

Universal Temperature Meter

UTF



Introduction

Model UTF is a microprocessor-based temperature instrument offered 1/8 DIN size with universal selection to temperature sensor with thermocouple and RTD inputs. The selection is easily configured from the menu with three front panel push-buttons.

The UTF offers the broadest selection of temperature signal inputs on one instrument for TC of J, K, E, T, N, R, S, B and RTD PT100Ω.

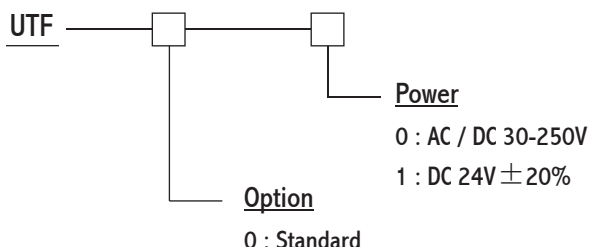
Features

- Universal temperature signal inputs
Thermocouple - J, K, E, T, N, R, S, B, and RTD PT100Ω
- 0.1% accuracy $\pm 0.5^{\circ}\text{C}$
- Wide auxiliary power range AC / DC 30-250V
- User friendly and easily configured

Model & Ordering

Model : UTF

Ordering



Specification

Universal input

- Thermocouple / configurable

Type	Range
J	-210~1200°C / -300~2200°F
K	-200~1372°C / -300~2500°F
E	-200~1000°C / -300~1800°F
T	-200~400°C / -300~750°F
N	-200~1300°C / -300~2310°F
R	-50~1650°C / -50~3000°F
S	-50~1650°C / -50~3000°F
B	250~1820°C / 480~3300°F

- RTD : 4 wires / 3 wires / 2 wires usable
PT100Ω (0.00385) : -100~650 °C / -150~1200°F

Accuracy

- 0.1% fs $\pm 0.5^{\circ}\text{C}$ (TC / J K E T N)
- 0.1% fs $\pm 1.5^{\circ}\text{C}$ (TC / R S B)
- 0.1% fs $\pm 0.3^{\circ}\text{C}$ (RTD)

Stability

TC : $0.05^{\circ}\text{C}/^{\circ}\text{C}$ - cjc @ 25°C ; RTD : $0.03^{\circ}\text{C}/^{\circ}\text{C}$

Resolution in display

$0.1^{\circ}\text{C}/^{\circ}\text{F}$, < $2000^{\circ}\text{C}/^{\circ}\text{F}$; 1°F , $\geq 2000^{\circ}\text{F}$
Auto range

Input resistance

TC $\geq 10\text{M}\Omega$

Display

4-1/2 digits / red LED with super rate

Noise rejection

NMRR $\geq 60\text{dB}$; CMRR $\geq 120\text{dB}$

Surge test

IEC 1000-4-11, 4KV

Dielectric strength

2.5KV AC rms 1 minute, power to input

Off line and over range detection

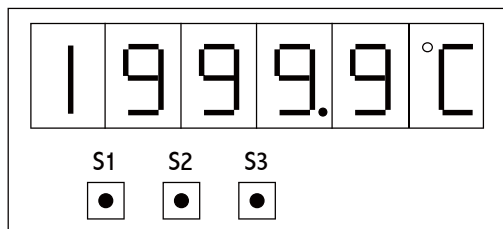
"OFL" flickering in display

Operating condition

-10 to 55°C 0-99% RH non-condensed,
storage -25 to 70°C

Auxiliary power

AC / DC 30--250V < 3 watts, (40-70Hz for AC)



Function key

S1 : Previous status, back to main display

S2 : Numeric up 0~9

S3 : Enter or execution

☉ : Keying Sx (S1, S2, S3)

Sensor selection

- Enter password

☉S3 → **PS** → ☉S3 → **0011**

- Write password (0011)

0 **0** **1** **1**
☉S2 → ☉S3 ☉S2 → ☉S3 ☉S2 → ☉S3 ☉S2 → ☉S3

- Enter password and input sensor selection

0 **0** **1** **1** → ☉S3 → **SENS** → ☉S3

- Select input sensor type °C or °F range

X

☉S2

X

┐C : TCJ in °C

┐C : TCK in °C

┐C : TCE in °C

┐C : TCT in °C

┐C : TCN in °C

┐C : TCR in °C

┐C : TCS in °C

┐C : TCB in °C

┐C : RTD PT100Ω in °C ┐F : RTD PT100Ω in °F

X

┐F : TCJ in °F

┐F : TCK in °F

┐F : TCE in °F

┐F : TCT in °F

┐F : TCN in °F

┐F : TCR in °F

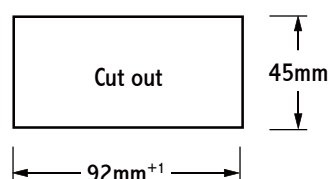
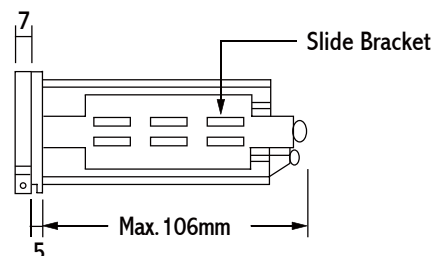
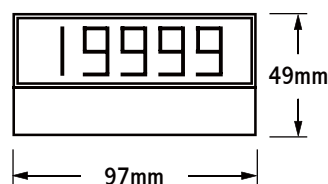
┐F : TCS in °F

┐F : TCB in °F

- Enter selection and return to main display

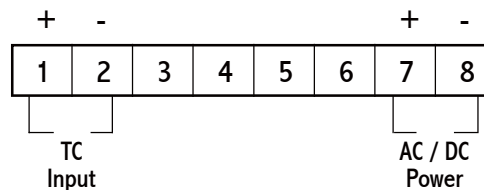
→ ☉S3 → **SENS** → ☉S1 → **1032.9 °C**

Dimension

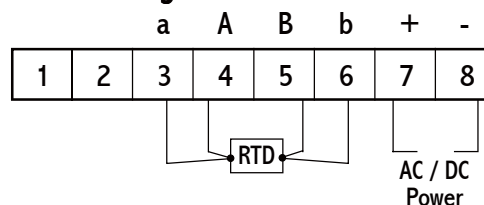


Wiring

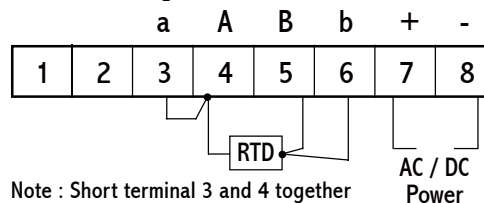
TC input wiring



RTD 4 wires wiring

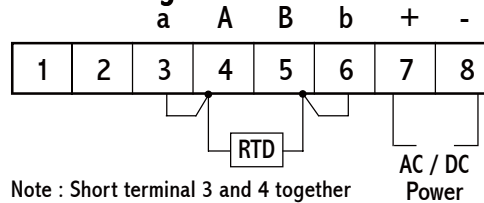


RTD 3 wires wiring



Note : Short terminal 3 and 4 together

RTD 2 wires wiring



Note : Short terminal 3 and 4 together
Short terminal 5 and 6 together