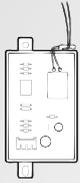


# Rinnai Infinity Error Indication Switch (R1070)

## About the error switch



The Rinnai Infinity water heater error switch is a volt-free normally open switch. The switch will shift to a closed position when there is an active error in the water heater.

The switch is intended to be connected to a monitoring system such as a BMS (building monitoring system) or other visual, or audible error indication system.

System designers should note that some errors (and hence the switch) will reset to an inactive (open) state under particular conditions. It is important this is clearly understood when developing monitoring and response systems.

### Suitability

Suitable for:

- Rinnai Infinity HD models
- Rinnai Infinity EF250 models

One error switch is required for each Rinnai Infinity unit. The switch is installed inside the Rinnai Infinity.

### Switch rating

The error switch will switch the following maximum loads:

Voltage (AC or DC): 24 Volts  
Current: 1 Amp

Systems requiring loads greater than this should be configured via an external relay.

### Kit contents

- 1 x error switch sub printed circuit board
- 1 x mounting screw
- 1 x crimp connectors
- 1 x instruction sheet

## Installation

### You will need:

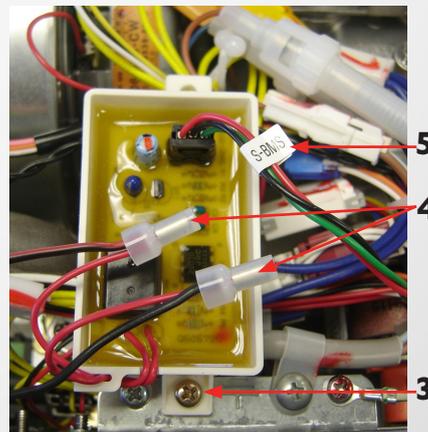
- A Phillips screwdriver
- Approximately 15 minutes



Please ensure the power supply to the Rinnai Infinity is disconnected before commencing installation. Removing the front cover will expose live mains voltage connections.

### Installation instructions

1. Remove the water heater front cover.
2. In the main wiring loom bundle locate the red-black-green wiring loom tagged S-BMS. Temporarily remove the red cable tie and separate the connector from the main loom. Refasten the cable tie around the remaining loom.
3. Attach the error switch using the mounting screw provided. If required, adjust the position of the main wiring loom to provide enough room.
4. With the crimp connectors supplied, join the two red wires of the error indication switch to the monitoring system via the remote controller access hole at the bottom of the water heater. Polarity is not important.
5. Attach the S-BMS wiring loom plug to the matching socket on the error switch.
6. Replace the water heater front cover and reconnect the power supply.



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## Testing

The operation can be quickly tested by passing water through the Rinnai Infinity with the gas supply shut off.

After several ignition attempts the combustion fan should be heard to stop and the status monitor on the front of the water heater (only on some models) should display 11—within 15 seconds the error switch should close. This can be verified with a multimeter. The switch should remain in the closed position.

Turn off the water flow and turn on the gas supply. Restart the water flow. The water heater should ignite as normal and the status monitor should display the water heater set temperature. At this point the error switch should return to the open position.

## Error codes

### General error codes

When an error occurs the Rinnai Infinity will shut itself down. Most errors will reset when the water flow stops, either by a tap being turned off, circulating pump stopping and/or the power being switched off.

### Lime check (LC) error code

In hard water areas calcium is deposited within the tubes of the heat exchanger. This reduces the heat transfer within the water heater. The Rinnai Infinity detects this and displays an LC error code. This will not prevent the operation of the unit, but indicates to the customer that maintenance is required.

When LC is displayed the error switch will remain in the closed position at all times, except where a remote control (if fitted) is switched off.

The time charts shows the relationship between the errors indicated by the error switch, and the output shown on the status monitor (only on some models) on the front of the water heater and a remote control (if fitted).

## Response to errors

If an error is currently active, the error code can be read directly off the status monitor on the water heater front panel (only on some models). Any active error, other than LC, indicates the unit is not currently heating the water.

Error codes 11 and 12 usually indicate a failure in the gas supply. To reset an error code 11 or 12, the water flow through the unit must be stopped for a few seconds and then restarted.

If an error has occurred the error history can be read from the unit with a Rinnai Compact Controller using the procedure described below. If no remote controller is fitted, contact a Rinnai authorised service centre who will be able to access the error history of the unit.

All errors, other than resetting errors 11 and 12 must be dealt with by a Rinnai authorised service centre. Providing the error code to the service centre at the time of making a service call will ensure the most efficient rectification of the issue.

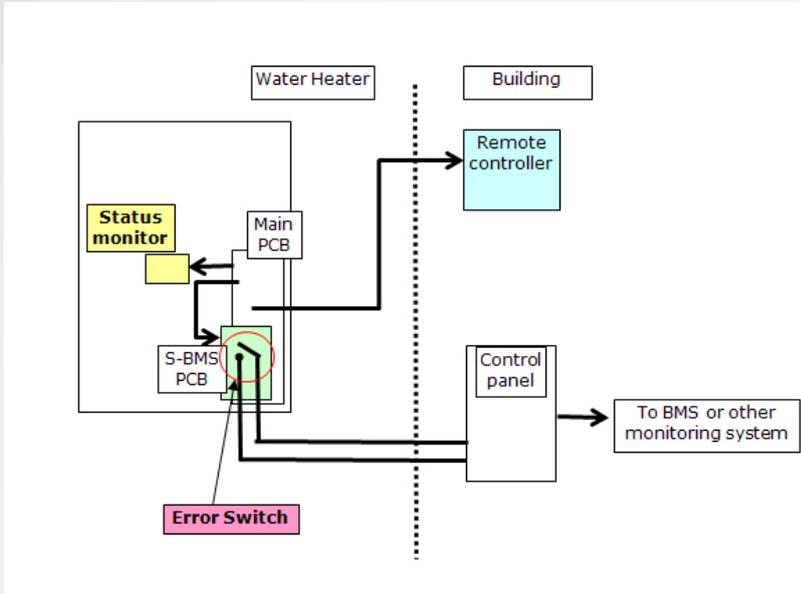
## Error code history using a Rinnai Compact Controller



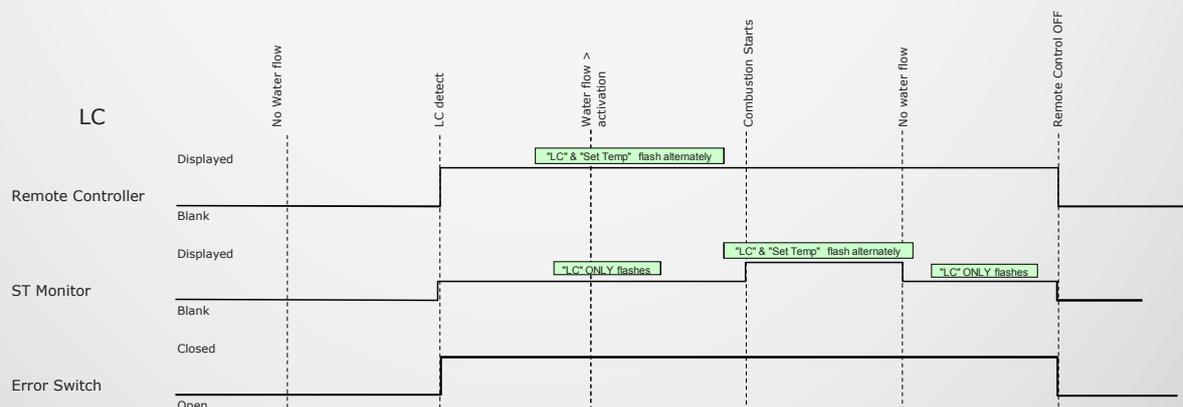
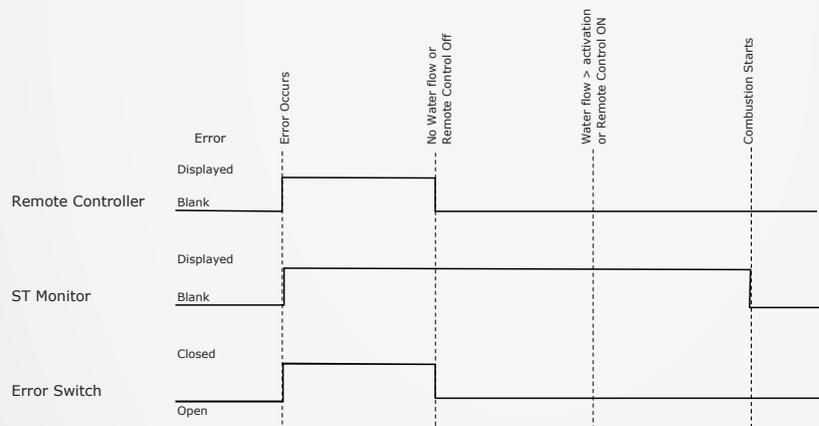
If temporarily fitting a controller for the purposes of checking error history, ensure power to the water heater is turned off. Failure to do so may result in irreparable damage to the main PCB of the Rinnai Infinity.

1. With the remote controller switched on, push and hold the power button.
2. While continuing to hold the power button down, push and release the temperature up button. Release the power button.
3. The remote controller should now scroll through the last 10 errors—record these.
4. To revert to normal mode, repeat steps 1-3 above.

## Schematic layout



## Operation time charts





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