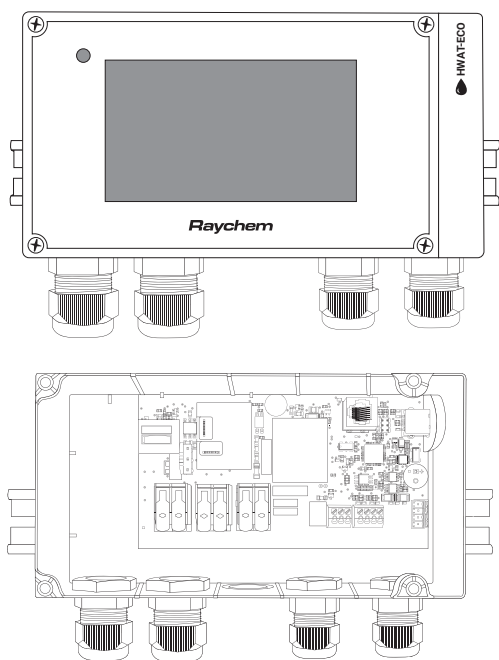


Electronic controller for hot water temperature maintenance systems

PRODUCT OVERVIEW



The Raychem HWAT-ECO controller is designed for operation with the Raychem HWAT-L, -M and -R self-regulating heating cables.

FEATURES

- Intuitive set-up and programming of the unit by a 5" inch colour touch screen
- Flexible temperature control of hot water temperature maintenance systems
- Energy savings through an integrated function that lowers the maintain temperature during hours of low water consumption
- Heat-up cycle function that increases the water temperature of the hot water in the pipes
- Alarm relay with change over contact to signal power, temperature or communication problems
- Hot water storage & pipe temperature monitoring with high and low temperature alarm and system shut down.
- Seven pre-defined building timer programmes that can be customized by the user
- Pre-set up in power-off mode by external power bank/charger via USB connection

GENERAL

Area of use Non-hazardous locations; for HWAT -L/ -M / -R heating cables only

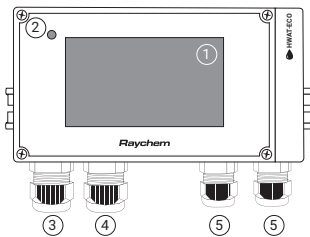
ELECTRICAL PROPERTIES

| | |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Supply Voltage | 180-253 VAC; 50/60 Hz |
| Operating temperature | 0°C to 40°C ambient |
| Power consumption | Max. 3,5 VA |
| Switching capacity output relay | 20 A 230 VAC, +10/-15% |
| Size Power supply terminals | 3 x 6 mm ² max. |
| Size Heating cable terminals | 3 x 6 mm ² max. |
| Size Alarm terminals | 3 x 1,5 mm ² max. |
| Size Sensor terminal - Boiler | 2 x 1,5 mm ² max. |
| Size Sensor terminal - Pipe | 2 x 1,5 mm ² max. |
| Alarm relay | Single pole double throw relay, volt-free; Max. switching capacity (resistive load only) 1 A/30 VDC 0.5 A/125 VAC, Max.: 60 VDC/125 VAC |
| Circuit breaker | Max. C 20 A (C-Characteristics) |
| Real time clock | Automatic Summer/ Winter time and leap year correction |
| Clock back-up time | 10 days |
| Clock accuracy | +/-10 minutes per year |
| Keylock | Password protection for parameter settings |
| USB Port | For pre-setup in power off mode; for firmware upgrades |

ENCLOSURE

| | |
|--------------------------|----------------------------------------------------|
| Dimensions | 210 mm x 90 mm x 85 mm |
| Ingress protection class | IP54 – indoor use only |
| Enclosure material | Polycarbonate |
| Mounting | Mountable DIN RAIL, 35 mm |
| Cable entries | 2 x M25 and 2 x M20 (1 Blanking plug for 2nd. M20) |
| Storage temperature | -20°C to +50°C |
| Flammability class | DIN EN 60730/VDE 0631-1 |
| Weight | 990 g |

TYPICAL ENCLOSURE DIMENSIONS AND MODULE LAYOUT



1. Touch screen: size 5" resistive
2. LED light - error message 0.2s on / 1.8s off
LED light - normal operation, heater on 1.5s on / 0.5s off
LED light - normal operation, heater off 1s on / 1s off
3. M25 Gland: Power cable
4. M25 Gland: Heating cable
5. M20 Gland: Sensor Hot water storage/Sensor Pipe/external alarm

PROGRAMMING

| | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Selectable temperatures | 37°C up to 65°C in 24 blocks of 1 hour per day |
| Default programmes | 7 built-in building specific programmes, editable |
| Timer | Programme can be modified in steps of one hour. Following operation modes are selectable: OFF, ECONOMY, MAINTAIN and HEAT-UP CYCLE |

SENSOR

| | | |
|-------------------------|------------------------------------------------------------------------------------------|-------------------|
| Temperature sensor type | NTC 2 KOhm / 25°C, 2-wire | |
| Sensor tip dimensions | Ø 5 mm; length 20 mm | |
| Sensor cable length | 3 m; cable extension up to 100 m, cross section extension cable: 2 x 1,5 mm ² | |
| Temperature range | 0°C to 90°C | |
| Sensor data | Temperature | Resistance |
| | 40°C | 1211 Ohm |
| | 45°C | 1033 Ohm |
| | 50°C | 884 Ohm |
| | 55°C | 762 Ohm |
| | 60°C | 658 Ohm |
| | 65°C | 571 Ohm |

MONITORING

| | | |
|--------------------------|---------------------------------------------|----------------------------------------------------------|
| Boiler temperature alarm | High temperature alarm/cut | Adjustable range: maintain temperature to 85°C or OFF |
| | Low temperature alarm /cut | Adjustable range: maintain temperature to 37°C or OFF |
| Pipe temperature alarm | High temperature alarm/cut | Adjustable range: maintain temperature to 85°C or OFF |
| | Low temperature alarm | Adjustable range: maintain temperature to 37°C or OFF |
| Sensor alarm | Sensor open circuit Sensor short circuit | |
| Heating cable connection | Heating cable open circuit | |

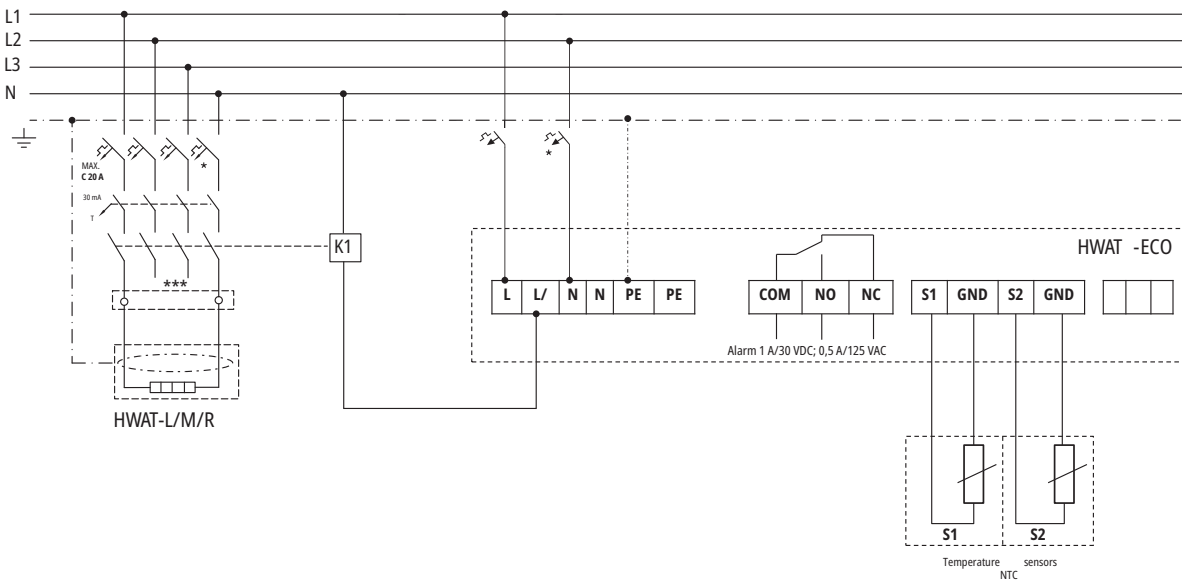
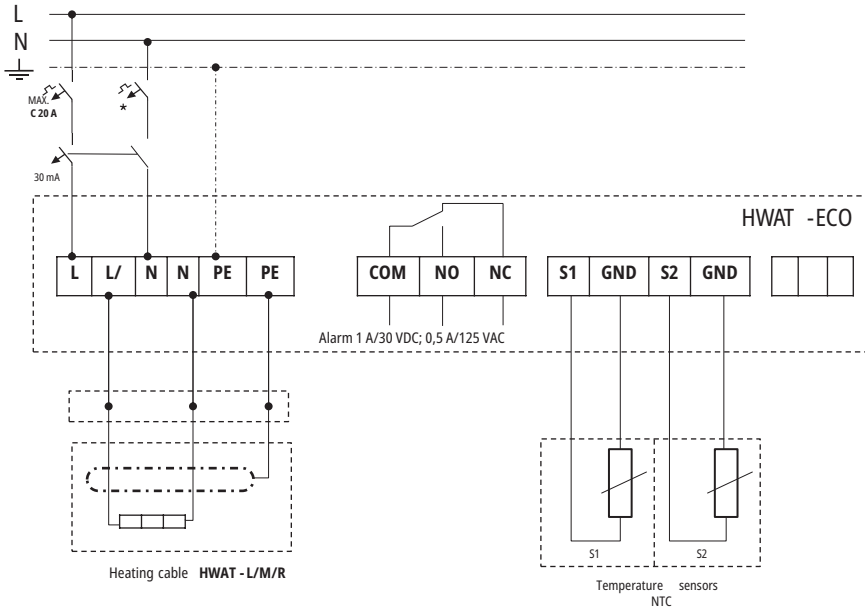
MEMORY

| | |
|--------------------|-----------------------------------------------------------------------|
| Parameters | All parameters are stored in nonvolatile memory, except date and time |
| Clock back-up time | 10 days |

APPROVALS

| | |
|-------------------------------------|-------------------------------------------------|
| Approvals | CE, UKCA |
| Electromagnetic Compatibility (EMC) | EN 61000-6-1: 2007; EN 61000-6-3:2007 + A1:2011 |

ELECTRICAL SCHEME



ORDERING DETAILS

| | |
|----------------|----------------------------------|
| Catalog number | HWAT-ECO |
| Part number | 1244-019897 |
| Weight | 990 g |
| In package | Control unit, Din-rail, 1 sensor |

ACCESSORY

| | | |
|-----------------------|-------------|-------------|
| Catalogue description | Pipe sensor | Power bank |
| Part number | 1244-015847 | 1244-020365 |

Important: The Raychem HWAT-ECO controller is for use with the Raychem HWAT- heating cables only. The warranty and system listing will be invalidated if the HWAT-ECO controller is used with other heating cables.

UK/Ireland

Tel: 0800 969 013
SalesUK@chemelex.com

Ireland

Tel: 1800 654 241
salesIE@chemelex.com

South East Asia

Tel: +65 6768 58 00
Fax: +65 6732 22 63

Australia

Tel: +61 297 920 250
Fax: +61 297 745 931

India - Noida

Tel: +91 120 464 9500
Fax: +91 120 464 9548
NTMinfome@chemelex.com

India - Mumbai

Tel: +91 22 6775 8800/01
Fax: +91 22 2556 1491
NTMinfome@chemelex.com

UAE

Tel: +971 437 817 00
Fax: +971 437 817 77
NTMinfome@chemelex.com