
CENTRAL HEATING UNIT CU3, ASSEMBLY AND INSTALLATION

1. Construction

Central heating unit CU3 is intended for closed circuits where the pressure is min. 0.5 bar higher than the atmospheric pressure. The unit includes temperature control and overtemperature cut-out functions. Loval central heating units are assembled of the following components (Picture 1):

Immersion heater UKT 323, UTT 323 or UKT 623 (2000 – 10000 W, 230/400 V)
Stand-off (100 mm, 150 mm, 200 mm), 100 mm as standard.
Terminal box S6, including temperature control/overtemperature cut-out unit.

2. Assembly and installation

Mounting of immersion heater

Screw on the immersion heater (1) together with the gasket onto the mating boss on the boiler. Check that the thread size and the immersed length of the heater are suitable for the boiler. The operating position of the immersion heater is not limited, however, it must be completely immersed in water. If the mating boss on the boiler is inside thermal insulation, fix a suitable stand-off to the immersion heater prior to mounting. If no stand-off is required, continue to section “Installation without stand-off”

Installation with stand-off

The supplied long wires (8) are terminated to the terminal screws of the immersion heater. Screw on the studs (9) to the element head. Then put on the stand-off (10) over the terminal wires and studs. Open the lid (5) of the terminal box and mount the base of the box (2) onto the stand-off, using the clamp ring (3). Remove the screws on the clamp ring and secure the box using the nuts on the studs. To make this easier, the temperature control unit (4) can be removed. Push the bulbs of the temperature control unit into the pocket tube of the heater.

Terminate the wires from the element terminals to the push-on terminals 11, 21 and 31 of the temperature control unit. The wires on the other side (7) are factory installed from terminals 12, 22 and 32 to the push-on terminals 1, 2 and 3 on the terminal block. Blue neutral wire can be brought from the star point of the immersion heater to the push-on terminal 4 on the terminal block. Next mount the temperature control unit. Make sure not to loosen the push-on wire terminals.

The supply cable can now be connected. Strip back the earth wire slightly longer than the phase wires. Terminate the phase wires L1, L2 and L3 to terminals 1, 2 and 3. Terminate the earth wire to the PE terminal on the base of the terminal box. If neutral wire is available, terminate it to the terminal 4 on the terminal block. When fixing the lid, make sure the fixing bracket of the temperature control unit remains within the grooves on the base of the terminal box.

Installation without stand-off

Open the lid (5) of the terminal box and mount the base of the box (2) onto the heater boss, using the clamp ring (3). To make this easier, the temperature control unit (4) can be removed. Push the bulbs of the temperature control unit into the pocket tube of the heater. Terminate the wires from the element terminals to the push-on terminals 11, 21 and 31 of the temperature control unit in accordance with the wiring diagram (Picture 2). If wires that came with the stand-off are used, they must be shortened. The wires on the others side (7) are factory installed from terminals 12, 22 and 32 to the push-on terminals 1, 2 and 3 on the terminal block.

Blue neutral wire can be brought from the star point of the immersion heater to the push-on terminal 4 on the terminal block. Next mount the temperature control unit. Make sure not to loosen the push-on wire terminals. The supply wire can now be connected. Strip back the earth wire slightly longer than the phase wires. Terminate the phase wires L1, L2 and L3 to terminals 1, 2 and 3. Terminate the earth wire to the PE terminal on the base of the terminal box. If neutral wire is available, terminate it to the terminal 4 on the terminal block.

