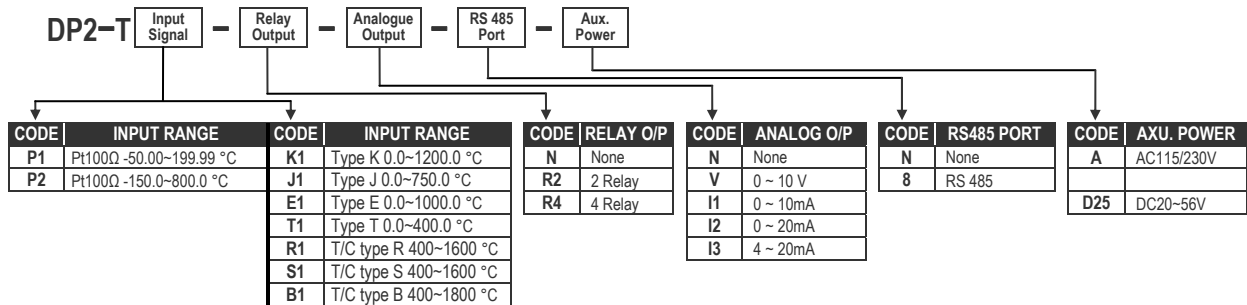


► FEATURES

- Measures & Displays RTD: Pt100Ω; Thermocouple: K, J, E, T, R, S, B
- Accuracy: RTD: ± 0.1%; Thermocouple: ± 0.2%
- Easily programmable via the front panel
- *Up to 4 relays available, with latching and time delay programmable*
- Analogue output and RS 485 communication port options
- *3 external control inputs for Reset and hold functions*
- CE Approved



► ORDER CODING



► SPECIFICATION

Measuring Range	Input Impedance	Excitation Supply
P1 Pt100Ω -50.00~199.99 °C	≥ 1M ohm	Sensing Current: 1.6mA
P2 Pt100Ω -150.0~800.0 °C	≥ 1M ohm	
K1 Type K 0.0~1200.0 °C	≥ 1M ohm	
J1 Type J 0.0~750.0 °C	≥ 1M ohm	
E1 Type E 0.0~400.0 °C	≥ 1M ohm	
T1 Type T 0.0~400.0 °C	≥ 1M ohm	
R1 T/C type R 400~1600 °C	≥ 1M ohm	
S1 T/C type S 400~1600 °C	≥ 1M ohm	
B1 T/C type B 400~1800 °C	≥ 1M ohm	

Calibration: System calibration by front key
Accuracy: Pt100Ω: ≤ ± 0.1% of FS ± 1C;
 Thermocouple: ≤ ± 0.2% of FS ± 1C;
Cold junction in T/C: 25 ± 20 °C, error ≤ 0.5 °C
Response time: ≤ 100 msec.(when the AvG = "1")

Operating Programming:
 4 keys for Enter(Function) / Shift(Escape) / Up / Down
 Up key: increases the number /back to previous function
 Down key: decreases the number / go to next function
 Shift/Escape key: moves the flashing digit position / Return to upper level

Enter/Fun key: enter the parameters you set or selects programming mode
 4 keys for Enter(Function) / Shift(Escape) / Up / Down
 4 digit password
 3 security levels User / Master / None

Security:

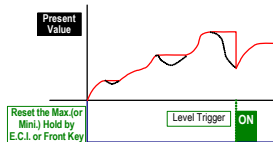
Lock:

Display functions

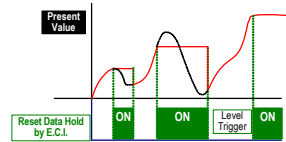
LED:
 Measuring value: 0.56" red high-brightness LED
 Relay output indication: square red LED
 External control input: square green LED
 RS 485 communication: square red LED
 Max. / Mini. Hold: square red LED

Low Cut function: Low.cut :Settable range: -19999~19999 counts
Average function: AvG :Settable range: 1~99 times
Digital Filter function: D.FiLt : Settable range: 0(None)/1~99 times
Over range indication: ovFL, when input is over 120% of input range Hi
Under range indication: -ovFL, when input is under -120% of input range Lo
Display functions: *Present Value / Maximum Hold / Minimum Hold / Write to display by RS485 command*

Max. (or Mini.) Hold & Reset



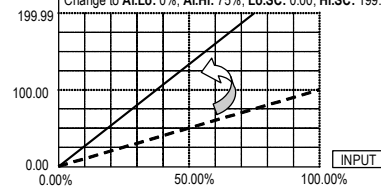
Data Hold & Reset



Scaling

Input range function: Ai.Lo: 0~100% of input
 Ai.Hi: 0~100% of input
Scaling function: Hi.SC(High scale): -19999~29999
 Lo.SC(Low scale): -19999~29999

[SCALE] Default: Ai.Lo: 0%, Ai.Hi: 100%; Lo.SC: 0.00, Hi.SC: 100.00
 Change to Ai.Lo: 0%, Ai.Hi: 75%; Lo.SC: 0.00, Hi.SC: 199.99

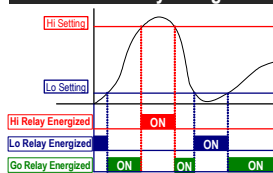


Decimal point: Settable from 00000~0.0000

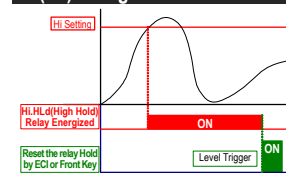
Control functions

Relay:
 2 Relays SPDT, 5A/230Vac, 10A/115V
 2 Relays SPST, 1A/230Vac, 3A/115V
Relay Output:
 Energized levels are compared with set-points:
 Hi / Lo / Hi.HLd / Lo.HLd / do / Go-1.2 / Go-2.3
 DO function: Energized by RS485 command
 Relay Latching : Selectable Low or High Hold

Hi / Lo / Go Relay Energized



Hi(Lo) Energized Hold & Reset

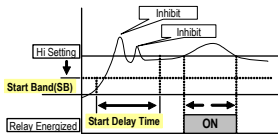


Functions:
 Start delay / Energized & De-energized delay / Hysteresis
 Start band: 0~9999 counts
 Start delay time: 0:00.0~9(Minutes):59.9(Seconds)
 Energized delay time: 9(Minutes):59.9(Seconds)
 De-energized delay time: 9(Minutes):59.9(Seconds)
 Hysteresis: 0~5000 counts

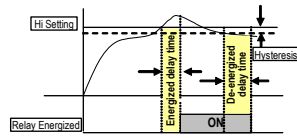
4½ Digit *T/C & RTD* with Alarm, A/O, RS485 Options

DP2-T

Start Delay



Energized / De-energized Delay & Hysteresis



External Control Input (ECI)

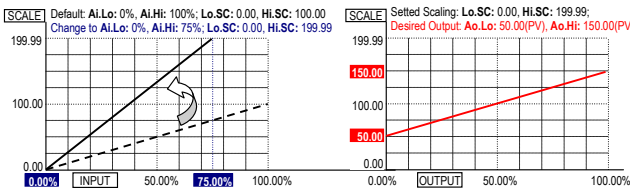
Input mode: 3 inputs, Contact or open collect input
Functions: *Relative PV / PV Hold / Reset Max or Mini. Hold / DI / Reset for Relay Latch*
De-bounce time: 5 ~255 x 8mseconds

Analogue output(option)

Accuracy: $\leq \pm 0.1\%$ of F.S.; 16 bits AD converter
Ripple: $\leq \pm 0.1\%$ of F.S.
Response time: ≤ 200 msec. (10~90% of input)
Isolation: AC 2.0 KV between input and output
Output range: Specify Voltage or Current
 Voltage: 0~5V / 0~10V / 1~5V selectable
 Current: 0~10mA / 0~20mA / 4~20mA selectable
 Voltage: 0~10V; $\geq 1000\Omega$;
 Current: 0(4)~20mA; $\leq 600\Omega$

Output Capability:

Functions: *Ao.Hi(output high): PV Hi vs. output range Hi*
Ao.Lo(output range Low): PV Low vs. output range Lo
Ao.LMT(output High Limit): 0.00~110.00% of output High



RS 485 communication(optional)

Protocol: Modbus RTU mode
 Baud rate: 1200/2400/4800/9600/19200/38400
 Data bits: 7 or 8 bit
 Parity: Even, odd or none (with 1 or 2 stop bit)
 Device no: 1 ~ 255
Write function: Write to display value from PC's RS485 command

Power

Power Supply: AC 115/230V $\pm 15\%$, 50/60Hz
Optional: DC20~56V
Power consumption: 5.0VA
Back up memory: By EEPROM

Environmental

Operating temperature: 0~60 °C
Operating relative humi.: 20~95 %RH, Non-condensing
Temperature coefficient: ≤ 100 PPM/°C
Storage temperature: -10~70 °C
Enclosure: Front panel: IEC 549 (IP54)

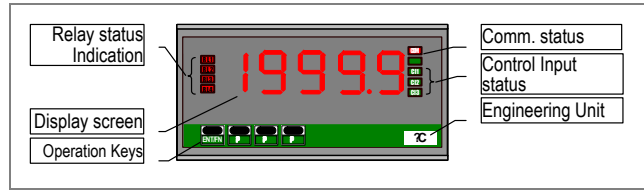
Electrical safety

Dielectric Strength: AC 2.0 KV for 1 min
 Between Power / Input / Output / Case
Insulation resistance: $\geq 100M$ ohm at 500Vdc
Isolation: Between Power / Input / Output
EMC: EN61326
Safety: EN61010

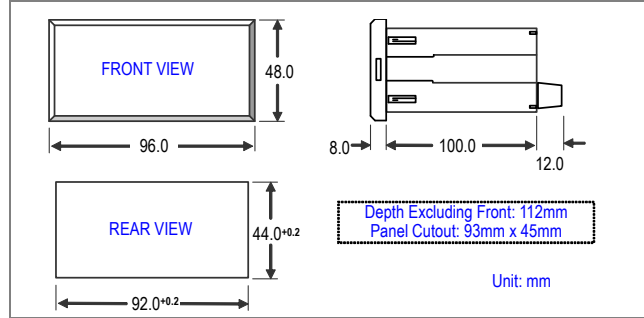
Mechanical

Dimensions: 96mm(W) x 48mm(H) x 120mm(D)
Panel cutout: 92mm(W) x 44mm(H)
Case Materiel: ABS fire-protection (UL 94V-0)
Mounting: Panel flush mounting
Terminal block: Plastic NYLON 66 (UL 94V-0)
 10A/300Vac, M2.6, 16~22AWG
Weight: 550g

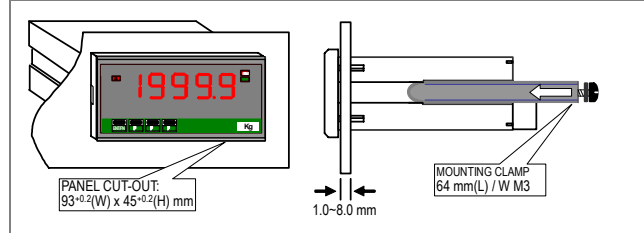
FRONT PANEL



DIMENSIONS



INSTALLATION



CONNECTION DIAGRAM

