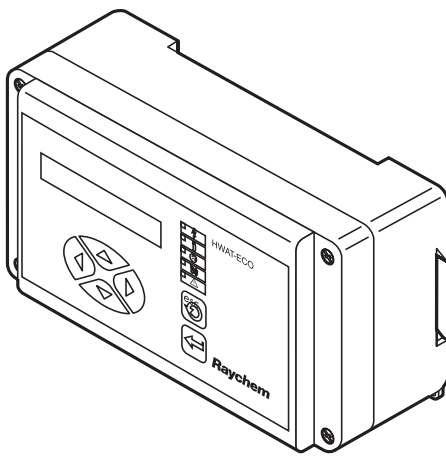


TEMPERATURE CONTROL UNIT FOR ENERGY EFFICIENT CONTROL OF HWAT TEMPERATURE MAINTENANCE CABLES



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

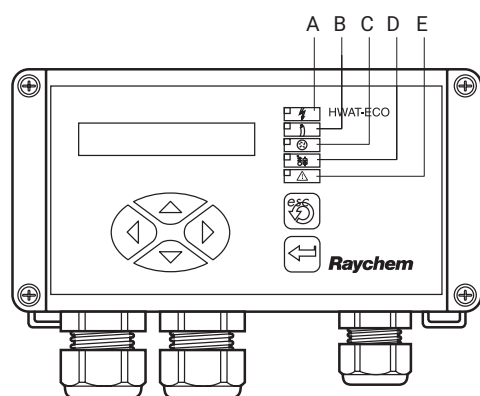
HWAT-R

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

MODULE LAYOUT



- 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



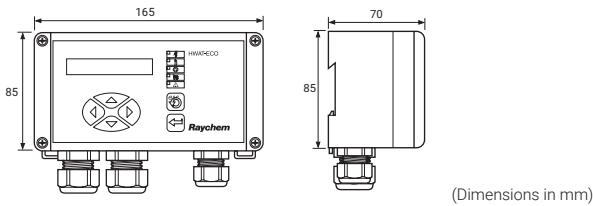
Confirm selection, new value or YES

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 mm ² for fixed wiring only
Auxiliary cable section entry	Up to 16 AWG (1.3 mm ²)
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 mm ² 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.

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.

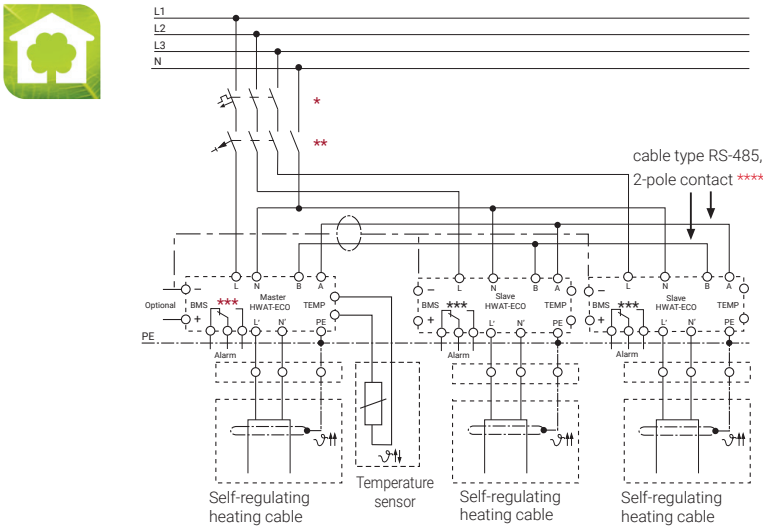
Programme name	Building type
Programme 0	Constant temperature (±55°C)
Programme 1	Apartment block
Programme 2	Prison / Barracks
Programme 3	Hospital
Programme 4	Hotel
Programme 5	Sports centre / Swimming pool
Programme 6	Office

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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