

3.5 digit LCD or LED display digital thermometer for Thermocouple

DAT 735



FEATURES

- Input for Thermocouple sensors type E, K, J, N, S and T
- Visualisation on LCD or LED display
- High accuracy
- Measure freezing by command
- Low current consumption
- EMC compliant – CE mark
- DIN 36 x 72 mm housing
- Mounting on panel in according to DIN 43700 standard

GENERAL DESCRIPTION

The DAT 735 is a 3.5 digit LCD or LED display, digital thermometer for Thermocouple sensor type E, K, J, N, S and T with high accuracy and reliability. The range of measure for every type of thermocouple is listed in the section “Technical specifications”-“Input Ranges”.

The range of measure must be chosen in phase of order.

It is possible to adjust the visualised value by the potentiometers located on the rear of the device.

The DAT 735 is designed for the mounting on panel in according to DIN 43700 standard .

Moreover is available the complementary function of measure freezing (HOLD).

The DAT 735 is in compliance with the directive CEE/336/89 on the Electromagnetic Compatibility.

USER INSTRUCTIONS

The digital thermometer DAT 735 must be connected as follows.

Connect the power supply between the terminals T3 (+V) and T2 (GND); in order to avoid damages for the device, the power supply value must be lower than 5.5 Vdc.

The input sensor must be connected between the terminals T4 (+Tc) and T5 (-Tc).

The complementary function HOLD could be used to freeze the measure at the last value detected. To use this function connect the terminal T1 (HOLD) to the terminal T2 (GND); in order to avoid damages for the device, it is recommended to active this function for a maximum time of 2 minutes.

To calibrate and install the device refer to sections “Calibration DAT 735” and “Installation Instructions”.

TECHNICAL SPECIFICATIONS (Typical at 25 °C and in nominal conditions)

INPUT

Type of signal	Thermocouple type E, K, J, N, S and T
Ranges of measure	Thermocouple type E : 0 ÷ 900 °C Thermocouple type K : 0 ÷ 1200 °C Thermocouple type J : 0 ÷ 600 °C Thermocouple type N : 0 ÷ 1200 °C Thermocouple type S : 0 ÷ 1600 °C Thermocouple type T : 0 ÷ 300 °C
Out of scale visualisation	High: 1(On the left side); Low -1(On the left side)



VISUALISATION

Type of visualisation (LCD – version C)	Static polarised Liquid Crystal Display for wide angle of visualisation
Digit height	0.35 "
Type of visualisation (LED – version D)	High efficiency LED display or standard LED display
Digit height	0.52 "

PERFORMANCES

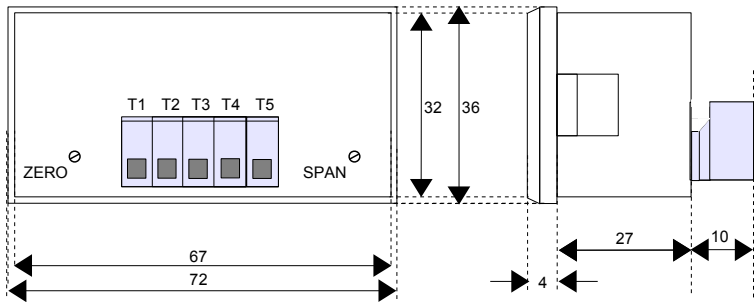
Reading accuracy	± 0.25 % of f.s.
Cold Junction Compensation error	± 0.5 °C
Thermal drift	0.02 % of f.s./°C
Response time	800 ms
Power supply voltage	5 Vdc ± 5 %
Current consumption	Version D: 180 mA (high efficiency), 90 mA (standard) Version C: 10 mA
Electromagnetic Compatibility (EMC) (for industrial environments)	Immunity: EN 61000-6-2; Emission: EN 61000-6-4.
Operative temperature	-10 ÷ 60 °C
Storage temperature	- 40 ÷ 80 °C
Relative humidity (not condensed)	0 ÷ 90%
Weight	about 100 g

CALIBRATION DAT 735

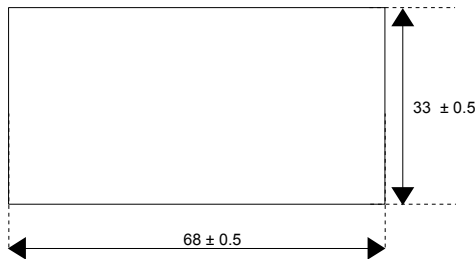
Refer to section "Dimensions and Regulations".

- 1) Connect on input a Thermocouple simulator.
- 2) Set the simulator at the minimum value of the input range.
- 3) By the ZERO potentiometer, adjust the minimum value of visualisation.
- 4) Set the simulator at the maximum value of the input range.
- 5) By the SPAN potentiometer, adjust the maximum value of visualisation.

DIMENSIONS (mm) AND REGULATIONS



PANEL CUT-OUT

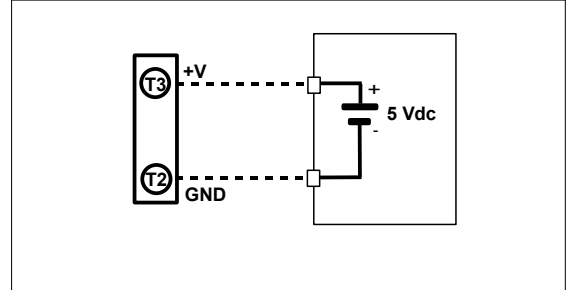


INSTALLATION INSTRUCTIONS

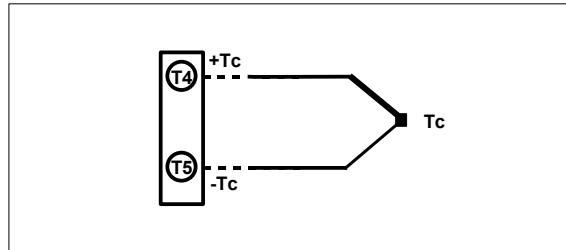
The device DAT 735 is suitable for mounting on panel (DIN 43700); the device needs a panel cut out of 68 * 33 mm (W*H). It is necessary to install the device in a place without vibrations; avoid to routing conductors near power signal cables .

CONNECTION DAT 735

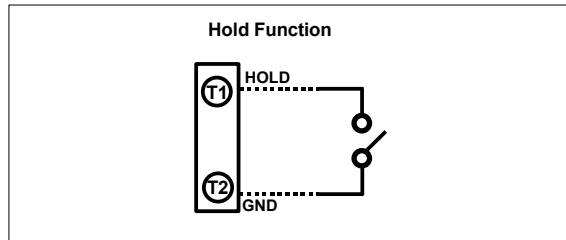
POWER SUPPLY CONNECTIONS



INPUT CONNECTIONS



COMPLEMENTARY FUNCTION CONNECTIONS



HOW TO ORDER

The DAT 735 is provided configured as requested from the Customer in phase of order.

ORDER CODE:

DAT 735 - [C] - [TC "J"] - [0+600 °C]

Range of visualisation

Sensor type

Type of display
Version C: LCD display
Version D: LED display