

Installation, Commissioning & User Instructions

Isolating Transformer

LV311288 | November 2013

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IMPORTANT INFORMATION



These instructions must be read and understood before installing, commissioning, operating or maintaining the equipment.

**Read this manual
carefully**

Warning

Read this manual carefully before starting the Isolating Transformer. Failure to read the manual and to follow the printed instructions may lead to personal injury and damage to the transformer, water heater or any other equipment.

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Although considerable care has been taken to ensure a correct and suitably comprehensive description of all relevant components, the manual may nonetheless contain errors and inaccuracies.

Should you detect any errors or inaccuracies in the manual, we would be grateful if you would inform us. This helps us to further improve our documentation.

More information

If you have any comments or queries concerning specific aspects related to the Isolating Transformer, then please do not hesitate to contact the supplier of the Isolating Transformer.

In the event of problems with your electricity or water supply connections, please contact the supplier/installation engineer of your installation.

Caution


The installation should be carried out by an approved installation engineer in compliance with the general and local regulations imposed by the gas, water and power supply companies and the fire service. Refer also to Installation, User and Service Manual paragraph '1.3 Regulations' of the water heater.

Isolating the water heater

Important

In order to mount the transformer on the water heater, the water heater must be isolated from the mains power.

The correct procedure is as follows:

1. Activate the MENU by using the -button;
2. Position the cursor in front of OFF.
3. Confirm OFF with ENTER.



4. Wait until the fan has stopped. The icon of the fan is then dimmed.
5. Switch the water heater **OFF (position 0)** using the ON/OFF switch on the control panel.
6. Isolate the water heater from the power supply by setting the isolator between the water heater and the mains power supply to position 0.

Note

Setting the main switch, between the water heater and the electricity mains, to 0 will also switch off the power supply to the power anodes; there will be no anode protection.

Positioning the transformer

Position the transformer under the *black air supply pipe* of the water heater, and secure it to the *surface below* using the four screws. If there are no holes (4 x Ø4) present, first mark out, then carefully drill them.

Connect the wiring harness from the Isolating Transformer to the connector block (see wiring diagram). Lay the wiring harness out in such a way that this can be secured in the *pull relief*.



Fig. 1 - Position of transformer

Connecting the transformer

1. Carefully remove the plastic covers from the water heater. The electrical section can now be seen.
2. Loosen the 2 screws of the electrical section, and remove the protective cap from the electrical section. The connector block will become visible.

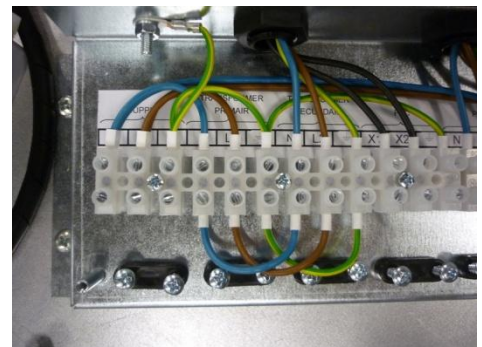


Fig. 2 - Connector block.

Terminal block water heater

Mains voltage			Isolating transformer						Alarm Out			Program-controlled pump									External ON/OFF		Bus-link	
			primary			secondary																		
N	L	⏚	N	L ₁	⏚	N	L ₂	⏚	X ₁	X ₂	⏚	N	L ₃	⏚	-	-	-	-	-	X ₃	X ₄	X ₅	X ₆	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	

Note

The total power consumed by the water heater goes via the isolating transformer.

- Position the isolating transformer near the connector block.
- Connect the neutral (N), live (L) and earth (⏚) of the power cables to terminals 4 through 9 of the connection block, see below:

Connecting primary side

Note

The cables that are to be connected on the primary side of the connector block have white sleeves.

The cables must be connected in the following way:

- The phase lead - running from the orange connector block on the isolating transformer, must be connected to L₁;

Mains voltage			Isolating transformer					
			primary			secondary		
N	L	⏚	N	L ₁	⏚	N	L ₂	⏚
1	2	3	4	5	6	7	8	9



- The neutral lead - must be connected to N, on the primary side of the connector block;

Mains voltage			Isolating transformer					
			primary			secondary		
N	L	⏚	N	L ₁	⏚	N	L ₂	⏚
1	2	3	4	5	6	7	8	9



- The earth lead - must be connected to the earth, on the primary side.

Mains voltage			Isolating transformer					
			primary			secondary		
N	L	⏚	N	L ₁	⏚	N	L ₂	⏚
1	2	3	4	5	6	7	8	9






Connecting secondary side

Note

The cables that are to be connected on the secondary side of the connector block have grey sleeves.




The cables must be connected in the following way:

- The phase lead - running from the grey connector block on the isolating transformer, must be connected to L₂;

Mains voltage			Isolating transformer					
			primary			secondary		
N	L		N	L ₁		N	L ₂	
1	2	3	4	5	6	7	8	9






- The neutral lead - must be connected to N, on the secondary side of the connector block, see fig. 3.

Mains voltage			Isolating transformer					
			primary			secondary		
N	L		N	L ₁		N	L ₂	
1	2	3	4	5	6	7	8	9



- The earth/neutral lead - must be connected to the earth, on the primary side.

Mains voltage			Isolating transformer					
			primary			secondary		
N	L		N	L ₁		N	L ₂	
1	2	3	4	5	6	7	8	9



5. Fit the cables in the strain relief.
6. If no other connections need to made:
 - Fit the cover on the terminal block.
 - Fit the covers onto the water heater.

Starting the water heater

Start the water heater as follow:

1. Switch on the power supply to the water heater using the isolator between the water heater and the power supply.
2. Before activating the controller, measure the potential difference between the earth and the N, on the secondary side of the transformer (grey connector block). The difference between these two ports must be 0 Vac. At the same time, measure the potential difference between L₂ and the earth, this must be 230 Vac (-15% / +10%).
3. If this is correct switch the controller, of the water heater, **ON** by setting the ON/OFF-switch to **position I**.

The display will now show INTERNAL CHECK for 10 seconds, and will then go to the main menu.





4. Press once on the blue arrow (↓) to position the cursor beside ON, then press ENTER. The display, as shown in the figure, will appear.



5. Confirm the selection START OPERATION with ENTER.

The water heater is on the "ON-mode". If there is a heat demand, the water heater will run through the heating cycle (see Installation, Commissioning, User & Maintenance Instructions, 9.3 "The appliance heating cycle"). If the heating cycle is not run, there is no heat demand.



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