APM244-TC-2RL Temperature Display / Controller

■ DESCRIPTION

- **Up to 5 Digit Red LED high-brightness Display.**
- **Input any Thermocouple type; K – J – T – R – S - N**
- **2 relays can be programmed individually to be Hi / Lo / Hi Latch / Lo Latch / Energise with Start Delay / Hysteresis / Energised & De-energised Delay functions, or to be remote control.**
- **1 external control input can be programmed to be Relative PV (Tare) / PV Hold / Maximum or Minimum Hold / DI (remote monitoring) / Reset for Relay Energised Latch….**
- **20-56Vdc or 85-264Vac supply options.**
- **Front Panel mount as standard**

Just 24 x 48mm with 2 x Trips

■ TECHNICAL SPECIFICATION

Input

T/C type   K, J, T, R,   E, B, S, N

➤ **Any Input Temperature range to suit thermocouple type**

Calibration:	Digital calibration by front key
A/D converter:	**16 bits resolution**
Accuracy:	≤± 0.04% of FS ± 1C;
Sampling rate:	15 cycles/sec
Response time:	≤100 msec.(when the AvG = "1") in standard
Input type:	Thermocouple, with auto CJ compensation
Dimensions:	48w x 24h mm Front Bezel **(Cut Out 45.0 x 22.5 mm)**
	Housing Depth 105mm incl screw terminals

Display & Functions

LED:	**Numeric:** 5 digits, 0.4"(10.0mm)H red high-brightness LED
	Relay output indication: 4 square red LED
	RS 485 communication: 1 square orange LED
	E.C.I. function indication: 3 square green LED
	Max/Mini Hold indication: 2 square orange LED
Display range:	-19999~29999;
Scaling function:	**Lo.SC:** Low Scale; Settable range: -19999~+29999
	Hi.SC: High Scale; Settable range: -19999~+29999
Decimal point:	Programmable from 0 / 0.0 / 0.00 / 0.000 / 0.0000
Over range indication:	**ovFL,** when input is over 120% of input range Hi
Under range indication:	**-ovFL,** when input is under -20% of input range Lo
Max / Mini recording:	Maximum and Minimum value storage during power on.
Display functions:	*PV / Max(Mini) Hold / RS 485 Programmable*
Front key functions:	*Up and down key can be set to be a function as ECI.*
Digital fine adjust:	**Pv.Zro:** Settable range: -19999~+29999
	Pv.SPn: Settable range: -19999~+29999

Reading Stable Function

Average:	Settable range: 1~99 times
Moving average:	Settable range: None / 1~10 times
Digital filter:	Settable range: None /1~99 times

Control Functions(option)

Set-points:	Two set-points
Control relay:	2 Relays SPCO, 1A/230Vac, 3A/115V

Relay energised mode:	Energised levels compare with set-points:
	*Hi / Lo / **Hi.HLd** / **Lo.HLd** programmable*
	Energized by RS485 command of master: DO programmable
Energising functions:	Start delay / Energised & De-energised delay / Hysteresis / Energised Latch
	Start band(Minimum level for Energising): 0~9999counts
	Start delay time: *0:00.0~9(Minutes):59.9(Second)*
	Energised delay time: *0.00.0~9(Minutes):59.9(Second)*
	De-energised delay time: *0.00.0~9(Minutes):59.9(Second)*
	Hysteresis: 0~5000 counts

External Control Inputs(ECI)

Input mode:	1 ECI points, Contact or open collect input, Level trigger
Functions:	*Relative PV(Tare) / PV Hold / Reset for Max or Mini. Hold / DI / Reset for Relay Energised latch*
Debouncing time:	Settable range 5 ~255 x (8m seconds)

Relay 1   Relay 2
b c a   b c a   A B

Terminal blocks: 5A 300Vac, 0.5~1.3mm² (22~16AWG)

1 2 3 4 5 6 7 8 9 10

POWER

INPUT