



**PULSER®-HC-Lon is a controller intended to control electric heating and cooling valve in sequence.**

- \* LonWorks-communication
- \* Built-in sensor and input for external sensor
- \* Window contact- Stops the electric heating
- \* Three modes of operation - settable via network
- \* Electric heating and cooling valve in sequence
- \* Cooling valve, three-point valve or thermal actuator

## Function

*Pulser HC-LON* is a zone controller for controlling heating and cooling in sequence based on Lon-technology.

The controller has a triac output to control electric heating (10 A) and an extra output (cooling alt. heating), three-point or to 24 V thermal actuator.

Triac control is more accurate than on/off-control and therefore gives increased heating comfort and lower energy costs.

Pulser HC-Lon controls electric heating using time-proportional pulse/pause control. The ratio between on-time and off-time varies in accordance with the present power demand.

The controller can be used with either internal or external sensor or with a temperature signal from a LonWorks network. The main setpoint is set via the LonWorks network. With the setpoint knob on the controller, it can be shifted  $\pm 3K$ .

### Modes of operation

Via the Lon-network the Pulser-Lon can be set to different operation modes: present, not present and standby. Shiftable setpoint and also individual setpoints for heating and cooling.

### Open window indication

To save energy, the controller will be forced to shut down if the window indication is activated.

### Setpoint

Basic setpoint is set via the network. Setpoint can be shifted -3...+3 K by means of the knob on front.

### Selection internal / external sensor

Is set by jumpers on the switchboard. Please see overleaf.

- Internal sensor and internal setpoint shift
- Internal sensor and external setpoint shift
- External sensor and internal setpoint shift
- External sensor and external setpoint shift

In addition the device can be set by means of network variables to obtain its data over the Lon-network.

## Technical data

Supply voltage	24 V AC
Connection	Screw terminal
Ambient working temperature	0...30°C not condensating. N.B. The unit generates 12 W heat.
Ambient humidity	Max 90% RH
Storage temperature	-40...+50°C
Pulse period	60 sec.
Protection class	IP30



This product conforms with the requirements of European EMC standards CENELEC EN50081-1 and EN50082-1 and carries the CE-mark.

### Outputs

Load, electric heating	10 A, 230 V AC, (Min 1A)
Acuator	Triac, 24 V AC, 0,5 A (1 A peak)

### Inputs

Input external sensor/setpoint	For Regin NTC-sensor type TG-R530, TG-K330 or corresponding sensor
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### Settings

Setpoint shift	+/-3K, basic setpoint is set via network (LonWorks)
Neutral Zone (NZ)	Is set via network (LonWorks)

### Sensor

Built-in sensor	Range 0...30°C
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## LonWorks network variables

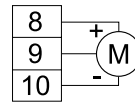
See separate leaflet

## Wiring and dimensions

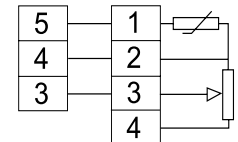
### Terminal blocks

1	Net A	13	Supply 230 V
2	Net B	14	Supply, neutral
3	External setpoint	15	Load
4	Signal neutral	16	Load
5	External sensor		
6	Window indication		
7	Window indication		
8	Actuator, increase/heating		
9	Actuator, common		
10	Actuator, decrease/cooling		
11	Supply, 24 V AC		
12	Neutral		

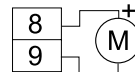
### 3-point / cooling increase/decrease



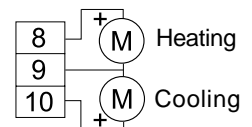
### Wiring TG-R430



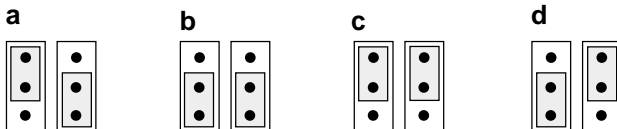
### One thermal actuator cooling / heating



### Two thermal actuators cooling / heating

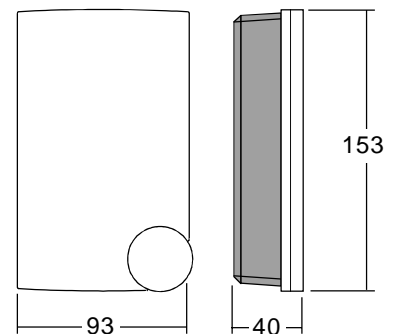


### To select sensor / input data



- a: Internal sensor and internal setpoint shift
- b: Internal sensor and external setpoint shift
- c: External sensor and internal setpoint shift
- d: External sensor and external setpoint shift

In addition the device can be set by means of network variables to obtain its data over the Lon-network.



IMPROVING INDOOR CLIMATE CONTROL WORLDWIDE

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