessary, the remote touchscreen's terminal strip can be removed to facilitate the wiring.
3	Insert the wiring into the white plastic wire retention clamp on either side of the mounting bracket and twist the clamp to close it. <ul style="list-style-type: none">■ This will secure the wiring and prevent it from getting lost inside the mounting surface.
4	Make sure all wiring connections are correct and secure.

Infosystem Remote Touchscreen Installation Instructions

Table 1. Remote Touchscreen Wiring Connections		
WIRE	CONNECTS TO THE REMOTE TOUCHSCREEN AT	CONNECTS TO THE SAVVY AT
Red	Terminal 1 (+)	Terminal 73 (+)
Shield	Terminal 2 (Shield)	Terminal 72 (Shield)
Black	Terminal 3 (-)	Terminal 71 (-)
White	Terminal 4 (+24)	Terminal 55 (+24V)
Green	Terminal 5 (GND)	Terminal 74 (GND)

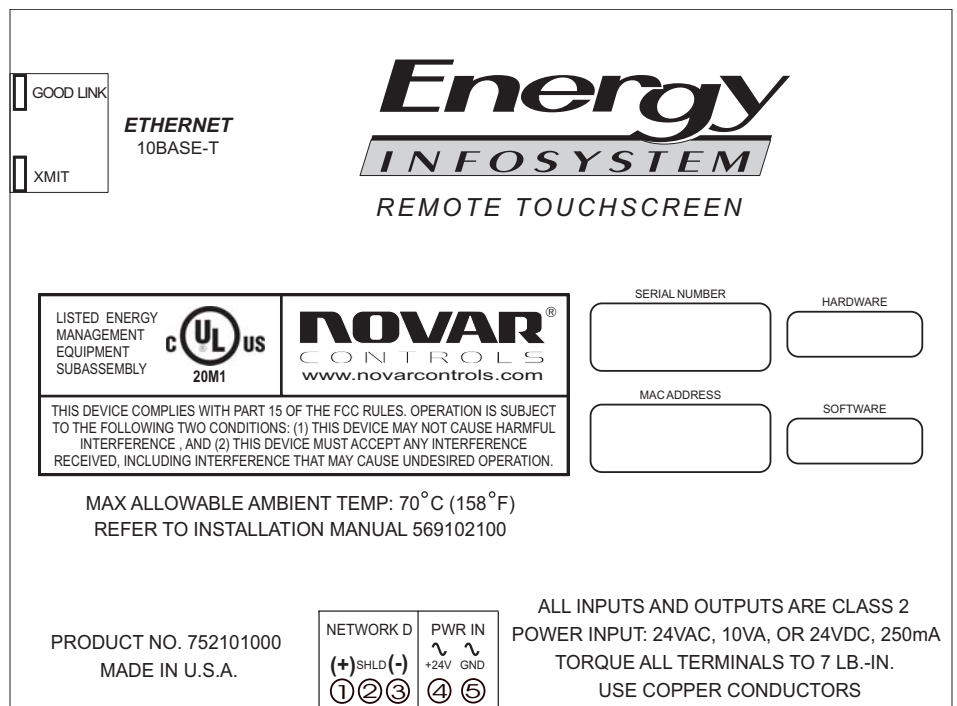


Figure 2. Rear view of the remote touchscreen electronics assembly

Lingo Wiring

One or more remote touchscreens can only communicate with a Lingo via a standard Category 5 Ethernet cable.

- Connect 24 volts AC or DC power to the remote touchscreen at Terminals 4 and 5. For DC power, Terminal 4 is positive and Terminal 5 is negative or ground.
- Connect the 10Base-T Ethernet connection of the touchscreen and the 10Base-T connection of the Lingo to Ethernet hubs. If the touchscreen and the Lingo are within 330 feet of each other, an Ethernet crossover cable can be used in place of the hubs for a direct connection.

Installing the Electronics Assembly

The electronics assembly consists of the metal case that encloses the circuit boards and the touchscreen.

Once the wiring has been connected, the electronics assembly can be mounted in the bracket using the following procedure.

Step	Procedure
1	Position the electronics assembly over the mounting bracket and gently push it into the cutout area.
2	Align the holes on the electronics assembly with the mounting holes on the sections of the bracket that extend out from the mounting surface.
3	Insert and tighten the ¼-inch mounting screws (supplied) to secure the assembly to the bracket.

Checking the Installation

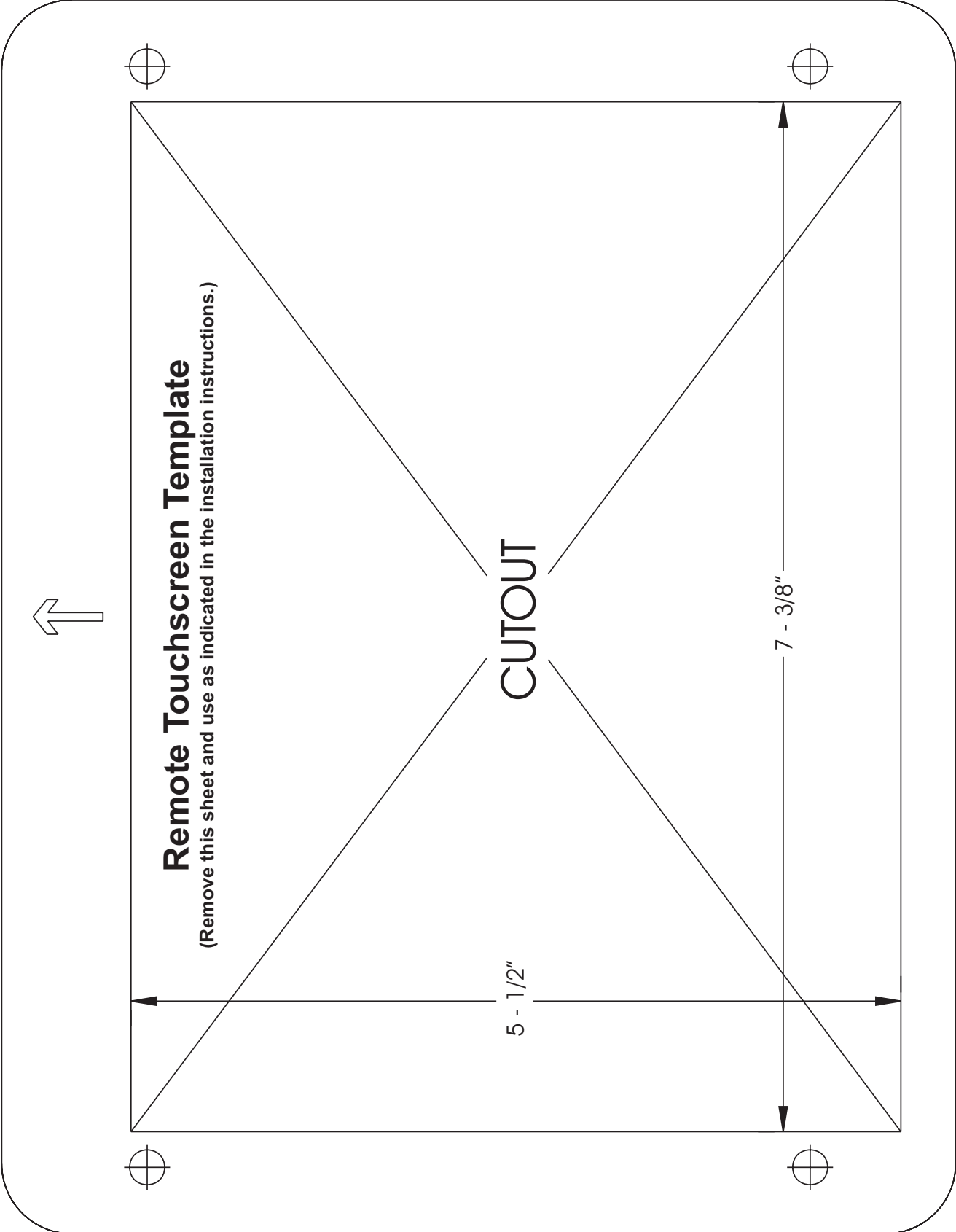
Once the bracket has been mounted, the wiring has been connected, and the electronics have been installed, the following items should be checked to ensure proper operation.

- Check the power and status light-emitting diode (LED) on the front of the touchscreen. It should be flashing if proper communication is taking place.
- Touch the touchscreen to make sure that the back light comes on when contact is made.
- Access some of the screens on the remote touchscreen, change some of the settings, and monitor the equipment for proper response.

Model and Part Numbers

Use the part numbers provided in Table 2 to order the necessary Novar Controls parts.

PRODUCT	MODEL NUMBER	PART NUMBER
Infosystem Remote Touchscreen	—	752101000
Four-conductor cable (Belden 9155 equivalent)	WIR-1020	709002000
24V, 40 VA, Class 2 Transformer	24V-XFR	355025000
24V Transformer, plug-in model	—	355034000



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