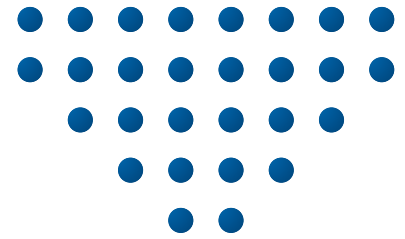




Thermostat

ETP-97



HVAC CONTROLS AND POWER

# Universal Thermostat

The ETP thermostat is an allround industrial ON/OFF thermostat for PT100 sensors.

- 4 temperature ranges from  $-50$  to  $+375^{\circ}\text{C}$
- Change-over between cooling and heating functions
- Several thermostats may be controlled by 1 sensor
- DC outputs, 0-10V and 0-20/4-20mA
- Safeguarded in case of sensor failure
- May be applied as a value converter

## PRODUCT PROGRAM

TYPE	PRODUCT
ETP-1974	230V, Output 4-20mA

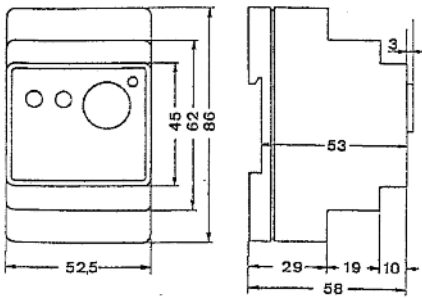
## ACCESSORIES

ETPP	Ext. potentiometer unit
ETF-..97	PT100 temperature sensor of various types

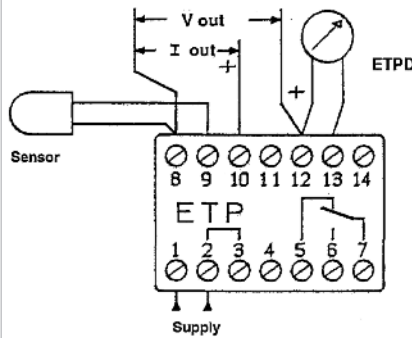
## Temperature scales, set at installation:

4 temperature scales are supplied to be attached to the control knob.

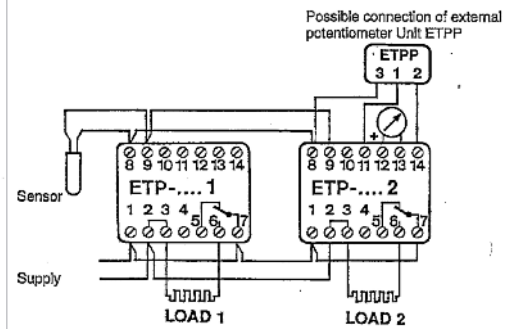
Scale 1:	$-50/+75^{\circ}\text{C}$
Scale 2:	$+50/+175^{\circ}\text{C}$
Scale 3:	$+150/+275^{\circ}\text{C}$
Scale 4:	$+250/+375^{\circ}\text{C}$



Dimensions



Installation



ETP-97 controlled by the same sensor.  
 Step 1 is programmed as master, Step 2 as slave

## FUNCTION

The ETP-97 thermostat is equipped with 6 switches and a programming table, which facilitates the choice between the following functions and settings:

1. The relay action may be set to call for either "heating" or "cooling".
2. There are 4 temperature ranges from  $-50^{\circ}\text{C}$  to  $+375^{\circ}\text{C}$  selectable with an interval of  $125^{\circ}\text{C}$ .
3. Adjustment for "master-slave function", i.e. the master thermostat sensor controls one or several slave thermostats. The system allows an application as a neutral-zone thermostat, a 2- to 3-step thermostat, with several alarm levels etc.

## Controls

The set control serves to set the desired temperature. With a coin inserted into its slot the scale may be adjusted in accordance with a reference thermometer. Thus, a high accuracy throughout the entire scale is ensured. The DIFF control enables the temperature differential to be adjusted from 1 to  $+15^{\circ}\text{C}$ . The SCALE ADJ control allows compensation for sensor tolerances and conductor resistance. Red light-emitting diode indicates when the relay has been connected. In case of an error in the sensor circuit, the output relay will always fall out.

## Interconnections:

An analogue instrument, type ETPD, may be connected to display the sensor temperature. Voltage outputs 0-10V DC and current outputs 0-20mA or 4-20mA may be utilized for remote control and data transfer to PLC systems etc. These outputs also allow the application of the ETP-97 thermostat as a value amplifier (temperature transducer) within a larger system. The setpoint may be controlled externally via External Potentiometer, type ETPP.

## TECHNICAL DATA

Supply voltage	230V AC $\pm 10\%$ , 50/60 Hz
Power consumption	3V A
Ambient temperature	$-20/+50^{\circ}\text{C}$
Accuracy	$\pm 1^{\circ}\text{C}$
Relay output	1 S.P.C.O., max. 10A, 250V resistive
Expected lifetime	$2 \times 10^5$ switch functions at max. load
DC output	0-10V DC, Max. 1mA Min. range = 0V, $\Delta U = 80\text{mV}/^{\circ}\text{C}$
Current output ETP-1974	4-20mA current loop, $\Delta I = 128\mu\text{A}/^{\circ}\text{C}$
Dimensions & weight	Din rail mounting. Width 52.5mm and height above rail max. 56mm.
Weight	200g

ON <input checked="" type="checkbox"/>					
OF <input type="checkbox"/>					
		6	5	4	3
		2	1		
-50 - $+75^{\circ}\text{C}$	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50 - $175^{\circ}\text{C}$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150 - $275^{\circ}\text{C}$	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250 - $375^{\circ}\text{C}$	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MASTER <input checked="" type="checkbox"/>	SLAVE <input type="checkbox"/>				
COOLING <input checked="" type="checkbox"/>	HEATING <input type="checkbox"/>				

Programming table