



Optima Series

Touchscreen Pool Heater — Optima Compact & Titan Optima
Installation, Operating & Maintenance Manual

Series codes: 203.11.263 – 203.11.283



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1. Safety Warnings

Read and follow these instructions for proper installation, use and maintenance. **Failure to install the unit correctly may void the warranty.** Retain this manual for future reference.

INSTALLATION BY A QUALIFIED ELECTRICIAN ONLY

This device must be installed by a **qualified electrician** in accordance with national and regional requirements, and an **Electrical Installation Certificate** must be provided on completion. The manufacturer is not liable for issues caused by poor or improper installation. **Any alteration** to the unit, or replacement of components with non-standard parts, **affects the warranty**.

30 mA RCD — MANDATORY

The supply line must be fitted with a **30 mA residual-current device (RCD)** and a correctly rated circuit breaker. The heater has a **thermal cut-out with manual reset**. The electrical access cover may be opened **only by a qualified electrician**, with the unit de-energised.

FIRE HAZARD — COMBUSTIBLE SURFACES

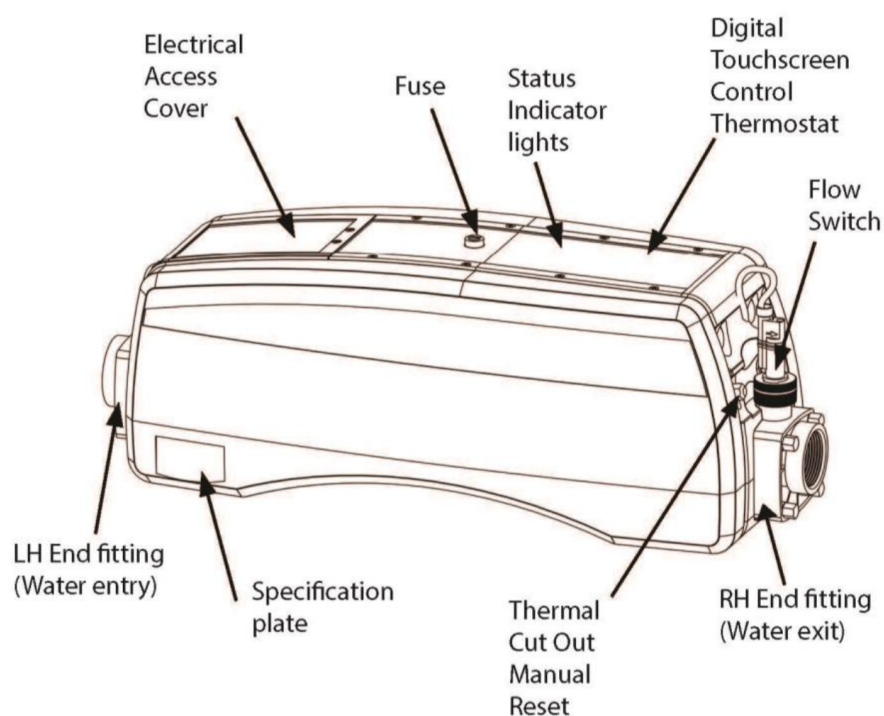
If the heater is placed against **combustible material**, a fireproof barrier must be fitted covering a minimum of **15 cm around** the outside of the unit. **Do not cover** the unit — adequate ventilation is required.

DRY LOCATION — MOISTURE VOIDS THE WARRANTY

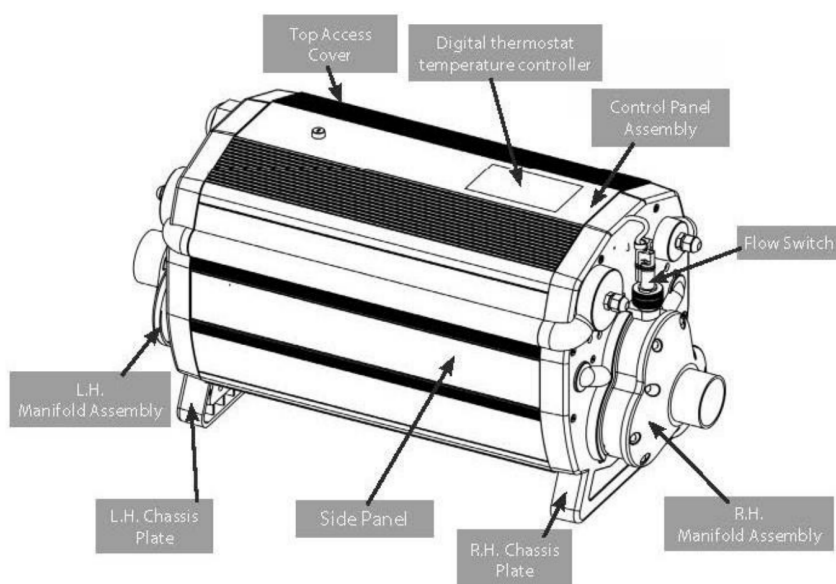
The heater must be installed in a **dry, permanent, weather-proof area**. In any case where **water or moisture enters the enclosure the warranty is void**. If the heater is unused during the winter months it must be **drained**: water freezing inside will cause severe damage.

2. The Optima Series

The **Optima** series are Electro electric pool heaters with a **digital touchscreen**, made in England. It comprises the **Optima Compact** (2 – 18 kW single phase and 15 – 24 kW three phase) for domestic pools and the **Titan Optima** (18 – 120 kW three phase) for commercial installations. Both share the same touchscreen controller with **five operating modes**, a timer, heating priority and a **MODBUS** connection for BMS.



Optima Compact components



Titan Optima components

Key: electrical access cover · fuse · status indicator lights · digital touchscreen control thermostat · flow switch · thermal cut-out manual reset · LH end fitting (water entry) · RH end fitting (water exit) · specification plate.

3. Technical Data & Product Codes

Optima Compact

Oxygen code	Output	Current	Voltage / Phases
203.11.263	2.0 kW	9 A	220-240 V / 1PH
203.11.264	3.0 kW	13 A	220-240 V / 1PH
203.11.265	4.5 kW	20 A	220-240 V / 1PH
203.11.266	6.0 kW	27 A	220-240 V / 1PH
203.11.267	9.0 kW	40 A	220-240 V / 1PH
203.11.268	12.0 kW	53 A	220-240 V / 1PH
203.11.269	15.0 kW	66 A	220-240 V / 1PH
203.11.270	18.0 kW	79 A	220-240 V / 1PH
203.11.271	15.0 kW	22 A	380-400 V / 3PH
203.11.272	18.0 kW	26 A	380-400 V / 3PH
203.11.273	24.0 kW	35 A	380-400 V / 3PH

Titan Optima — commercial

Oxygen code	Output	Current	Voltage / Phases	Element banks
203.11.274	18.0 kW	26 A	380-400 V / 3PH	2
203.11.275	24.0 kW	35 A	380-400 V / 3PH	2
203.11.276	30.0 kW	44 A	380-400 V / 3PH	2
203.11.277	36.0 kW	52 A	380-400 V / 3PH	2
203.11.278	45.0 kW	66 A	380-400 V / 3PH	3
203.11.279	54.0 kW	78 A	380-400 V / 3PH	3
203.11.280	60.0 kW	87 A	380-400 V / 3PH	3
203.11.281	72.0 kW	104 A	380-400 V / 3PH	3
203.11.282	96.0 kW	139 A	380-400 V / 3PH	4
203.11.283	120.0 kW	174 A	380-400 V / 3PH	5

Note: the Titan Optima currents and outputs are taken from the manufacturer's table. Each bank of elements is supplied by **two independent contactors**. Every unit carries its **own specification plaque** — if your voltage is not listed, the plaque applies.

Common series data

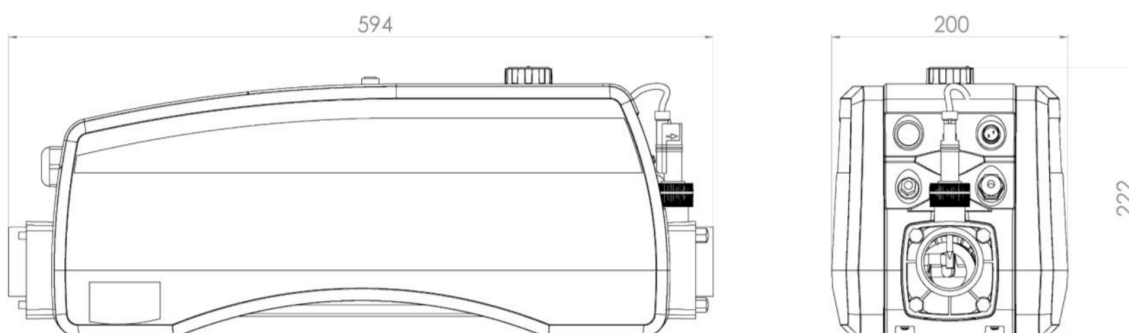
Output range	Optima Compact 2 – 24 kW · Titan Optima 18 – 120 kW
Voltage	220-240 V single phase · 380-400 V three phase
Frequency	50/60 Hz
Maximum flow	Optima Compact 17 m ³ /h · Titan Optima 45 m ³ /h
Minimum flow	Optima 1 m ³ /h (2–6 kW) · 4 m ³ /h (9–24 kW) · Titan 12 m ³ /h
Minimum pipe bore	32 mm
Temperature increment	0.1 °C
Differential	0.6 °C
Start delay	2 minutes
Controller modes	Normal · Timer · Priority · Installation · Standby
Communication	MODBUS (baud rate, address, parity) for BMS connection
Safety devices	flow switch · thermal cut-out with manual reset
Country of manufacture	England

4. Dimensions

The dimensions apply to **both versions** and are given in millimetres (mm).

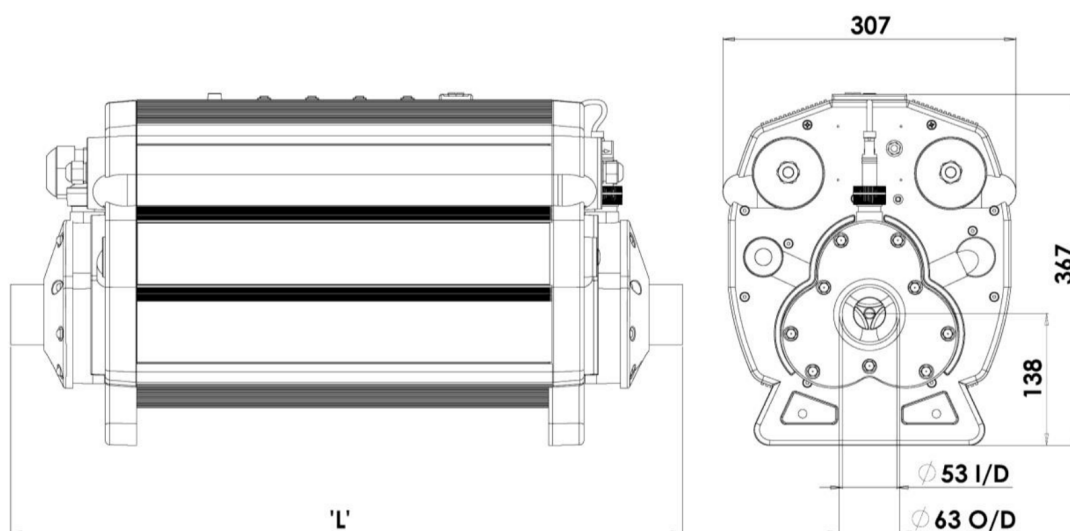
Optima Compact

Dimension	Value
Length	594 mm
Width	200 mm
Height	222 mm



Titan Optima — commercial

Dimension	Value
Width	307 mm
Height	367 mm
Base height	138 mm
Connections	Ø 53 mm I/D · Ø 63 mm O/D
Length "L"	model-dependent — see the specification plate



5. Installation & Mounting

- The heater is installed **horizontally or vertically**, with enough space for the pipe connections and wiring.
- It must be **firmly secured with screws** to a firm base or wall.
- On combustible material, fit a fireproof barrier covering at least **15 cm** around the unit.
- **Do not cover** the unit — adequate ventilation is required.
- The location must be **dry and weather-proof**.

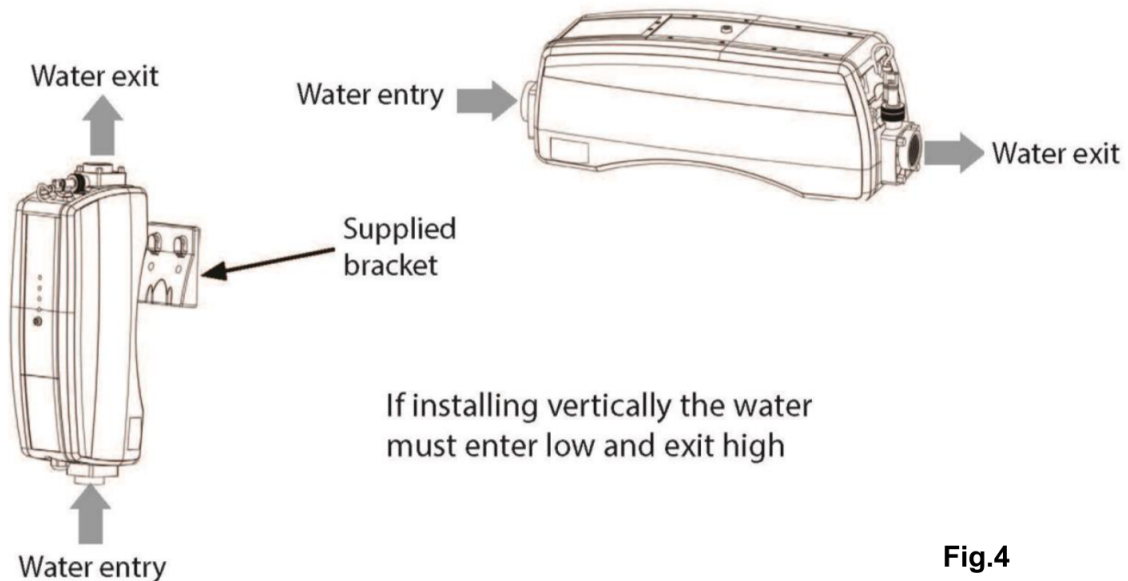
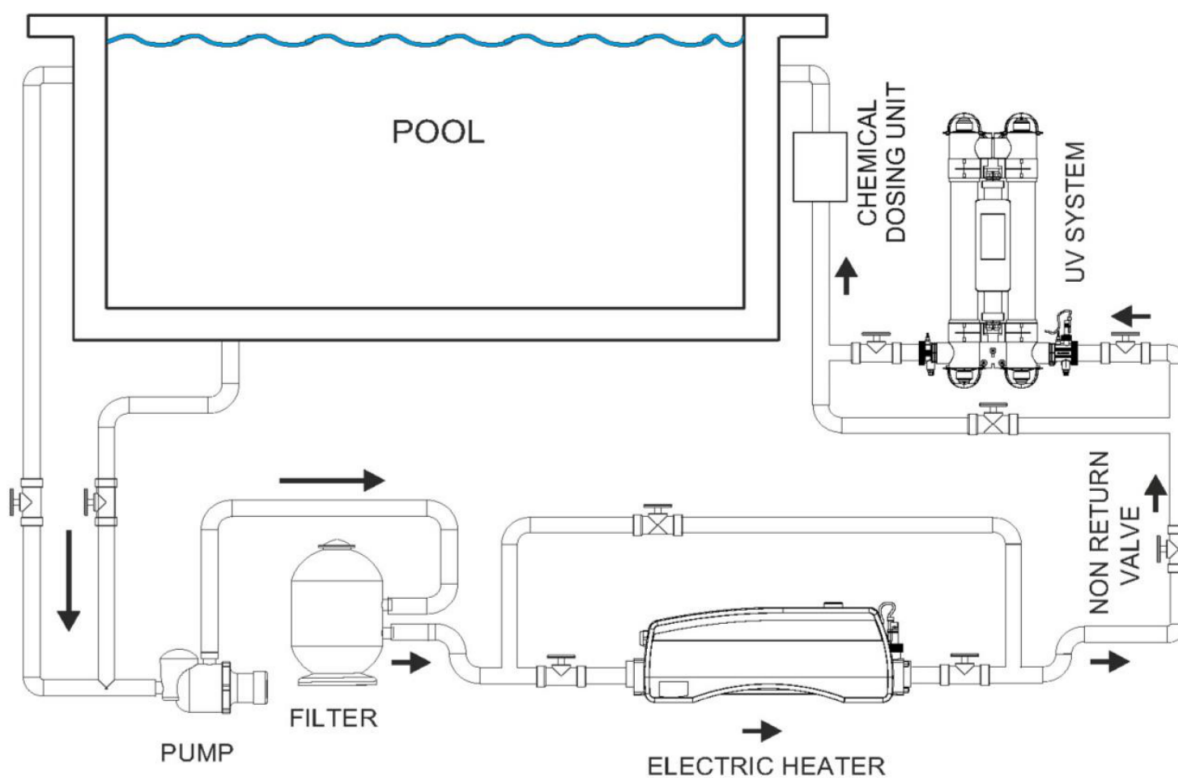


Fig.4

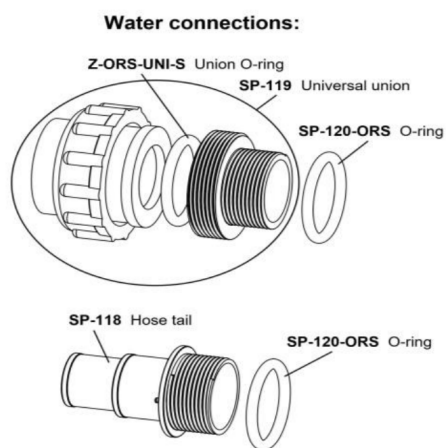
Safety loop and correct orientation — ✓ correct, ✗ incorrect; flow switch at top, floor mount

6. Pipe Work

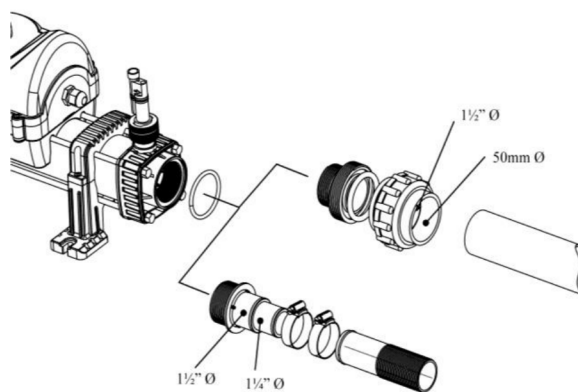
- The heater is installed at a **low point** in the filtration system.
- Always **after the filter** and **before** any dosing or other water-treatment equipment.
- The pipe work to and from the heater must have a **minimum bore of 32 mm**.
- The return pipe carrying water back to the pool must incorporate a **safety loop** ("kick-up") **as close as possible** to the heater. It supports correct air purging and keeps the heater **completely full of water**.
- The heater accepts flow from **one end only**. If the flow direction is opposite, **rotate the heater by 180°** so the flow switch is always where the water **exits**.
- On **rigid unions** no mastic or PTFE tape is needed — use the **O-ring supplied**.
- On **flexible pipe**, connect to the non-threaded side of the hosetail and secure with **two jubilee clips**; wrap PTFE tape or silicone before connecting.



Position in the circuit — pool/spa, pump, filter, electric heater, chemical dosing unit, UV system, non-return valve



Rigid union with O-ring

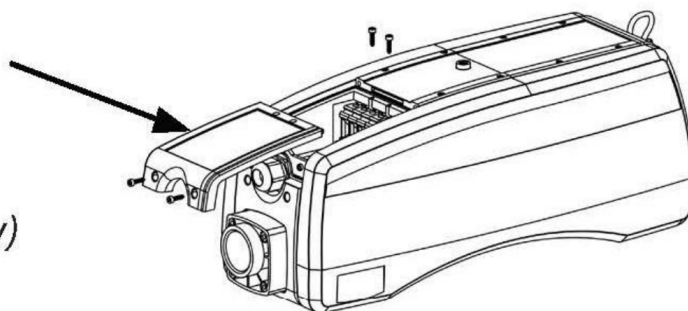


Flexible pipe connection

7. Electrical Connection

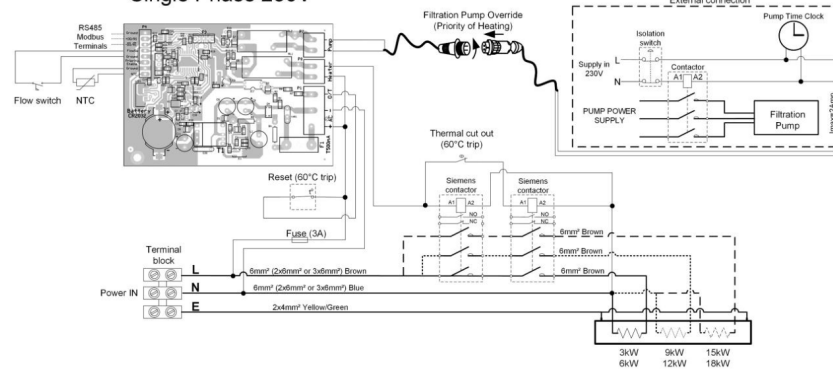
- The power supply must be fitted with a **30 mA RCD**. The electrician may replace the supplied cable gland with a larger size if required.
- Remove the **access cover** to connect the power supply cable.
- Make sure all terminal-block connections match **the label inside the heater** and are tight.
- Protect the cable from **sharp edges, hot surfaces and crush hazards**; fix it so it is not a trip hazard.

*Remove Access Cover
to make the electrical
connections
(Qualified electricians only)*

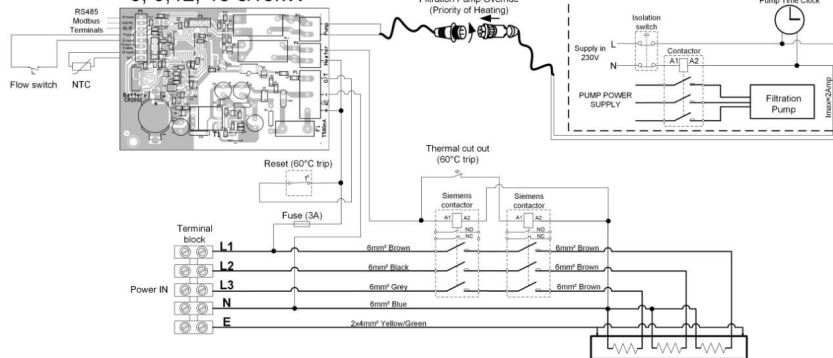


Removing the access cover

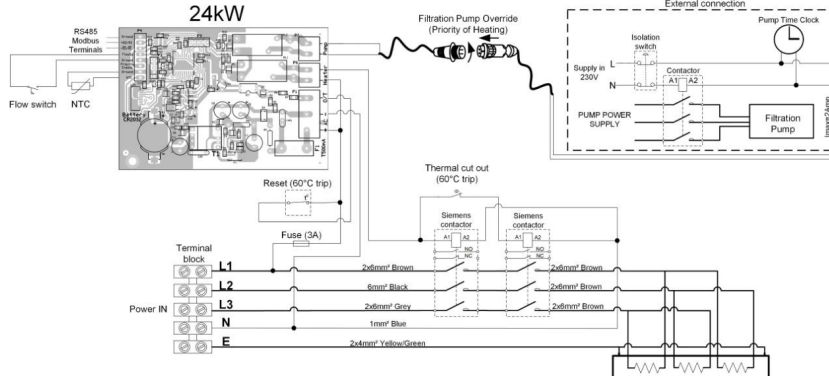
Single Phase 230V



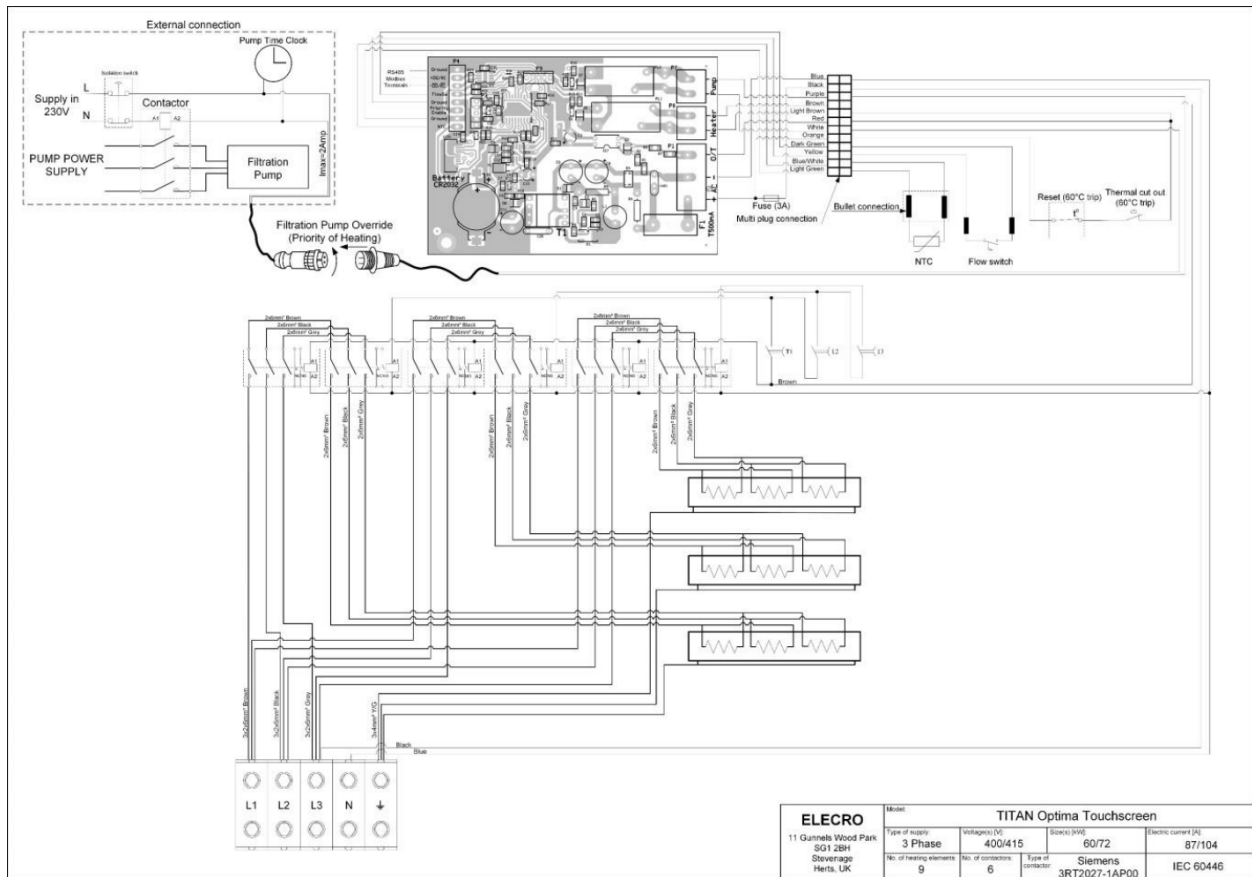
3 Phase 400V 6, 9, 12, 15 & 18kW



3 Phase 400V 24kW



Optima Compact



Titan Optima — commercial

8. Water Quality & Flow

Water quality **must** be within the following limits. **Failure to meet them voids the warranty.**

Parameter	Limit
pH	6.8 – 8.0
Total alkalinity (TA)	80 – 140 ppm
Chloride content	max 150 mg/l
Free chlorine	2.0 mg/l
Total bromine	max 4.5 mg/l
Calcium hardness	200 – 1,000 ppm

STAINLESS STEEL HEATERS — NOT FOR SALT WATER

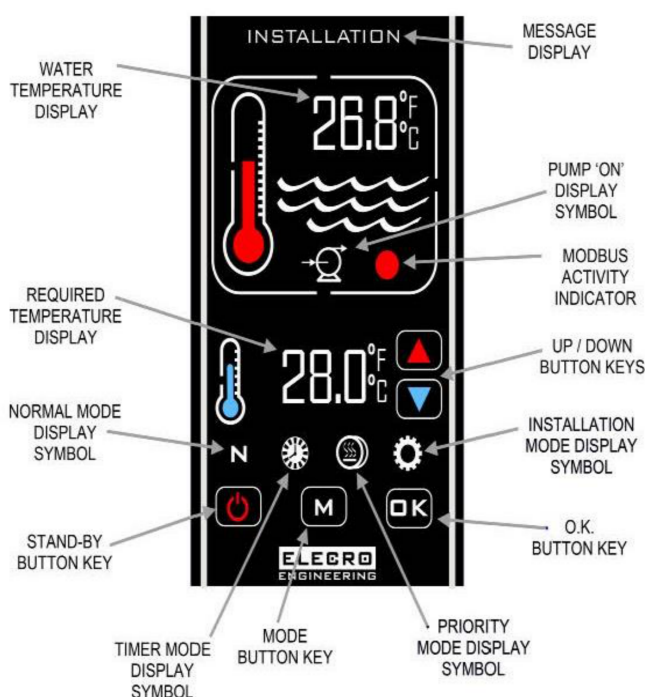
Heaters with **stainless steel** heating elements are **not suitable** for saline (salt) water pools. **Only** heaters with **titanium** heating elements are suitable for such water.

Flow	Value
Maximum flow — Optima Compact	17 m ³ /h — above this a bypass is required
Minimum flow — Optima Compact 2 – 6 kW	1 m ³ /h
Minimum flow — Optima Compact 9 – 24 kW	4 m ³ /h
Flow — Titan Optima	minimum 12 m ³ /h · maximum 45 m ³ /h

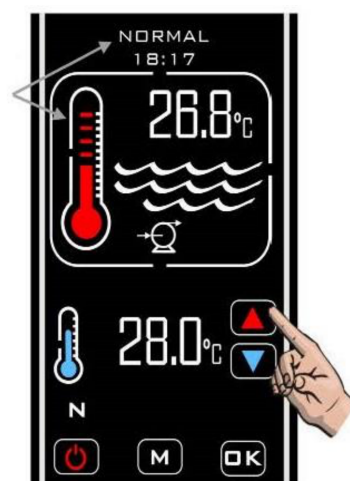
9. Operation

Touchscreen controller

- The heater switches on **only** when the pump is running above the minimum flow **and** the required temperature is higher than the actual one.
- While heating, the display shows **NORMAL** and the red thermometer is animated.
- The required temperature is set with the **UP / DOWN** keys in **0.1 °C** increments.
- **Priority of Heating:** the heater monitors the water temperature and **starts both the circulation pump and the heating** whenever necessary.
- **HEATER DELAY:** two minutes before starting, to prevent overheating of the switch components from frequent cycling.
- **Differential:** heating restarts once the water has fallen **0.6 °C** below the required temperature.
- **Five modes** via the "M" key: Normal · Timer · Priority · Installation · Standby.
- In **Installation** mode the heater and pump are **turned off immediately** and cannot be turned on while you remain in the setup menus.



The touchscreen and its symbols



Changing mode with the "M" key

Display key: water temperature display · required temperature display · message display · pump 'ON' symbol · MODBUS activity indicator · UP / DOWN button keys · mode button key (M) · O.K. button key · stand-by button key.

Installation menu	What it sets
LANGUAGE	Language — English, French, German, Spanish, Russian
UNITS	Temperature units — Centigrade or Fahrenheit
CLOCK	Current time
TIMER	Four on/off time settings for the heating
PROBE CAL	Temperature probe calibration
MODBUS	Baud rate, address and parity for BMS connection
FACTORY	Factory settings — access restricted
EXIT	Exit; returns to Normal

Useful advice: to reduce running costs and speed up heating, insulate the pool wherever possible. A **floating cover** is an essential minimum to retain heat.

10. Troubleshooting

Message / Symptom	Possible cause	Remedy
NO FLOW	Insufficient flow: the pump is off or not powerful enough; the cartridge filter needs cleaning or replacing; the sand/glass filter creates too high a back pressure.	Check the pump, clean the filter, backwash.
HEATER DELAY	Normal two-minute delay before heating starts.	None — wait.
No display when switched on	Power failure external to the heater.	Check fuses, RCD and switchgear. The PCB is fitted with a fuse which should be inspected.
Heating does not start	The set temperature has already been reached.	Turn the dial above the current water temperature.
The flow tube feels warm	Direct sunlight, or an air pocket trapped inside (especially if the highest point feels warmer).	Shade the unit; purge the system completely.
The returning water does not feel much warmer	Normal: the temperature gain per pass is proportional to the flow. A 6 kW heater at 4 m ³ /h gives about 1.2 °C per pass.	None. Slowing the flow does not speed up heating.
Circuit breaker trips after hours	Faulty or incorrectly sized MCB; insufficient cable cross-section; loose connections at either end of the supply cable.	Electrician: check the installation and protection.
Circuit breaker or RCD trips instantly	Short circuit in the wiring or a faulty component; heating element going to ground or damaged; moisture inside the heater.	Return the heater to the manufacturer.
The supply cable gets very hot	Insufficient cable cross-section or loose connections.	Electrician: inspect connections and upgrade the cable.

11. Maintenance & Winterising

- **Annual maintenance and cleaning** is recommended.
- **Before any maintenance, isolate the unit from the mains.**
- Drain the heater and clean the **flow tube and heating elements** of scale, sludge and debris — this extends element life and avoids failures.
- Check that electrical cable connections are **properly tightened**.
- **Winterising:** if the heater is not in use it must be **drained**. Water freezing inside will cause severe damage.
- Dispose of electrical and electronic equipment in accordance with the applicable regulations.

12. Warranty & Contact

- Guaranteed for **two years within Europe** and one year outside, from the date of purchase, against faulty workmanship and materials.
- The manufacturer will, at its discretion, **replace or repair** faulty units or components returned for inspection. Proof of purchase may be required.
- Not covered: **incorrect installation**, inappropriate use or neglect, **failure to connect the Safety Circuit**, moisture in the enclosure, water outside the quality limits, frost damage.
- Shipping damage must be reported **within 48 hours** of receipt; later claims are not covered.
- **Consumables** (glass parts, seals, water connections) are excluded.

Contact Information

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ISO Certifications

ISO 9001:2015 Quality Management <i>EUROCERT</i>	ISO 14001:2015 Environmental Management <i>BQV</i>	ISO 45001:2018 Occupational Health & Safety <i>BQV</i>
ISO 22301:2019 Business Continuity <i>EUROCERT</i>	ISO 46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.