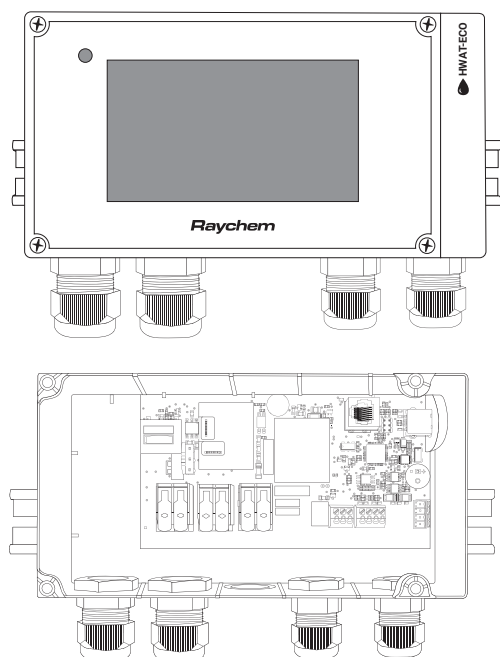


Electronic controller for hot water temperature maintenance systems

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

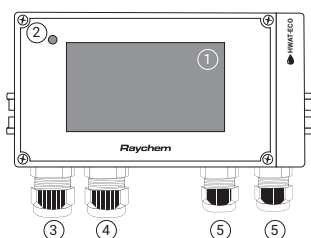
ELECTRICAL PROPERTIES

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	

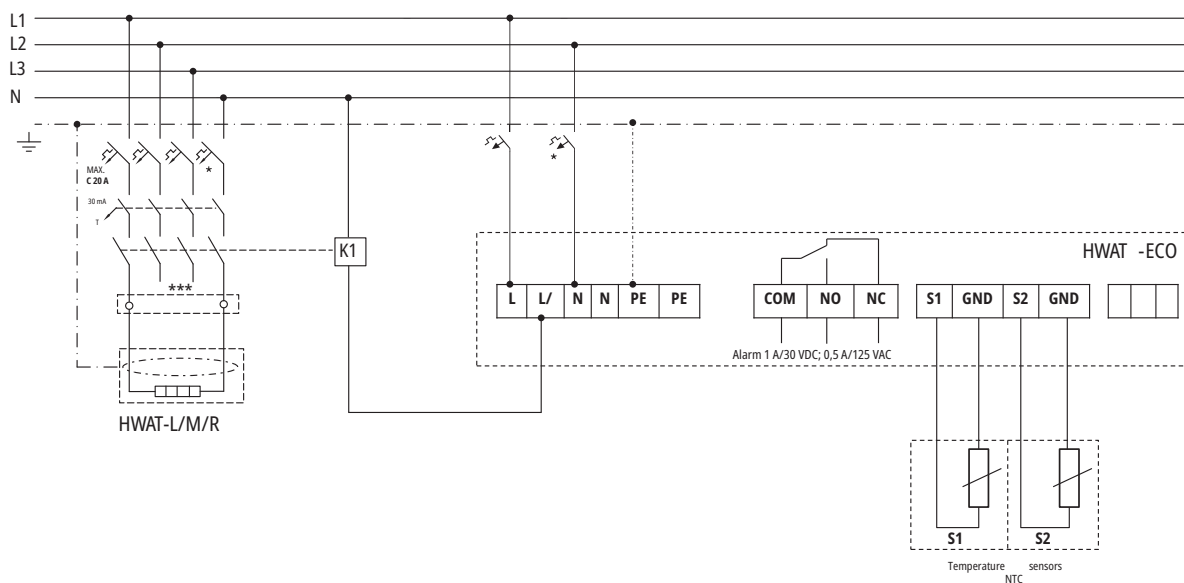
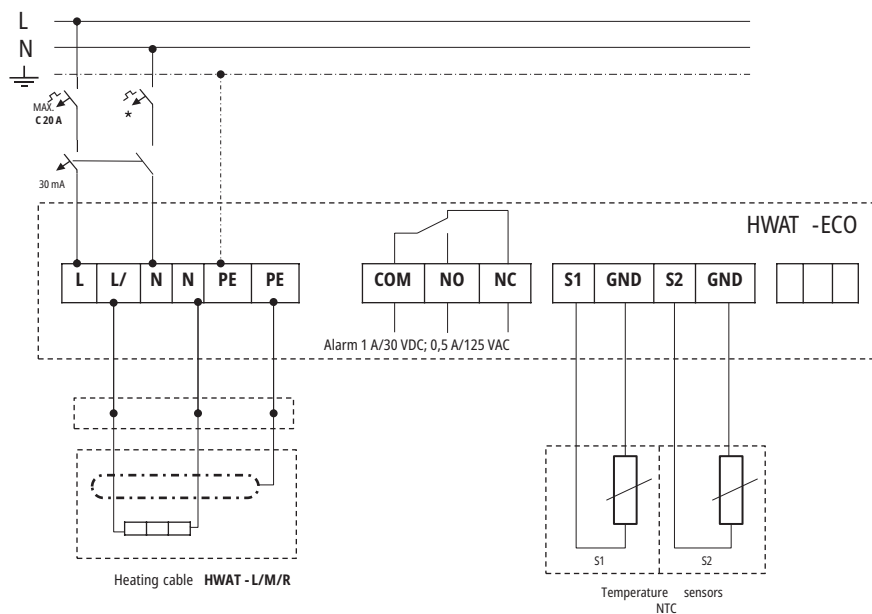
MEMORY

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.