**Company**

Our mission

R & D

Sales Department

Where we are

News

Products

Temperature Control

digital thermometers

low-cost digital

thermostats series

digital thermostats and

controllers for refrigerat

digital thermostats and

contr. for refrigeration

digital 1- and 2-stage

thermostats and

controllers

digital multifunction

controllers

Pressure Control

Humidity Control

Milk Preservation

Accessories

Customised

Thermoregulation for civil

Support

Site Map

Search

Join us

Contact us



Temperature Control



low-cost digital thermostats series

WH31-DISPLAY

APPLICATION FIELD: the WH31-DISPLAY represents the leading model of the WH series.

It is a digital thermostat with temperature visualized on a LED-type display. The measuring range varies between $-55 \times +99 \text{ }^{\circ}\text{C}$.

CARRIED-OUT ACTION: the WH31- DISPLAY operates as an ON/OFF cooling (heating) regulator. This means that the compressor stops (starts) when set point temperature is reached and restarts (stops) at a temperature equal to the set point one plus (minus) a differential. The WH31-DISPLAY allows managing defrost cycles by time by simple compressor stop.

SETTING: the set point temperature and the differential (hysteresis), are set by the user. Defrost cycle duration and the interval between two consecutive cycles are settable too. Users are allowed to manage operating parameters (max./min. temperature alarms, probe error correction, etc.).

USER-FRIENDSHIP: the WH31-DISPLAY stands out for the innovative design of the ColorLine series, based on the only push button on the frontal mask and on the simplified alphanumerical system to visualize parameters that permits a quick and intuitive controller setting.

INPUT: the WH31-DISPLAY is provided with 1 input for PTC standard probe for medium-low temperatures. On request the "Quick-Key" programming connector is also available; through it users can quickly and easily reset default values of operating parameters.

OUTPUT: it is provided with 1 relay for 8 A loads (16 A or 30 A on request).

POWER SUPPLY: it can be connected directly

TECHNICAL SPECIFICATIONS

Housing: self-extinguish UL94V0 ABS plastics, black colour

Size: frontal 32 x 74 mm; depth 78 mm (incl. terminal cover)

Mounting: flush-panel on hole 28 x 70 mm (with "fast-lock" sliding brackets)

Protection: IP 64 for the frontal panel

Connections: on screw terminal board for wires with cross section area < 2.5 mm²

Display: 2-½-digit LED display 12.5 mm high

Data storing: on not volatile memory

Operating temperature: $-5 \times +65 \text{ }^{\circ}\text{C}$ ($+23 \times +149 \text{ }^{\circ}\text{F}$)

Stocking temperature: $-30 \times +75 \text{ }^{\circ}\text{C}$ ($-22 \times +167 \text{ }^{\circ}\text{F}$)

Relative humidity: 20 x 85 % (not condensing)

Measure range: $-55 \times +99 \text{ }^{\circ}\text{C}$ ($-67 \times +99 \text{ }^{\circ}\text{F}$) for PTC probe;

Output: 1 on a SPDT 8 (3) A 250 Vac relay (on request, SPDT 16 (8) A 250 Vac or SPST 30 (15) A 250 Vac) (*)

Analogue input: 1 for PTC thermostatic probe

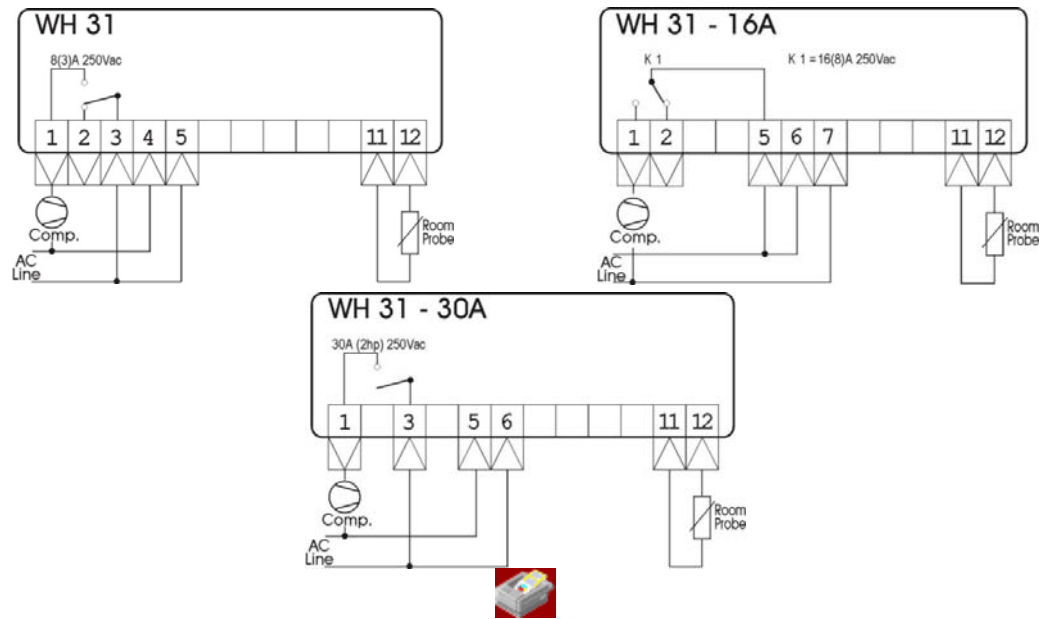
Resolution: 1 $^{\circ}\text{C}$ (1 $^{\circ}\text{F}$)

Accuracy: better than 1.0% f.s. \pm 1 digit

Power supply: standard 12 Vac/dc \pm 15%; available 230 Vac \pm 5/-10% 50/60 Hz through built-in transformer

(*): with only-ohmic loads, the max. amperage tolerable for the terminal board is 24 A

to the supply mains with 230 Vac voltage (115 Vac on request) through the internal transformer. It can be supplied with switching-mode facility (12-24 Vac/dc). This feature is a decisive factor for the automotive field, where voltage rushes can be relevant.



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