

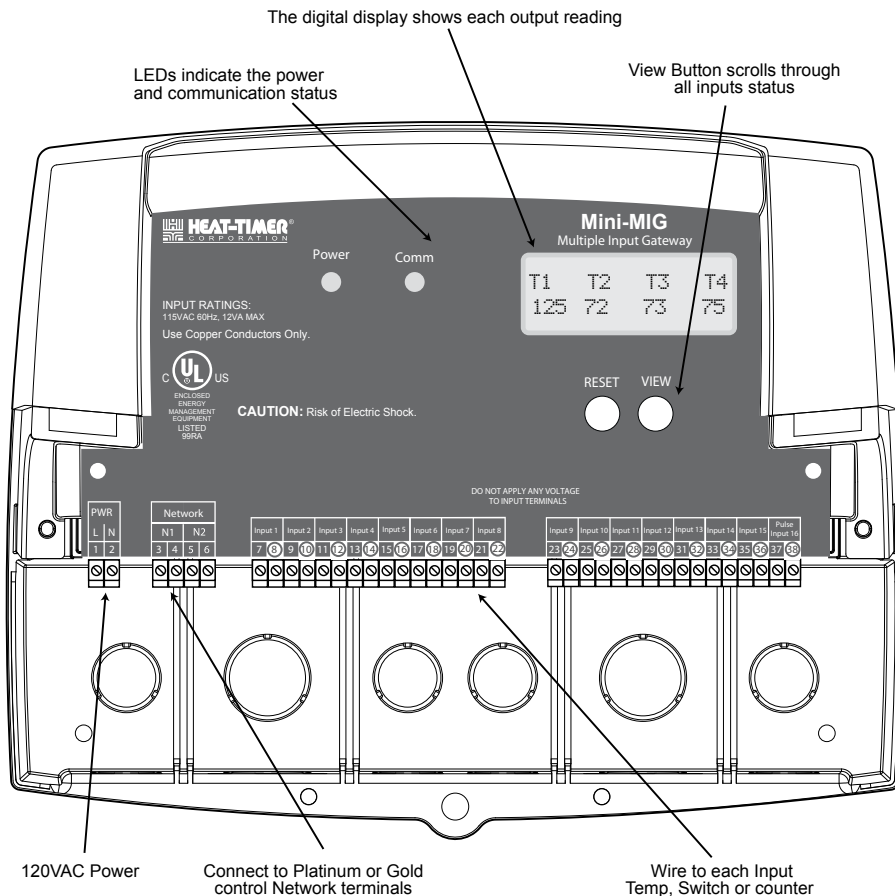
HEAT-TIMER®

INSTALLATION AND OPERATION INSTRUCTIONS

Mini-MIG MULTIPLE INPUT GATEWAY

WITH TEMPERATURE, SWITCH, AND PULSE/COUNTER INPUTS

FOR PLATINUM AND GOLD CONTROLS



OVERVIEW

The Mini-MIG is used with any Heat-Timer Remote Communication network or Internet control. The Mini-MIG simplifies the wiring and reduces the cost of individual Network sensors. The network can terminate in any of the following controls which have been equipped with the Internet or Remote Communications packages: MPC, MPCQ, HWR, HWRQ, SRC, or Multi-MOD.

The MIG can accept Temperature, Switch, and pulse/counter (with Internet ready Platinum controls only) inputs. Any of the sensors types listed on the next page can be connected to the Mini-MIG. However, The pulse counters can only be utilized when connected to an Internet ready Platinum control.

⚠ WARNING

All Heat-Timer controls are strictly operating controls. They CANNOT be used as limit controls. All boilers must have all safety and limit controls required by code. It is the responsibility of the installer to verify that all the safety and limits are working properly before the Mini-Mod is installed.

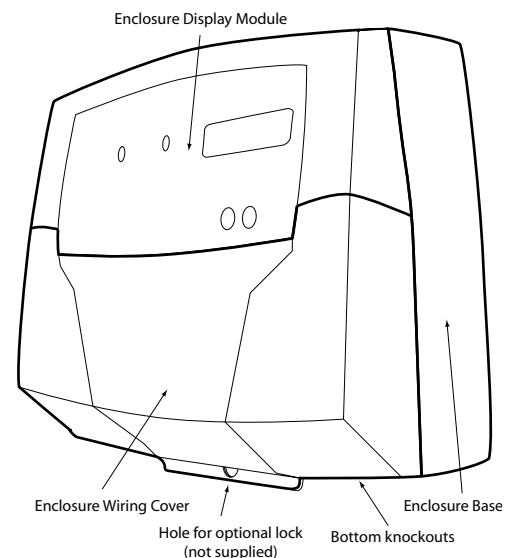
POSSIBLE SENSOR TYPES TO CONNECT TO MINI-MIG

Part#	Type	Name	STARTUP	Size
904001-00	Space	Room Space Sensor in plastic enclosure to be wall mounted		
904220-00	Temperature	Outdoor, Strap-On, or Immersion Sensor (3-in-1 Sensor)		
904250-00	Temperature	Brass Tube Sensor 3/8" diameter with concave surface.		
904022-00	Temperature	UV, Corrosion, and Moisture Resistant Sensor		
904112-00	Temperature	Stainless Steel Sensor with Tapered Tip 1/4" x 6"		
904021-00	Temperature	Stainless Steel Sensor with Round tip 1/4" x 6"		
904060-01	Switch	Float (Sump Pit) Assembly with 1" Clamp- provides Dry Contact closure		1"
904060-00	Switch	Float (Sump Pit) Assembly with 1 1/2" - provides Dry Contact closure		1 1/2"
904060-02	Switch	Float (Sump Pit) Assembly with 2" - provides Dry Contact closure		2"
380001-00	Count (Input #16)	Water Meter Counter 1/2" NPT 150 PSI, 200°F	Y	1/2"
380002-00	Count (Input #16)	Water Meter Counter 3/4" NPT 150 PSI, 200°F	Y	3/4"
380003-00	Count (Input #16)	Water Meter Counter 1" NPT 150 PSI, 200°F	Y	1"
380004-00	Count (Input #16)	Water Meter Counter 1 1/4" NPT 150 PSI, 200°F	Y	1 1/4"
380005-00	Count (Input #16)	Water Meter Counter 1 1/2" NPT 150 PSI, 200°F	Y	1 1/2"
380006-00	Count (Input #16)	Water Meter Counter 2" NPT 150 PSI, 194°F	Y	2"
380010-00	Count (Input #16)	Water Meter Counter 1/2" NPT 232 PSI, 248°F	Y	1/2"
380011-00	Count (Input #16)	Water Meter Counter 3/4" NPT 232 PSI, 248°F	Y	3/4"
380012-00	Count (Input #16)	Water Meter Counter 1" NPT 232 PSI, 248°F	Y	1"
380013-00	Count (Input #16)	Water Meter Counter 1 1/2" NPT 232 PSI, 248°F	Y	1 1/2"
380020-00	Count (Input #16)	Water Meter Counter 2" NPT 232 PSI, 248°F	Y	2"
380021-00	Count (Input #16)	Water Meter Counter 3" NPT 232 PSI, 248°F	Y	3"
380022-00	Count (Input #16)	Water Meter Counter 4" NPT 232 PSI, 248°F	Y	4"
380023-00	Count (Input #16)	Water Meter Counter 6" NPT 232 PSI, 248°F	Y	6"
380024-00	Count (Input #16)	Water Meter Counter 8" NPT 232 PSI, 248°F	Y	8"

INSTALLATION

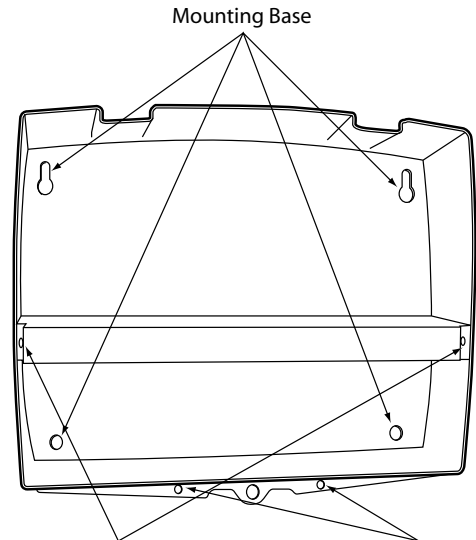
The Mini-MIG consists of three primary enclosure components.

- **The Enclosure Display Module:** contains the display, buttons, LEDs and electric wiring terminals. Wiring terminals are of the plug-in type to ease installation and removal. The Display Module mounts to the base using two screws. **NOTE:** Never unscrew the PCB board from the Enclosure Display Module. If there was a problem with the control, the complete Enclosure Display Module must be return to factory for inspection and repair.
- **The Enclosure Base:** contains the holes to mount and hold the control against the wall or any flat surface. All other enclosure components mount on the base. The bottom section of the Enclosure Base contains the wiring chamber with knockouts on the bottom to ease the installation.
- **The Enclosure Wiring Cover:** covers the wires from the external environment. It has two screws to hold it to the base and a hole to secure a lock on the wiring enclosure. A plastic web that separates the wiring chamber into high and low volt sections has been provided.



MOUNTING THE ENCLOSURE

- Select a location near the equipment to be controlled.
- The surface should be flat, and be sufficiently wide and strong to hold the control.
- Keep the control away from extreme heat, cold, or humidity. Ambient operating temperature is from 20 to 130°F.
- Remove the Enclosure Wiring Cover from the control enclosure by removing the two bottom screws.
- Remove the Enclosure Display Module by removing the middle screws.
- Screw the Enclosure Base to the surface through the upper and lower mounting holes on the back of the enclosure.
- Replace the Enclosure Display Module and replace the middle screws.
- Do not replace the enclosure wiring cover until all wiring is done.

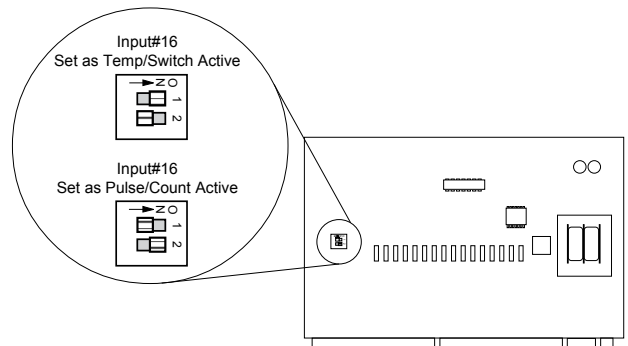


DIP SWITCH SETTING

The Mini-MIG can accept inputs from temperature sensors, Dry Contact closure, and a pulse/count sensor (input 16 only when activated with an Internet ready control).

- However, to activate input #16 to work as a pulse/count sensor, Dip Switch 1 must be set to OFF and Dip Switch 2 must be set to ON. In addition, the Startup menu option CNTR must be set to "Y". See Startup Settings on page 4.
- To activate input #16 to work as a temperature/switch sensor, Dip Switch 1 must be set to ON and Dip Switch 2 must be set to OFF.

Display Mounting Screws Wiring Cover Mounting Screws



WIRING

WIRING THE POWER (TERMINALS 1 AND 2)

- Bring the 120VAC 60Hz power wires through the left bottom Knockout of the enclosure.
- Class 1 voltages must enter the enclosure through a different opening from any Class 2 voltage wiring.
- Connect the hot line to terminal marked L 1.
- Connect the neutral line to the terminal marked N 2.
- Heat-Timer recommends installing a surge suppressor on the power source to the Mini-MOD.

⚠ WARNING

Class 1 voltages must enter the enclosure through a different opening from any Class 2 voltage wiring. Heat-Timer recommends installing a surge suppressor on the power source to the Mini-MIG.

WIRING TEMPERATURE SENSORS

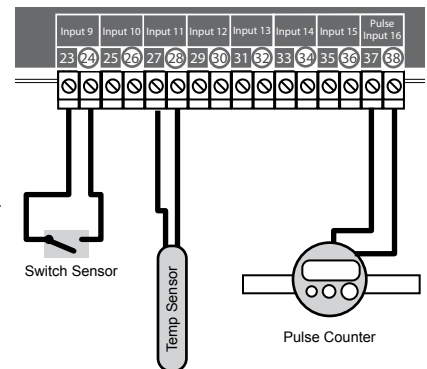
- Only use Heat-Timer Gold sensors.
- The sensor wires can be extended up to 500' using a shielded 2-conductor cable (Belden #8760 or equivalent). DO NOT ground the shield at the sensor but do connect at the Mini-MIG using one of the terminals marked with an "O".
- Do not run sensor wires in conduit with line voltage wiring.
- Temperature sensors have no polarity.

WIRING SWITCH SENSORS

- The Switch sensor signal must be a Dry Contact only. No voltage can be placed across the Switch sensor input terminals
- Do not run sensor wires in conduit with line voltage wiring.

WIRING PULSE/COUNT SENSORS (INPUT#16 TERMINALS 37,38) ONLY)

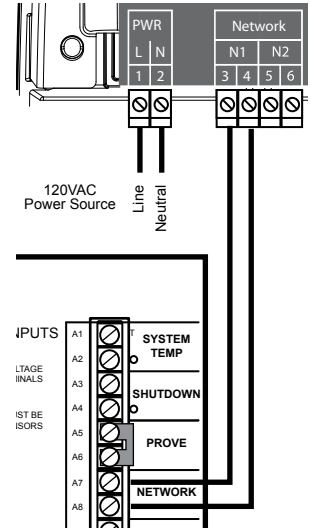
- The pulse/count sensor signal must be a Dry Contact only. No voltage can be placed across the Switch sensor input terminals
- Do not run sensor wires in conduit with line voltage wiring.
- Make sure that Dip Switch 1 is OFF and Dip Switch 2 is ON.
- Startup CNTR must be set to "Y".



CONNECTING TO THE PLATINUM OR GOLD CONTROLS

To utilize the Mini-MIG, it must be connected to a communication ready Platinum or Gold control through the Network terminals. This will provide the control with access to the Mini-MIG sensor data.

- The Mini-MIG has two sets of network terminals. Either set can be connected to the Platinum/Gold control Network terminals.
- The second set of Mini-MIG Network terminals can be used to connect to other network sensors.
- Each sensor must be configured using the remote communication of the specific control (either through Visual Gold or the Internet). When configuring each sensor, the proper sensor type must be selected.



STARTUP SETTINGS

- Selecting "I" from the Startup menu using the "View Button" will allow the MIG to function with a Platinum or a Gold control using Visual Gold Software. No counter will be available in this setting.
- Selecting "Y" from the Startup menu using the "View Button" will allow the MIG to function with a Platinum control using the Internet. This will allow the user to configure Input 16 as a pulse counter or a temperature or switch. See Dip Switch Settings on page 3.



BUTTONS

- The "View" button scrolls the display through all the inputs and their values.
- The "Reset" button tests the network communication components and refreshes the display data.

⚠ ALERT

The Mini-MIG can control a pulse counter **ONLY** when connected to an Internet ready Platinum control. The Startup option must be set to "Y" in this case.

Mini-MIG Specifications

Voltage Input:	120 VAC 60 Hz
Power Consumption:	12 VA Max
Operating Temperature:	20°F to 130°F
Operating Humidity:	20% to 80%
Display:	Alphanumeric (2 rows x 16 char. each)
LED:	(1) Power, (1) Communication
Inputs:	Total of 16 inputs that can accept Temperature (All), Switch (All), and Count Sensor (input 16)
Buttons:	View (scrolls through inputs), Reset (tests Communication)
Communication:	2 Network communication ports
Temperature Sensor Ranges:	- minus 35°F to 250°F
Dimensions:	11"W x 9" H x 3 3/4" D
Weight:	2.5 pounds