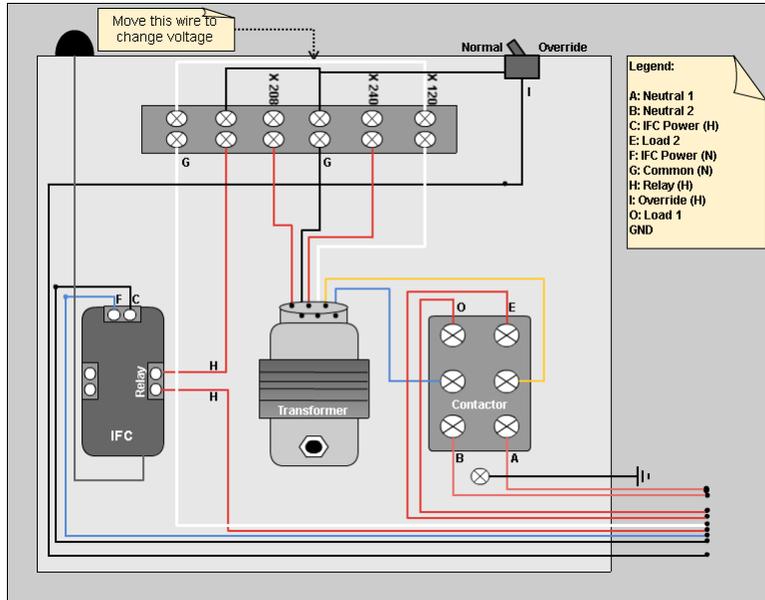


# GridNavigator®

## Programmable Time Switch Installation Manual



### MODELS

**GN-PTS-001**      120V, 208V, 240V  
**GN-PTS-002**      208V or 277V

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## **SYMBOLS**



Read, understand, and follow all instructions, including warnings and precautions before installing and using this product.



Potential Shock Hazard from Dangerous High Voltage.

## **PRECAUTIONS**

- Only qualified personnel or licensed electricians should install the Programmable Time Switch.
- Follow all applicable local and national electrical and safety codes.
- More than one disconnect switch may be required to de-energize the equipment before servicing.
- Verify that circuit voltages and currents are within the proper range for the Programmable Time Switch.
- Protect the line voltage conductors to the Programmable Time Switch with fuses or circuit breakers (not needed for Neutral).
- Equipment must be disconnected from the hazardous live voltage before access.
- If the Programmable Time Switch is not installed correctly, the safety protections may be impaired.

## **OVERVIEW**

The GridNavigator Programmable Time Switch is a wirelessly-controlled device that can switch electrical loads of up to 30 Amps on and off in tandem. It can be controlled manually from a smartphone, or it can be scheduled to turn on and off at different times of day, or in accordance with an astronomical clock. The Time-of-day scheduling system automatically adjusts for changes in daylight savings time, and the astronomical clock is automatically adjusted for seasonal variations in sunrise and sunset time. These scheduling features combine to eliminate the need for any day-to-day adjustment of the device, allowing for full hands-off operation.

## **KEY FEATURES**

<b>FEATURE</b>	<b>BENEFIT</b>
<b>Wireless Communication</b>	<ul style="list-style-type: none"><li>• Easy installation for new buildings or for retrofits.</li><li>• Wireless connection through Grid Navigator Bridge.</li><li>• No wires to pull through walls or conduit.</li></ul>
<b>High Current</b>	<ul style="list-style-type: none"><li>• Incorporates a dual contactor, capable of driving two loads at up to 30 A.</li></ul>
<b>Time-of-day Scheduling</b>	<ul style="list-style-type: none"><li>• Schedule by day of week and time of day</li><li>• Time zone is detected automatically</li><li>• Daylight savings adjustments are automatic</li></ul>
<b>Astronomical Clock</b>	<ul style="list-style-type: none"><li>• Easy configuration from building address</li><li>• Switch on and off at fixed offsets from sunrise and sunset</li><li>• Automatically calculates sunrise and sunset times</li></ul>
<b>Smartphone Integration</b>	<ul style="list-style-type: none"><li>• Use your smart phone to perform:<ol style="list-style-type: none"><li>1. Installation</li><li>2. Real-time control</li><li>3. Schedule setup</li></ol></li></ul>
<b>Manual override</b>	<ul style="list-style-type: none"><li>• Heavy duty physical switch allows an immediate override to switch both loads on</li></ul>

## **SPECIFICATIONS**

<b>POWER</b>	Powered from external 120V, 208V, 277V, or 480V power, depending on model.
<b>OPERATING CONDITIONS</b>	-40 to +65 C 0% to 90% RH
<b>STORAGE CONDITIONS</b>	-40 TO +90 C
<b>RF INTERFACE</b>	2.4GHz 802.15.4 +19dBm
<b>RF RANGE</b>	Up to 1000 ft. depending on architecture
<b>HOUSING</b>	Stainless steel casing
<b>OVERRIDE FUNCTION</b>	External override switch
<b>DIMENSIONS</b>	tbd
<b>WEIGHT</b>	tbd

The GridNavigator Programmable Time Switch requires a source of power for its internal electronics. Please consult the table below to determine which models are compatible with your installation site.

<b>Model Number</b>	<b>Supply Voltage Options</b>
<b>GN-PTS-001</b>	120V, 208V, 240V
<b>GN-PTS-002</b>	208V, 277V
<b>GN-PTS-003</b>	480V

## **INSTALLATION**

This device is to be installed by a qualified electrician, and must follow all applicable national and local regulations. This unit, and the associated current transformers, must be installed inside an electrical panel only, and will not be accessible during operation of the device. Use appropriate sheet metal screws, and mount the unit using the pre-drilled mounting flanges. Ensure the device model number is appropriate for the intended installation with regard to its supply voltage. Do not position the Programmable Time Switch so as to make accessing the disconnect device difficult. The disconnecting device must be marked accordingly and easily reached.

## CONNECTIONS

Refer to the following table for information about the connections on the whip:

Wire	Description
<b>A</b>	Neutral for load 1
<b>B</b>	Neutral for load 2
<b>C</b>	IFC Hot
<b>E</b>	Hot for load 2 (30A Max)
<b>F</b>	IFC Neutral
<b>G</b>	Common (Neutral)
<b>H</b>	Relay (Hot)
<b>I</b>	Override (Hot)
<b>O</b>	Hot for load 1 (30A Max)
<b>Gnd</b>	Ground connection

## INSTALLATION PROCEDURE FOR GN-PTS-001 AND GN-PTS-002

1. Open the front cover of the Programmable Time Switch casing.
2. Locate the screw terminal block inside the casing, then locate the wire labelled **X**.
3. Note the voltage label on the screw terminal connected to wire **X**. This must correspond to the voltage that will be connected to the Programmable Time Switch's internal power supply. If this voltage value is incorrect, then unscrew wire **X** and move it to the screw terminal labelled with the correct voltage.
4. Close the PTS casing, ensuring all screws are securely fastened.
5. Ensure that the junction box or electrical panel where the PTS is to be installed has been fully isolated.
6. Attach the PTS whip to the junction box or electrical panel.
7. Connect the Ground wire to ground.
8. Connect wire **C** to a source of power whose voltage matches the screw terminal connected to **X**.
9. Connect wire **F** to Common.
10. Connect wires **H** and **I** to a Line terminal.
11. Connect wire **G** to Common.
12. Connect wire **O** to a suitable source of power for the first load. This may be connected to the same power source as wires **C**, **H**, and **I**, if desired.
13. Connect wire **A** to the first load. Each load may individually draw up to 20 A of current.

14. Connect wire **E** to a suitable source of power for the second load, if present. This may also be connected to the same power supply as the first load, if desired.
15. Connect wire **B** to the second load, if present.
16. Close the junction box or electrical panel and restore power.

**FCC ID: W7OMRF24J40MDME**

The enclosed 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.

WARRANTY

All products sold by GRID NAVIGATOR are guaranteed against defects in material and workmanship for a period of one year from the date of shipment. GRID NAVIGATOR responsibility is limited to repair, replacement, or refund, any of which may be selected by GRID NAVIGATOR at its sole discretion. GRID NAVIGATOR reserves the right to substitute functionally equivalent new or serviceable used parts.

This warranty covers only defects arising under normal use and does not include malfunctions or failures resulting from: misuse, neglect, improper application, improper installation, water damage, acts of nature, lightning, or repairs by anyone other than GRID NAVIGATOR.

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