

## ELECTRONIC CONTROL BOX, 1 FUNCTION 20-0241

### Specifications

Rated voltage: 230 V, 50/60 Hz, single phase  
 Rated power: 3680 W  
 Rated current: 16 A

The total sum of the loads must not exceed the rated power and current.

### Dimensions & temperatures

Weight: 0.5 kg  
 Length: 160 mm  
 Width: 80 mm  
 Depth: 60 mm

Operating temperature: 0 to 50°C  
 Storage temperature: -20 to 50°C

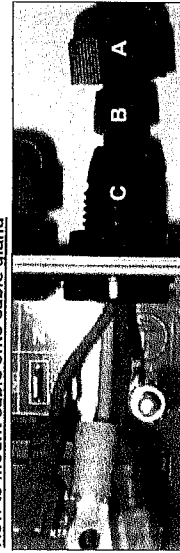
### Important

This control box is not suitable for medical use. Follow the directions for installation and connection. We reserve the right to change the product and the specification without notice.

### Safety rules

- Locate the box in a dry area with good ventilation.
- The box must be situated at least 3 cm above the ground floor.
- Before cleaning, servicing, exchanging of parts or accessories or checking up on various disturbances, the mains have to be cut off.
- Make sure that there are no unconnected wires and cables inside the box.
- Cables and wires must be as short as possible inside and outside the box.
- The box is protection Class I. It has to be connected with cables according to the instructions from EN 60335-1 and EN 60335-2-60. It is recommended that you consult a state registered electrician. The supply cable has to be minimum type H05VV-F; 3G1.5 mm<sup>2</sup>.
- Keep at all time minimum 20 mm distance between high and low power cables.
- In order to separate the box from the mains you must install a suitable ground fault circuit interrupter with at least 3 mm break distance on each terminal in the present electrical installation.
- The mounting is to be made in such a way that it is not possible to touch the electric parts.
- The electric parts have to be mounted in such a way that they cannot fall into the bathtub.
- Instruments of Class I must be connected to a permanent installation.
- Be aware that some countries have requirements about power indication.
- Tighten all cable glands sufficient by means of a tool to ensure that the Ingres protection is IPX5 and to ensure that the glands are fixed in position and protected for physical traction and pressure.
- If not all cable outlets are used, the cable gland(s) in question has to be changed to dummy plug(s) of the same dimension to ensure that the Ingres Protection still is IPX5.
- This appliance is not intended for use by persons, including children with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a responsible person for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

### How to mount cable onto cable gland



- Pull the cable through A.
- Pull the cable through B, and C (B is normally placed inside C).
- Tighten A sufficient onto C by means of a tool.
- Mount the spade- and eye shoes onto wire ends where this is necessary.



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### Cabling and wiring

- Water level sensor (25-0211-5) is connected to the connector marked: LEVEL.
- 1-function touch is connected to screw terminals marked: TOUCH
- Pump/light/blower/valve or similar is connected to spade terminal marked: A (and if necessary to earth)
- Control box is connected to MAINS via spade terminals marked: MAINS and to earth.

### Jumper settings (All Jumpers are default in ON position)

Jumper	Function	ON	OFF
X1	Water level/dry (no function at X3=OFF)	Correct water level is required for activation.	Operation independent of water level.
X2	Timer.	Switch OFF automatically after 30 minutes.	No timer.
X3	Control box type.	ON/OFF control.	Water control (see X4).
X4	Water control (when X3=OFF)	Water inlet control.	Water level control.

### Functional description

#### Single function ON/OFF control (Jumper X3=ON):

The bathtub is filled with water until at least half the sensor is covered. This allows operation. By pressing the touch, the pump (or any connected device) will start. This is indicated by LED on the touch. With jumper X1 in ON position a 30 minutes timer is activated. With jumper X1 in OFF position, the timer is disabled.

#### Water inlet control (Jumper X3=OFF & X4=ON) — Used for bathtubs

Water filling is started by pressing the touch. The solenoid valve (normally closed) will open for water flow. Diode indicates the function is active. When water level reaches the water level sensor, water filling will stop automatically. It is recommended to set jumper X2 in ON position, which activates a 30 minutes timer. This is a security option to prevent waste of water in case of a failure on the water level sensor. With jumper X2 in OFF position this security is disabled.

#### Water level control (Jumper X3=OFF & X4=OFF) — Used for spas

When power is connected to the control box, water filling will start immediately if no water is in the spa. Filling will continue until water level sensor is activated (no time dependence). An optional light indicator (e.g. touch) flashes slowly to indicate it is a first time water filling (time independent).

Subsequently water filling is activated every time water level falls below the water level sensor. A built in delay of 5 seconds prevents an inappropriate activation (e.g. waves in the tub). A 30 minutes timer in a filling sequence prevents against water waste in case of defective water level sensor. If the timer exceeds 30 minutes, water filling will stop and light indicator (option) shows with 3 fast flashes that the control box has gone in to fail modus. This is reset by disconnecting mains for at short while. However the water level sensor function should be controlled first. With jumper X2 in OFF position, this security is disabled.

### Connection diagram

