



The Oventrop Quality Management System is certified to DIN-EN-ISO 9001

Technical information

### Tender specification:

Oventrop “DynaTemp 100/16” for an individual room temperature control via LAN networks. Application router with pre-installed software and 16 outputs for activation of Oventrop thermostats “Uni LHZ” for instance. Display of output status via integrated LEDs.

With integrated wireless receiver for solar powered window contacts (Reed contacts) or radio controlled window handles. Power supply via the enclosed power pack.

### Item nos.:

- 115 30 16 Application router “DynaTemp 100/16” with 16 outputs and 16 inputs for wired window contacts
- 115 03 00 Thermostat “Uni LHZ” with electric temperature setback, without “0” setting
- 115 30 70 Window contact, white solar powered
- 115 30 60 UP-repeater, 230 V

### Function:

When used in conjunction with Oventrop thermostats “Uni LHZ” with integrated electric setback function or Oventrop electric room thermostats 24 V with actuators, the Oventrop “DynaTemp 100/16” allows a programmable, timed individual room temperature control.

The “DynaTemp” software running on the router is accessible via the internet browser of any PC connected to the network. By feeding the IP address of the router into the computer, a Web screen on which the setback periods can be entered, is selected. The setback periods can be programmed individually for each room and day of the week.

If a room shall be heated out of this period, an external access to the website via the internet is possible and the setback period can be interrupted for a certain time.

The software has integrated user administration in which the access authorizations are allocated to the individual users.

Furthermore, the signals of the solar powered window contacts or the radio controlled window handles can be processed via the integrated wireless receiver on the basis of EnOcean radio technology. The router evaluates the signals and passes them on to the individual outputs.

This way, temperature setback of the thermostat is activated when the windows are opened. At the same time, the current window position is displayed on the Web screen and can be queried at any time.

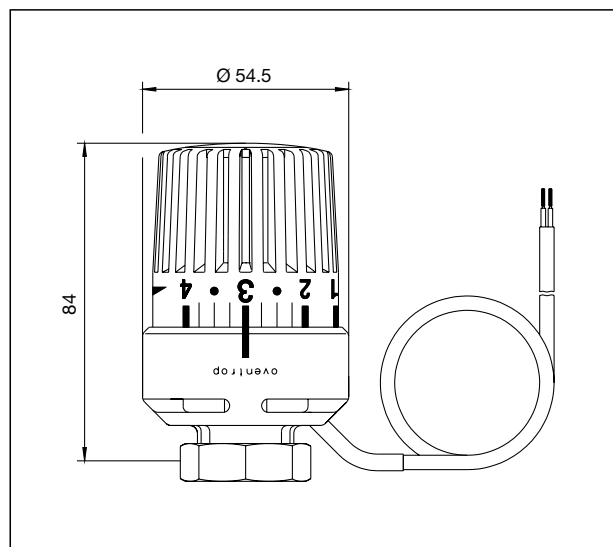
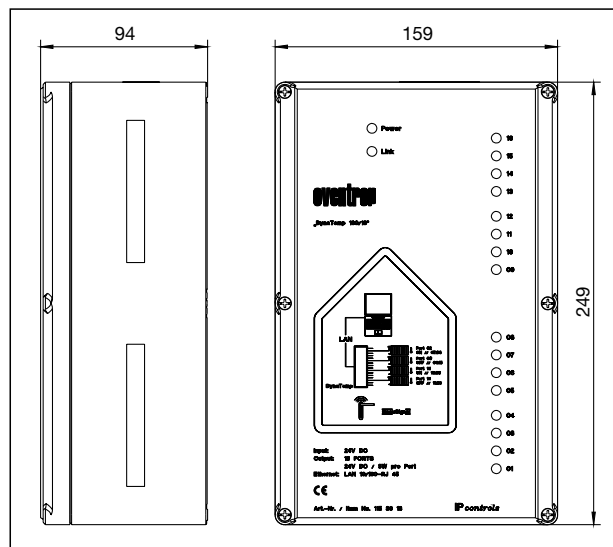
When using the thermostat “Uni LHZ”, temperature setback is carried out by activating the integrated electric resistance via the application router. A temperature setback of the room up to 7 K can be achieved by a warming up of the sensor element when current flows. The real setback which can be achieved depends essentially on the thermal insulation of the building.

During normal operation, temperature control is carried out by the thermostat without auxiliary energy.

When using electric room thermostats 24 V, the separate input for temperature setback is activated by the “DynaTemp 100/16” router and the room temperature is reduced by approx. 5 K.



### Dimensions:



Thermostat “Uni LHZ”

**Technical data:**

Power pack (ready for plug-in)

Input voltage: 230 V AC, 50/60 Hz  
 Output voltage: 24 V DC  
 Power: 60 W

Router

Operating current: 24 V DC  
 Connections: 1 input, power supply  
 1 input, Ethernet 10/100-RJ-45  
 16 outputs, bipolar  
 16 bipolar inputs for the connection of wired window contacts

Switching capacity: 3 W per output  
 Output voltage: 24 V DC  
 Status display: 1 LED per output  
 1 LED operating current (power)  
 1 LED network connection (link)  
 Wireless receiver for radio signals (EnOcean) with external antenna  
 Ambient temperature: 0°C up to 45°C, non condensing  
 Storage temperature: -20°C up to +65°C, non condensing

Thermostat "Uni LHZ"

Operating current: 24 V AC/DC  
 Power consumption: approx. 0.6 W  
 Temperature setback: up to approx. 7 K

Radio controlled window handle or solar powered window contacts

Power supply: without cable and batteries  
 Transmitter frequency: 868 MHz  
 Radio range (depending on the building):  
 with visual contact approx. 30 m in corridors, up to 100 m in halls  
 Gypsum plaster board, wood approx. 30 m, through a max. of 5 walls  
 Brickwork approx. 20 m, through a max. of 3 walls  
 Armoured concrete approx. 10 m, through a max. of 1 wall/ceiling

The range of the radio signals can be impaired by:

- hollow lightweight partition walls with insulating wool on metal foil
- intermediate ceilings with panelling made of metal or carbon fibre
- lead glass or glass with metal coating
- installation of the transmitter/receiver near materials with metal components or near metal objects
- other transmitters also transmitting high-frequency signals (e.g. computers, stereo sets or video recorders)

A minimum distance of 0.5 m should be kept.

**Application:**

The "DynaTemp" system is used in combination with thermostats "Uni LHZ" or electric room thermostats and actuators in heating systems, especially in office buildings, authorities, schools and universities.

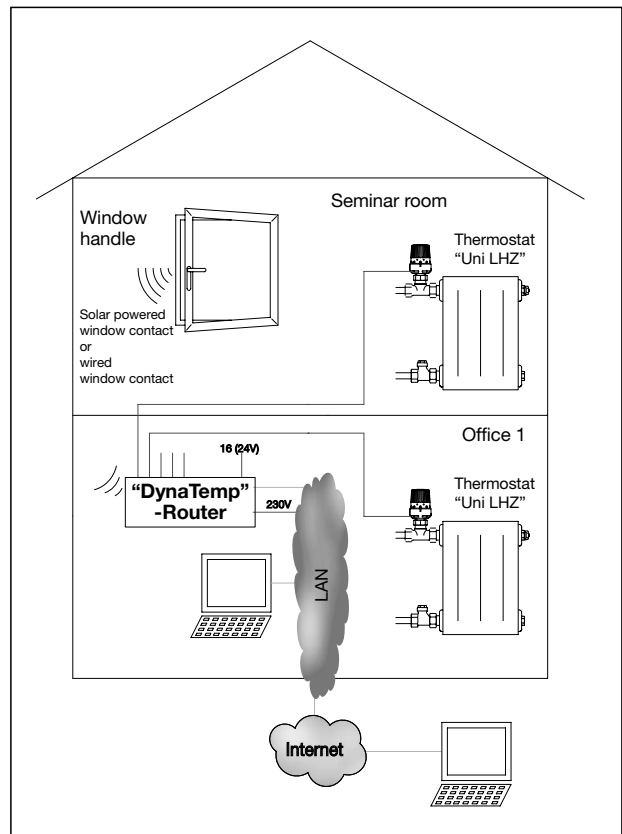
**Installation:**

The existing network infrastructure (cable channels, computer network) can be used when installing the "DynaTemp 100/16". The control lines required for the drive of the thermostats can often be laid in existing cable channels.

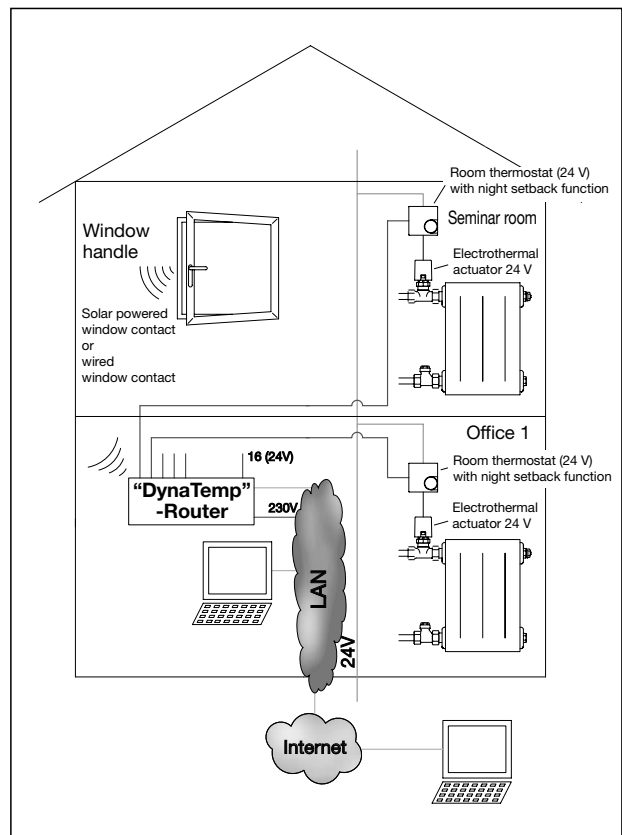
The application router has to be connected to the computer network and to the 230 V current supply via the power pack. The control lines of the thermostats are to be connected to the router via the terminals.

By feeding the IP address of the router into the computer (factory preset: 192.168.1.111), the web screen on which the setback periods of the thermostats are programmed is selected. As the software is running on the router, an additional software is not required.

Many standard windows can be retrofitted with radio controlled window handles or the solar powered window contacts. The window handles are allocated to the corresponding rooms/outputs via the menu of the router. Wired window contacts can also be connected.

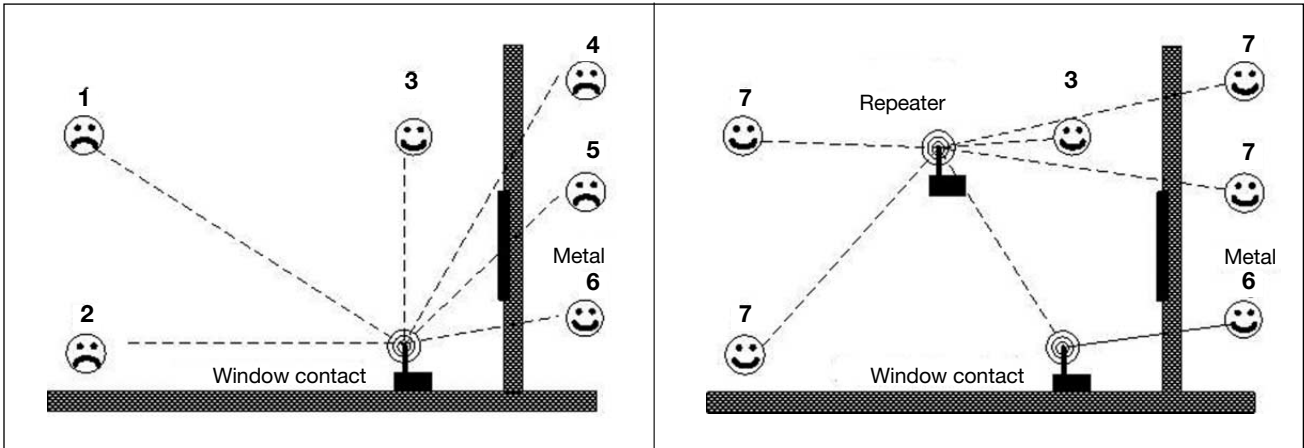


Connection example 1, with thermostat "Uni LHZ"



Connection example 2, with room thermostat and actuator 24 V

Installation notes for the combination of the systems “DynaTemp 100/16” and radio sensors, e.g. window contacts



1. Poor position - distance between the transmitter and receiver is too large
2. Poor position - installation was carried out too close to the wall
3. Good position - radio link shows no obstacles
4. Poor position - wall penetration is unfavourable
5. Poor position - radio waves are disturbed by metals
6. Good position - wall is penetrated in a straight line
7. Optimised by using a repeater

Unfavourable positions can be optimised by using a repeater.

**Note**

Metals can act as barrier to radio signals. Metal surfaces can be visible in the form of cabinets, controllers or doors but they can also be concealed in the form of metal foils in insulations, metal coated glass or as supporting framework in lightweight partition walls. It is advantageous to find out possible metal shielding beforehand and to take them into consideration when designing the radio links.

**Note**

Radio signals are dampened by walls. The more oblique the radio signals have to penetrate the wall, the longer is their way through the obstacle and the more intense is the dampening effect. Walls should be penetrated in a straight line. In case of window recesses, the receiver should be in a vertical position to the window.

**Note**

Radio waves running parallel to the walls can be disturbed. If the installation is in a corridor or a similar location, it is recommended to mount the transmitter and receiver on different sides to allow for a straight distribution of the radio waves. Should an external antenna be connected, it should be installed at the most remote location of the ceiling and wall in order to guarantee a perfect function.

**Note**

Other electrical appliances can disturb the radio signals. While the installation of a transmitter communicating with the “DynaTemp 100/16” station near other radio transmitters is unproblematic in most cases, a minimum distance of 0.5 m should be kept between the “DynaTemp 100/16” station and high-frequency sources of disturbance.

**Note:**

Should the installation of transmitters and receivers prove to be problematic, the use of up to three repeaters will remedy. Repeaters receive signals, re-send them and thereby increase the radio range.

**Preparatory measures/installation advice:**

- Carry out radio range design for the window sensors
- Detect problematic areas, e.g. metal shielding, and defuse by using repeaters
- Do not install router near electrical appliances, e.g. power packs
- Define location of the antenna
- Note serial number and position of the installed router in the ground plan (serial number can be found on the casing of the “DynaTemp 100/16”)
- Document allocation of the rooms in the cable layout in order to allocate one outlet of the router to a room

**Important advice as to SecuSignal window handles:**

There is an arrow on the white surface surrounding the square hole. “DynaTemp 100/16” interprets the position of the arrow as follows:

- Arrow pointing downwards - > window closed
- Arrow pointing to the left or right - > window opened
- Arrow pointing upwards - > window tilted

Subject to technical modification without notice.

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