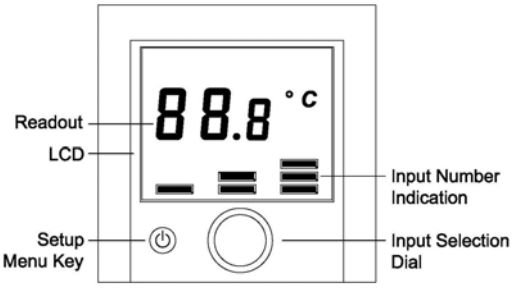
Issue Date June 6, 2014

TDU Series Temperature Display Units for 0-10 VDC or Thermistor Inputs

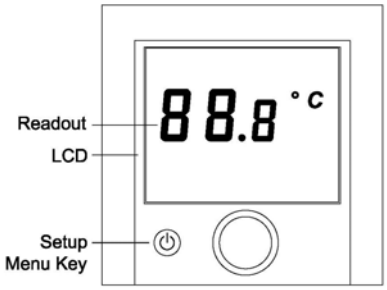
Installation and Parameter Setup Instructions

Display Unit and LCD Layout

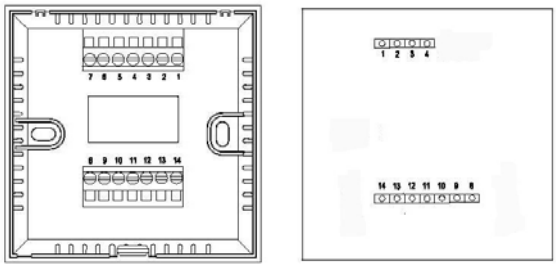
3-Input Unit



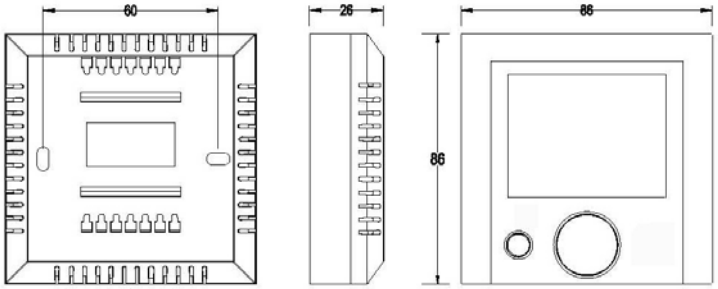
Single-Input Unit



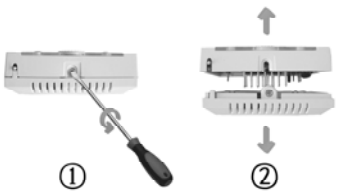
Wiring Terminals and Jumper Settings



Dimensions in mm

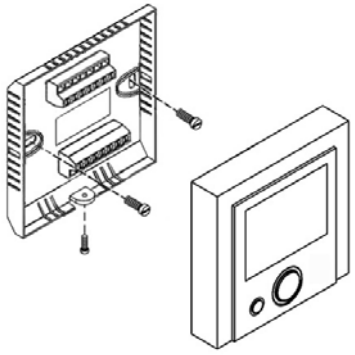


Cover Removal Procedure



1. Loosen the fixed screw.
2. Slightly twist the screw driver to crack open the cover from the base.
3. Hold the base firmly with one hand and remove the cover with another hand by pulling away from the base forcibly.

Mounting Details

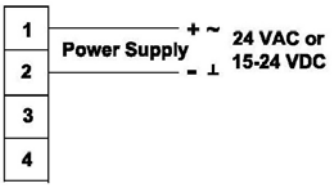


Mounting

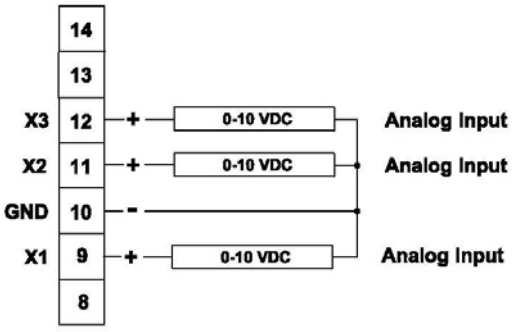
The display unit can be surface mounted or secured to a standard European 75 x 75 x 35 mm electrical box or on a control panel. Two mounting screws are included.

Wiring Diagram

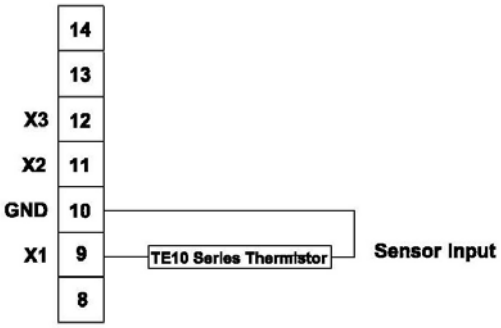
Power Supply



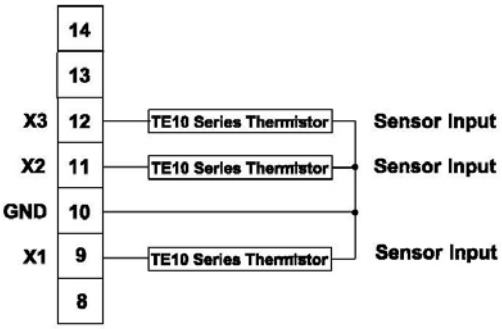
TDU-V3



TDU-R1



TDU-R3



Wiring Notes

- The display unit is designed for 24 VAC or 15-24 VDC power supply.
- 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as 0-10 VDC input signal wiring and its length must not exceed 25 m.
- Do not bundle and run power wiring and signal wiring in the same conduit.
- Run the signal wires away from any electric motors or power wiring. Failure to do so may result in poor display accuracy due to electrical noise. When several isolated double-wound step-down transformers are used in a control loop, observe the polarities of the AC power supply of all devices including the display unit.

Operation Notes

- For 3-input units, LCD shows value of analog input X1, X2 or X3 constantly, one at a time. Select input number by turning the bi-directional rotating dial about 90º either way to display the next temperature input. For single-input units, LCD shows the single temperature input value constantly.
- The backlight will turn on for 5 seconds when the enter key is pressed
- The display unit allows authorized service agent to change the operating parameters in the below setup menu.

Symbol	Function	Description
0	MCU firmware revision level	Appears after entering the setup menu
1	Display offset for readout value of X1 input	1 5 = temperature indication plus 5 degrees 1 4 = temperature indication plus 4 degree 1 3 = temperature indication plus 3 degree 1 2 = temperature indication plus 2 degrees 1 1 = temperature indication plus 1 degree 1 0 = no offset (factory setting) 1- 1 = temperature indication minus 1 degree 1-2 = temperature indication minus 2 degrees 1-3 = temperature indication minus 3 degree 1-4 = temperature indication minus 4 degrees 1-5 = temperature indication minus 5 degrees
2	Display offset for readout value of X2 input	2 5 = temperature indication plus 5 degrees 2 4 = temperature indication plus 4 degree 2 3 = temperature indication plus 3 degree 2 2 = temperature indication plus 2 degrees 2 1 = temperature indication plus 1 degree 2 0 = no offset (factory setting) 2- 1 = temperature indication minus 1 degree 2-2 = temperature indication minus 2 degrees 2-3 = temperature indication minus 3 degree 2-4 = temperature indication minus 4 degrees 2-5 = temperature indication minus 5 degrees
3	Display offset for readout value of X3 input	3 5 = temperature indication plus 5 degrees 3 4 = temperature indication plus 4 degree 3 3 = temperature indication plus 3 degree 3 2 = temperature indication plus 2 degrees 3 1 = temperature indication plus 1 degree 3 0 = no offset (factory setting) 3- 1 = temperature indication minus 1 degree 3-2 = temperature indication minus 2 degrees 3-3 = temperature indication minus 3 degree 3-4 = temperature indication minus 4 degrees 3-5 = temperature indication minus 5 degrees
rS	Restoration of default factory settings	rS 1 = Retain current settings (factory setting) rS2 = Restore default factory settings