

## N-Series

### Error indication switch (REUOPU3)



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

#### About the N-Series error switch

The Rinnai INFINITY water heater error switch is a volt-free normally open or normally closed switch. The switch will shift to the reverse 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.

Systems designers should note that some errors will reset the switch to the normal state under certain conditions. It is important that this is understood when developing monitoring and response systems.

#### Suitability

The REUOPU3 is suitable for the N-Series models only. One error switch is required for each unit—the switch is installed inside the water heater.

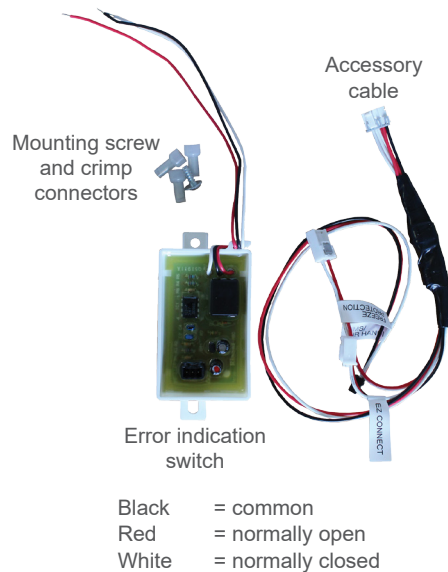
#### Switch rating: 24 V (AC or DC), 1 A

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

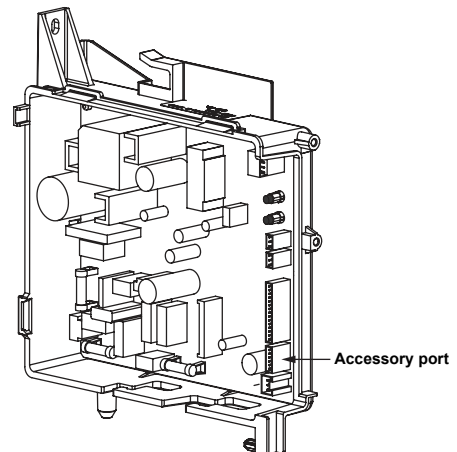
#### Installation

1. Remove the water heater front cover.
2. Connect the accessory cable main wiring loom into the accessory port of the PCB, refer image for position.
3. Connect the cable labeled 'BMS/Air Handler' into the error indication switch.
4. Attach the error switch to the mounting bracket (above the controller) inside the unit. The orientation will differ depending on whether the model is external or internal, refer images on next page.
5. With the crimp connectors supplied, join the red and black 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.
6. Replace the water heater front cover and reconnect the water supply.

#### Kit contents



#### PCB accessory port position



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#### Testing

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

After several ignition attempts the combustion fan should be heard to stop and error code 11 should display on the inbuilt controller—within 15 seconds the error switch should reverse position. This can be verified with a multimeter. The switch should remain in this 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 of the monitor should display the water heater set temperature. At this point the error switch should return to the normal 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 reverse 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 inbuilt controller.

#### Response to errors

If an error is currently active, the error code can be read off the inbuilt controller. 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 controller using the procedure described below.

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 be helpful in rectifying the problem.

#### Retrieving error code history

1. Have the controller turned off, but the power on.
2. Hold the On/Off button for two seconds while at the same time pressing the up arrow button, and then release.
3. The controller will display the last nine error codes, the latest code displaying first. If less than nine codes, or no error codes '--' will be displayed.

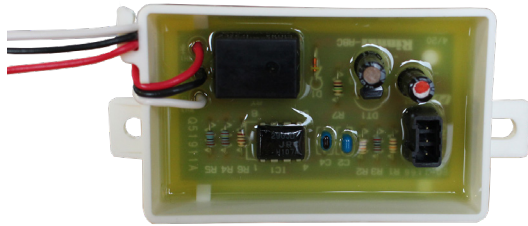
Error codes are displayed for three minutes. To return the controller to normal operation, press the temperature up arrow and then press and hold the On/Off button.

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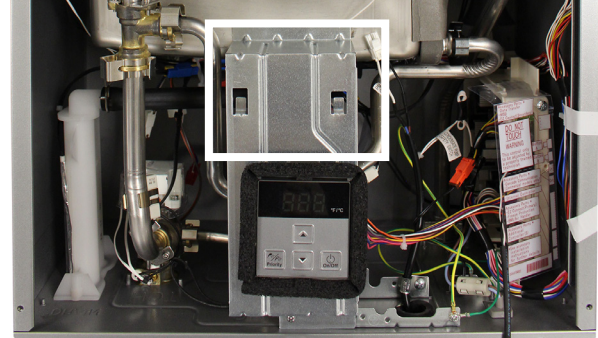
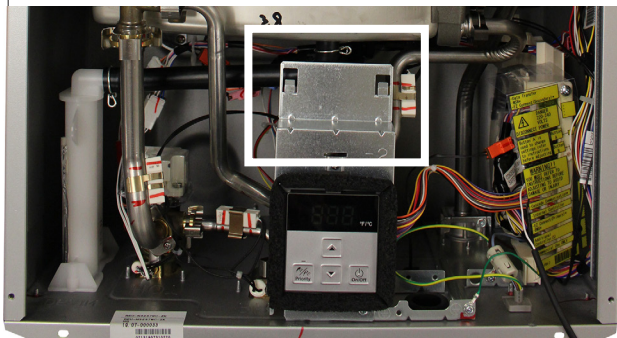
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#### Error switch orientation inside N-Series units

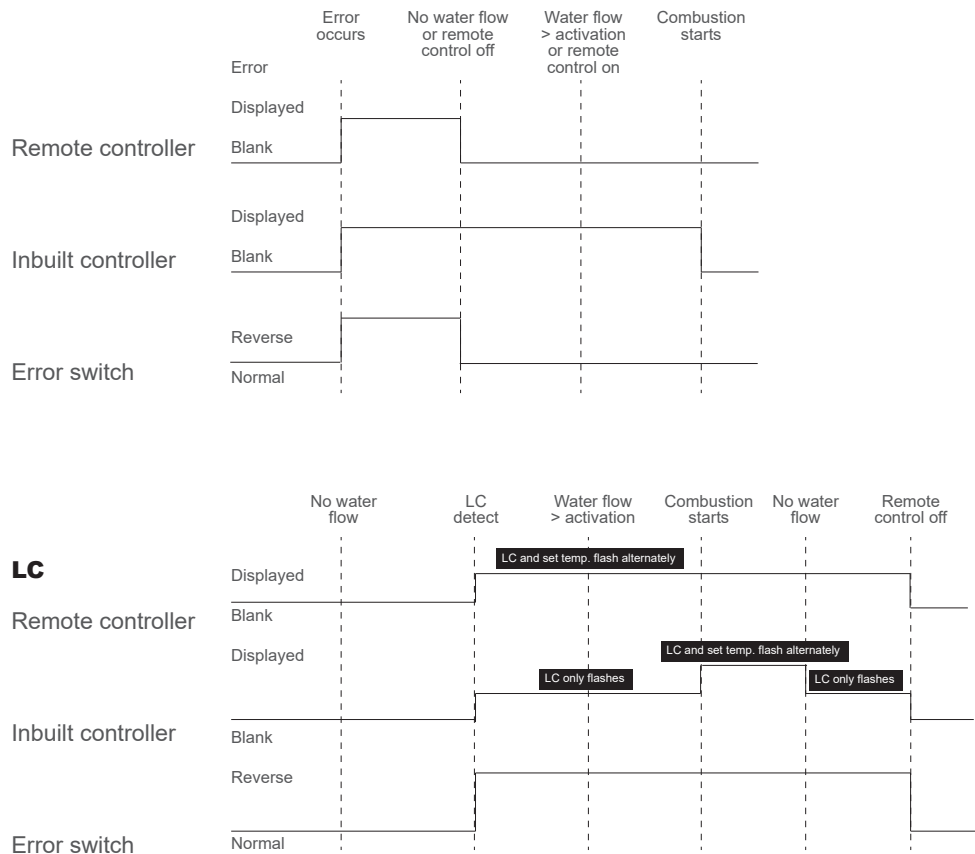
External unit board faces out



Internal unit board faces in



#### Operation time charts



**Rinnai.co.nz**

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<http://www.youtube.com/rinnainz>  
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N-Series error indication switch 12554-A