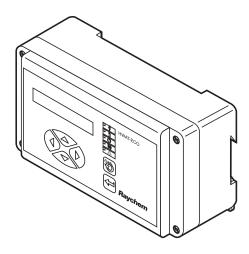
HWAT-ECO



TEMPERATURE CONTROL UNIT FOR ENERGY EFFICIENT CONTROL OF HWAT TEMPERATURE MAINTENANCE **CABLES**



PRODUCT OVERVIEW

The nVent RAYCHEM HWAT-Eco controller is designed for operation with RAYCHEM HWAT Systems for temperature maintenance of domestic hot water pipe networks.

It is compatible with RAYCHEM self-regulating temperature maintenance cables

HWAT-L

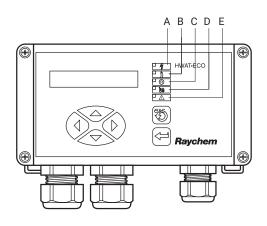
HWAT-M

HWAT-R

PRODUCT FEATURES

Electronic temperature control unit with integrated clock

- · Building-specific programs
- · Boiler temperature monitoring
- · Economy programs
- · Input maintain and comfort temperatures
- · Password protection
- · Simple user interface
- · BMS interface
- · Alarm outputs



- A Power supply on (green LED)
- B Power to heater on (green LED)



- C Legionella prevention (green LED) heating cable 100% powered increased risk of scalding
- D Maintain temperature lowered following boiler temperature decrease (green LED) boiler temperature is lower than expected.
- E Error (red LED)



Change menu selection or position cursor



Escape, backspace or NO



Confirm selection, new value or YES

TECHNICAL DATA

Product description HWAT-ECO

Use Only for HWAT-L/M/R heating cables

Selectable maintain temperature 37°C to 65°C in max. 48 timer blocks per day

Operating voltage 230 VAC (+10%, -10%), 50 Hz

Switching capacity 20 A / AC 230V

Internal power consumption 2,5 VA

Circuit breaker Max. 20 A, C-Characteristic

Power cable section entry 1.5 - 4 mm² for fixed wiring only

Auxiliary cable section entry Up to 16 AWG (1.3 mm²)

Weight 880 g

Mounting options Wall mount with 2 screws or DIN rail

Cable glands (entries) 2 x M20 and 1 x PG13.5 with 3 inputs for external wires of 3-5 mm

Protection level IP 54

Ambient temperature 0°C to 40°C

Housing material ABS
Internal temperature alarm 85°C

Master/slave cable 2-wire twisted pair shielded, max.1.3 mm² core and insulation of 500 V Master/Slave Master is selectable in the unit, up to 8 slaves can be connected

BMS interface 0 - 10 VDC

Alarm relay contacts Max. 24VDC or 24 VAC, 1 A, SPDT voltage free

Boiler temperature sensor Delivered with KTY 82-210, optional Pt100 in 2-wire technology

Power correction factor 60% to 140% (fine tuning of maintained temperature)

Clock back-up time 15 days with rechargeable battery

Clock accuracy ±10 minutes per year

Real time clock Automatic summer/winter time and leap year correction

Parameters stored in non-volatile All parameters, except date and time memory

Approval VDE according to EN 60730, CSTB

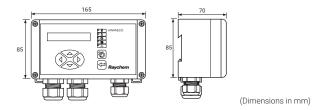
EMC According to EN 50081-1/2 for emission and EN 50082-1/2 for immunity

PCN number 875270-000 EAN code: 5017455010831

nVent requires the use of a 30 mA residual current device and a C-Characteristic circuit breaker to provide maximum safety and protection from fire.

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The unit complies with IEC1000-3-3 (flicker) if installed according to part 3 of VDE 0838. To avoid flicker install the unit in such a way that at the current value of the systems start-up temperature (max. 20 A per heating circuit) the voltage drop does not exceed 1% at the power supply of the lighting apparatus (normally subpanel).



PROGRAMS

The HWAT-ECO has 7 different building specific time/temperature programs. These programs are based on our long experience for optimum comfort and energy saving. For user specific changes in the programming, the Edit timer program can be used.

Programme name	Building type
Programme 0	Constant temperature (±55°C)
Programme 1	Apartment block
Programme 2	Prison / Barracks
Programme 3	Hospital
Programme 4	Hotel
Programme 5	Sports centre / Swimming pool
Programme 6	Office

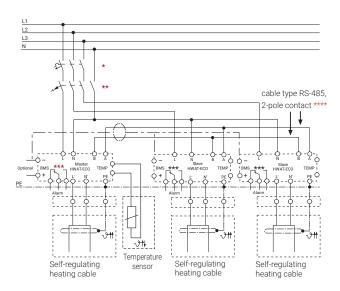
In addition, user specific programmes can be created

Temperature can be varied in 1/2 h blocks to any desired temperature between: OFF, economy t°, maintain t° and legionella prevention (100% powered, increased risk of scalding)

ELECTRICAL CONNECTION SCHEME

Wiring diagram for HWAT-L / HWAT-M / HWAT-R with HWAT-ECO temperature control unit





- * Two- or four-pole electrical protection by circuit breaker may be needed for local circumstances, standards and regulations
- Depending on the application, one- or three-pole circuit-breakers or contactors may be used
- *** Optional: Potential-free alarm contact
- **** The earth wire of shielded RS-485 cable needs to be connected to the BMS (-) terminal of each HWAT-ECO in the Master / Slave network.

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