

# ALPHA

Model: X5E

# X SERIES

Instant Water Heater



ISO 9001:2008  
Certificate No: KLR 0403851



Malaysia  
Brand Name Award

## PARTS IDENTIFICATIONS

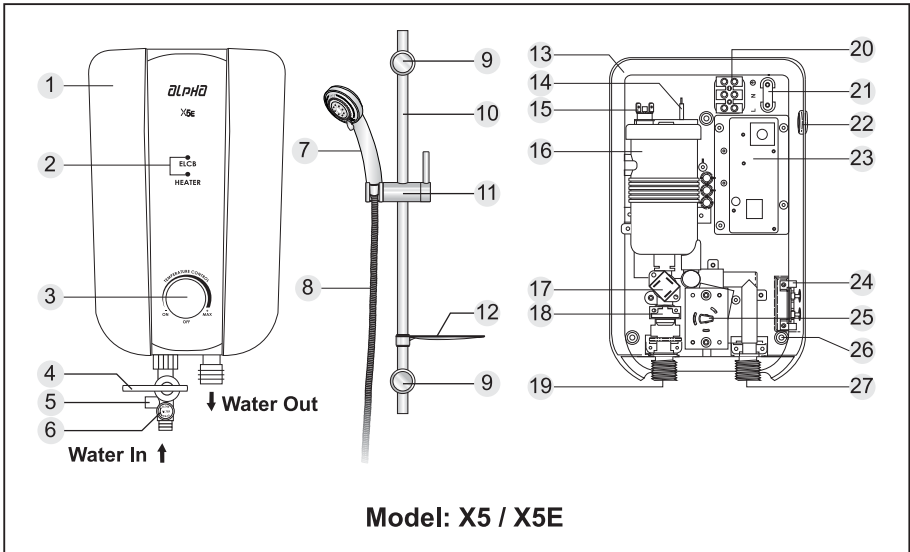


Fig. 1

- |  |   |
|--|---|
| <p>1 Heater Cover</p> <p>2 Indicator Light(s)</p> <p>3 Temperature Control Knob</p> <p>4 Stop Valve</p> <p>5 Regulator Unit</p> <p>6 Filter Unit</p> <p>7 Handshower</p> <p>8 Flexible Hose</p> <p>9 Rail Support (2 Nos)</p> <p>10 Sliding Rail</p> <p>11 Shower Holder</p> <p>12 Rotatable Soap Dish</p> | <p>13 Heater Base</p> <p>14 Heating Element</p> <p>15 Thermal Cut-out</p> <p>16 Heater Tank</p> <p>17 Triac</p> <p>18 Flow Switch Assembly</p> <p>19 Water INLET Connection</p> <p>20 Terminal Block</p> <p>21 Cable Clamp</p> <p>22 Side Cable Entry</p> <p>23 Built-in ELCB (Model X5E only)</p> <p>24 TEST and RESET PCB (Model X5E only)</p> <p>25 Electronic Control Unit</p> <p>26 Heater Base Mounting Holes (4 Holes)</p> <p>27 Water OUTLET Connection</p> |
|--|---|

**i) ELECTRICAL**

- a. The heater must be permanently connected to the electricity supply through a double pole linked switch having a contact separation of at least 3mm in all poles incorporated in the circuit and out of reach from the person using the shower.
- b. The use of a plug and socket is not recommended.
- c. **The appliance must be earthed.**
- d. All wiring MUST conform to local regulations. If in doubt, always consult a qualified electrician. A typical connection is shown in Fig. 2.
- e. Correct size of wire conductor corresponding to different electrical loading should be used. Table 1 provides a reference for selecting the correct type of wire conductor.

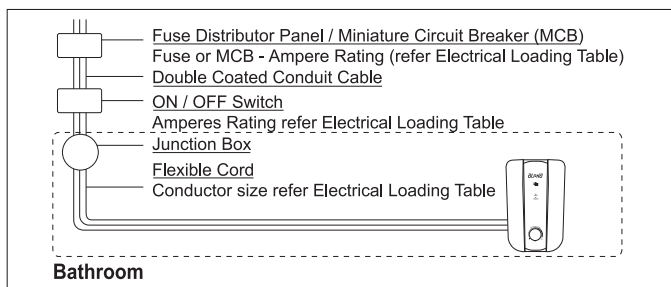


Fig. 2 - General Wiring Layout

Voltage (V~)	Power (kW)	Amperes (A)	Recommended Conductor Size (csa)			Fuse/ MCB (A)	ON/OFF Switch (A)
			mm <sup>2</sup>	Conduit Cable	Flexible Cable		
220 - 50/60Hz	3.5	16.0	2.5	7/0.67mm	50/0.25	20	20
	4.5	20.5	2.5	7/0.67mm	50/0.25	25	25
	5.5	25.0	4.0	7/0.85mm	56/0.30	32	32
	6.0	27.3	4.0	7/0.85mm	56/0.30	32	32
	6.5	29.6	4.0	7/0.85mm	84/0.30	32	32
	7.5	34.1	6.0	7/1.04mm	84/0.30	40	40
	8.0	36.4	6.0	7/1.04mm	84/0.30	40	40
230 - 50/60Hz	3.5	15.2	2.5	7/0.67mm	50/0.25	20	20
	5.5	14.4	4.0	7/0.85mm	56/0.30	32	32
	6.6	24.0	4.0	7/0.85mm	56/0.30	32	32
	8.8	38.3	6.0	7/1.04mm	84/0.30	40	40
240 - 50/60Hz	3.6	15.0	2.5	7/0.67mm	50/0.25	20	20
	4.2	17.5	2.5	7/0.67mm	50/0.25	20	20
	7.7	32.1	6.0	7/1.04mm	84/0.30	40	40
	9.0	37.5	6.0	7/1.04mm	84/0.30	40	40

Table 1 - Electrical Loading Table

**ii) WATER**

The unit works at a minimum water flow rate of 3 litre/min. Note that an incoming water flow rate of 5 litre/min and above would excel its performance.

### iii) SAFETY

**Note: An approved type of Residual Current Device (RCD) of 10mA sensitivity should be installed in conjunction with the heater.**

- a. An approved type of current operated Earth Leakage Circuit Breaker (ELCB) of 30mA sensitivity should be installed in conjunction with the heater.
- b. The heater only operates when there is sufficient water flow to trigger the Flow Switch.
- c. The Thermal Cut-out breaks off the power supply to the heater if there is abnormal rise in showering temperature.

## INSTALLATION PROCEDURES

### i) PLUMBING

#### **IMPORTANT:**

- a) All plumbing works should be completed before proceeding to electrical wiring connection.
- b) Metallic / Chromed hose and conductive control valve shall not be used (in Malaysia only - Malaysian government's regulations. Optional for others).
- c) Heater outlet shall not be connected to any tap or fittings not recommended by manufacturer.

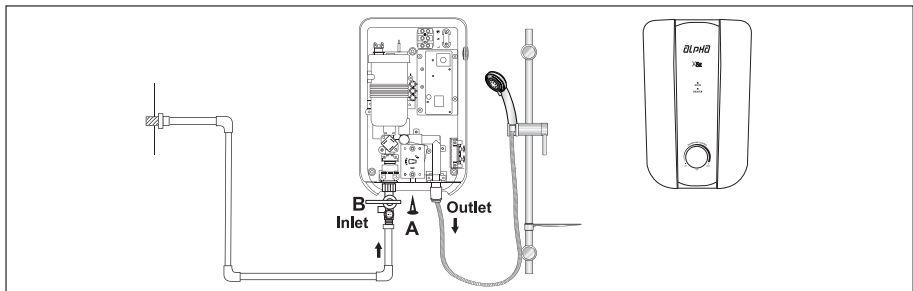


Fig. 3 - General Layout

- a. Turn off the water source.
- b. Remove screw marked 'A' with a screw driver.
- c. Remove cover by lifting the bottom upward until clear.
- d. Mark out all the (4) screw points of the heater base on the wall. It is recommended that the bottom of the heater be 1.50 metres/5 feet above the floor of the bathroom.
- e. Drill the (4) holes with 5.0mm diameter drill bit.
- f. Mount and secure the heater with the wall plugs and screws provided.
- g. Connect the stop valve assembly to the INLET 'B'. A rubber washer is provided for this connection to prevent water leakage.
- h. Connect the piping from the stop valve to the incoming water supply. If necessary, make use of sealing tape for the connection to prevent water leakage. **Do not apply excessive force to tighten the connectors.**
- i. Turn on the water mains to drain out all plumbing dirt and to fill up the heater tank. (Note: This step will prevent damage to the heating element).

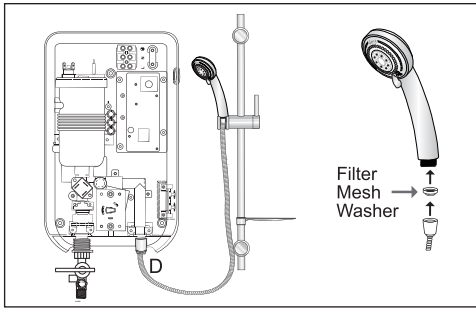


Fig. 4 - Shower Set Fitting

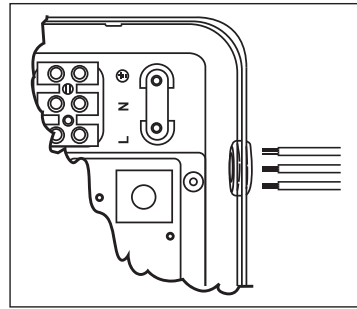


Fig. 5 - Electrical connection to Heater

ii) **SHOWER SET FITTING (Refer to Fig. 4)**

- a. Mark the positions of the two holes of the sliding rail set beside the heater - be sure that the top portion is in level with the top of the heater. Mount it with the plugs and screws provided.
- b. Connect the flexible hose and handshower to the OUTLET 'D' of the heater - be sure to put in the rubber washer.
- c. Connect the other end of flexible hose to handshower - be sure to put in the Filter Mesh.

iii) **ELECTRICAL CONNECTION (Refer to Fig. 5)**

- a. Switch off the electrical mains.
- b. Insert the electrical cable through the rubber grommet marked 'E'.
- c. Connect the cable to the terminal block as follows:
 

RED OR BROWN .....	LIVE ( L )
BLACK OR BLUE .....	NEUTRAL ( N )
YELLOW/GREEN OR GREEN/TELOW .....	EARTH ( ⊕ )
- d. Replace the cover and secure screw marked 'A' as in Fig. 3.

iv) **TESTING**

- a. Turn on the water supply at the stop valve. Water should spray out from the handshower.
- b. Switch on the heater switch outside the bathroom. Turn the Temperature Control Knob of the heater to the 'ON' position. The indicator lights would light up. The shower should be warm in a few seconds.
- c. You may proceed to 'Operating Instructions' before using the heater.

## OPERATING INSTRUCTIONS

The heater comes with an Electronic Variable Temperature Control for a wide range of power selections. Normal cold shower can be selected by just turning the control knob to 'OFF' position.

To have a warm shower, take note of the following steps:-

- a. Switch on the heater switch located outside the bathroom. The 'ELCB' indicator would light up.
- b. Turn on the water supply at the stop valve.
- c. Turn ON the Temperature Control Knob. The 'HEATER' indicator would light up. The shower would get warmer as the Temperature Control Knob is turned clockwise from 'ON' to 'MAX'. It is not necessary to return the Temperature Control Knob to the 'OFF' position when the heater is not in use.
- d. Switch off the heater switch outside the bathroom when the heater is not in use.

**Note:** The shower might not be hot enough even at 'MAX' in areas where the incoming water supply from the mains is too cold or the pressure too high. Replace the unit with one that is of higher power (if it is approved by the electrical board) or reduce the water inflow by adjusting the regulator unit or stop valve to get the desired showering temperature.

## WARNING

- a. The appliance must be earthed.
- b. The water control tap must be fitted to the water INLET only.
- c. The water OUTLET of this heater acts as a vent and must not be connected to any form of tap or fitting not recommended by the manufacturer.
- d. Do not use shower head that can turn off the flow of water.
- e. Do not use plumbing cement on connection. If necessary, use only thread or sealing tape.
- f. If the heater malfunctions, immediately switch off the power supply. Then contact the sales agent for repair. Never attempt to repair the unit yourself.

## GENERAL MAINTENANCE

### QUALITY ASSURED

All ALPHA heaters are tested before leaving the factory. With proper care and usage, the heaters are durable, safe and reliable. Use only accessories recommended by the manufacturer.

## GENERAL MAINTENANCE



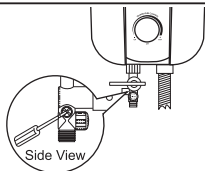
### **DO NOT USE THINNER, ALCOHOL OR PETROL**

You may clean the heater with a damp cloth and mild detergent but do not use thinner, alcohol, petrol or any other corrosive solutions.



### **CHECK ELCB AT LEAST ONCE A MONTH**

Turn on the electricity and water supply to the heater. Test the ELCB by gently pressing the ELCB 'TEST' button. The 'ELCB' indicator light and the 'HEATER' light must go off. Press the 'RESET' button to resume power.

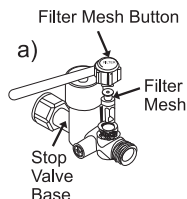


### **ADJUSTMENT OF REGULATOR VALVE**

Turn the knob anticlockwise to have the maximum water volume in low water pressure areas. In high water pressure areas, turn the knob clockwise until the desired shower temperature is attained.

### **CLEAN FILTER REGULARLY**

The filter should be cleaned whenever there is a sign of inlet water blockage.



#### **a) Stop Valve**

Remove Filter Mesh Button. Pull out Stop Valve Filter Mesh and flush it with water to remove any trapped sediments.

Slot back the unit to its original position and secure it.



#### **b) Handshower**

Disconnect the handshower from the hose. Remove Filter Mesh Washer and flush it with water to remove any trapped sediments.

Reassemble the handshower to the hose in its original position

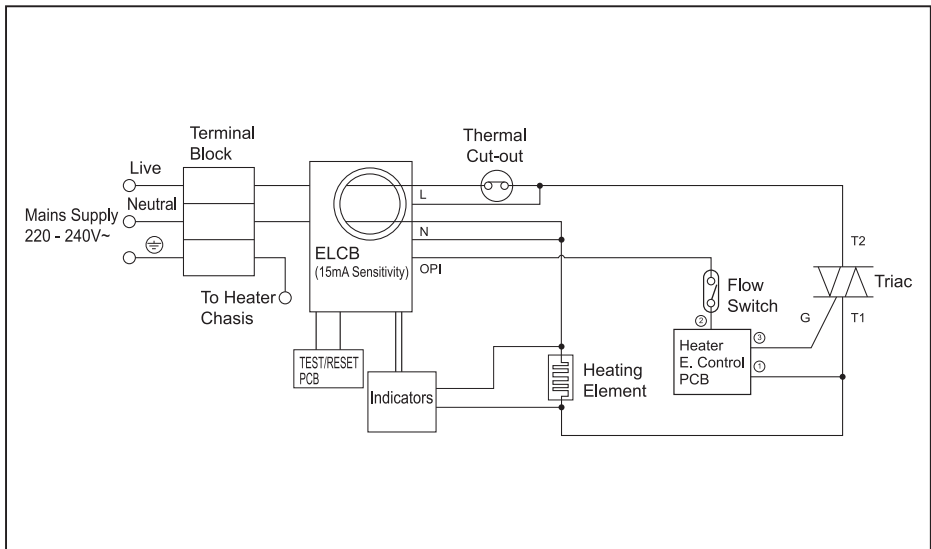
#### **Note:**

- Make sure to turn off the incoming water supply before the operation.
- This has to be done more regularly in area where the inlet water supply is dirty.

## SPECIFICATIONS

Heater Power Rating	Malaysia	3.6kW 240V ~ 50Hz
	Other Range	Please refer Electrical Loading Table for reference
Water Connection	Ø 15.0mm (½" BSP)	
Operating Condition	Open Outlet	
Protection Against Electric Shock	Class 1	
Water Temperature Control	Electronics	
Degree Of Protection	IP25	
Minimum Flow Rate	3 liters / minute	
Minimum Pressure	20kPa (0.2 bar / 2.9 psi)	
Maximum Inlet Pressure	0.38MPa (3.8 bar / 55 psi)	
Heater Dimension	190mm (L) x 320.25mm (W) x 84mm (H)	
Heater Nett Weight	1.4kg	

## SCHEMATIC WIRING DIAGRAM



\* Due to the minor changes in design or otherwise the picture(s) shown in this manual may sometimes differ from the actual.

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