



# CTR-ADD

Slave-controlled add-on unit for electric heating controller, single phase or two phase

CTR-ADD is a slave-controlled electric heating controller for controlling electric heating batteries, electric radiators etc. The controller is slave-controlled via another CTR..

- CTR-ADD is a supplementary unit for slave-control from another CTR.
- For loads up to 3.6 kW (230 V) or 6.4 kW (400 V).
- Automatic adaption to connected supply voltage 200 - 415 V.

CTR- ADD is an electric heating controller (triac control) for single phase or two phase (200 - 415 V) electric heating.

It is intended primarily for wall mounting and is connected in series between power supply and an electric heater, for example an electric heating battery or electric panel.

CTR-ADD is a supplementary unit which is used when the load of the electric heating battery exceeds the capacity of the CTR. The control input of the CTR-ADD must be connected to the control output of another CTR. If required several CTR-ADD units can be controlled by the same main CTR unit.

CTR-ADD controls the electric load synchronically with the output load from the main unit.

- Several CTR-ADD units can be slave-controlled by the same main unit.

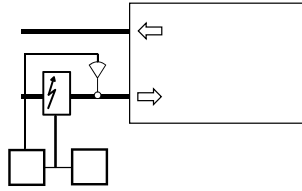
## Function

The controller pulses the entire power output ON/OFF. The controller utilises time-proportional control, the ratio between On-time and Off-time is varied to fit the prevailing heating requirement e.g. ON = 30 s and OFF = 30 s gives 50% output power. The cycle-time (the sum of on - time and off -time) is fixed approx 60 s.

This control accuracy contributes to reduced energy costs and to the increased comfort of an even temperature. Since the current is switched by a semiconductor (triac) there are no moving parts that can wear out. The current is switched at zero phase angle, to eliminate network disturbance.

## Application example

With loads larger than 3500 W (230 V AC) or 6000 W (400 V AC) a CTR ADD unit can increase the Controlling capacity of a standard CTR unit. Several ADD units can be connected but each controller must control an individual heater section.



## Technical data

### General

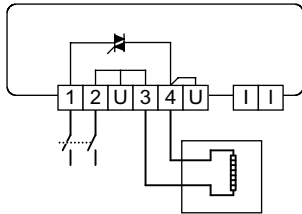
Supply voltage	200...415 V AC, 50...60 Hz, single or two phase. Automatic adaption.
Power output	Maximum 16A, minimum 1A
Ambient temperature	Maximum 30°C with no condensation. N.B. CTR generates 20 W.
Storage temperature	-40...+50°C.
Ambient humidity	90 % RH maximum.
Form of protection	IP20
Indicator	Red LED, visible through bottom of unit and lit when power is pulsed to the heater.
<b>CE</b>	<b>Low Voltage Directive (LVD) standards:</b> This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC through product standards EN 60730-1 and EN 60730-2-9. <b>EMC emissions &amp; immunity standards:</b> This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 61000-6-1 and EN 61000-6-3. <b>RoHS:</b> This product conforms with the Directive 2011/65/EU of the European Parliament and of the Council.

### Inputs

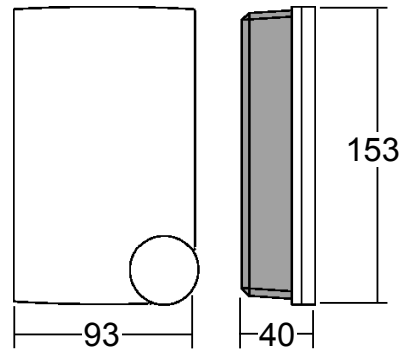
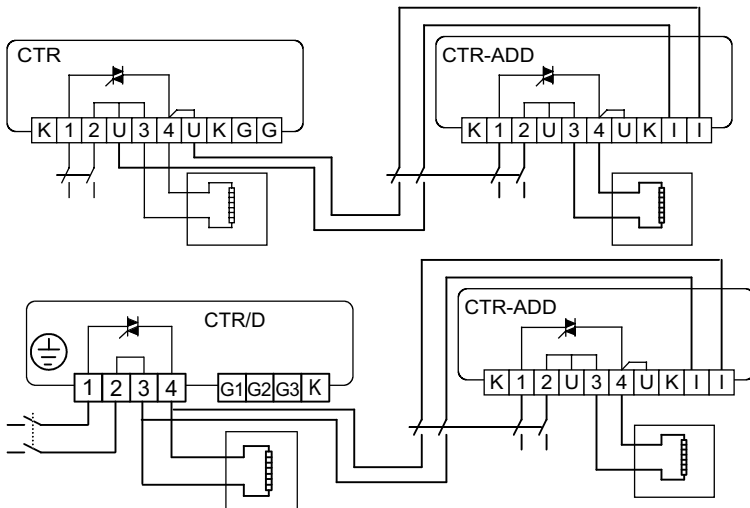
Control signal	For control signal 210...415 V AC. Galvanically separated from the CTR-ADD supply voltage. CTR-ADD will be on when the input signal is higher than 200 V.
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## Dimensions and wiring

### Supply voltage and load



### Wiring of control signal



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