

# Intelligent Load Cell Monitor

## High Speed/Precision Model TP4-WT

Measures weight, force, torque, pressure, level etc.



### Description

The TP4-WT is a high precision, high speed monitor which accepts a 4 or 6 wire load cell input. A user selectable 5V or 10V excitation is provided (15V is optionally available).

Calibration and setting up is achieved by the user via front panel pushbuttons, using easy to follow "on display" messages. The instrument may be calibrated to display directly in engineering units. All calibration values are retained in non volatile memory.

Special functions such as tare, zero, batch, peak hold, setpoint only access or security lockout, etc. may be operated via one of 3 separate programmable external inputs. A front panel pushbutton is also programmable to perform special functions.

A programmable digital filter improves stability by smoothing out short term interference.

Four setpoint output relays are provided, these are user programmable for setpoint level, hysteresis, high and or low alarm, trip delay, normally open or normally closed operation.

A 4-20mA retransmission output and RS232 communications are provided as standard.

Electrical isolation between power supply, input signal and 4-20mA retransmission eliminates grounding and common mode voltage problems. The TP4 may be installed on a convenient flat wall or may be panel mounted using the optional panel mount kit.

### Features

- 4 or 6 wire load cell
- 4-20mA retransmission included as standard
- RS232 communications. (non isolated) included as standard with choice of ASCII or Modbus RTU protocols
- Pushbutton calibration and setup
- Choice of calibration scaling methods
- 4 setpoint output relays with 5 Amp contacts, relays 2, 3 & 4 can be configured for setpoint or trailing operation
- Displays directly in engineering units
- Microprocessor based
- Digital filter (improves stability)
- Security lockout of keypad programming functions
- Isolation between input, 4-20mA retransmission and power supply
- 240VAC, 110VAC, or DC operation
- High brightness 6 digit 20mm LED display
- Display readable from 10 metres away
- Wallmount/weatherproof construction
- Rugged IP65 enclosure
- Optional isolated RS485 retransmission
- Optional inbuilt data logger (data downloaded via RS232 or RS485 serial link)
- 2 year guarantee

# SPECIFICATIONS

Specifications are subject to change without notice

## TECHNICAL SPECIFICATIONS

Input Type: 4 or 6 wire load cell/pressure transducer input

Sensitivity: 0.5mV/V to 250mV/V selectable

Excitation Voltage: 5V or 10V link selectable (15V optional)

Accuracy: 0.005% of full scale (alarms & display) when calibrated

Bridge Resistance: 80Ω to >2000Ω

Sample Rate: 5 to 100 per second, selectable

A/D Conversion: Sigma Delta up to 22 bits resolution

Microprocessor: MC68HC11 CMOS

Display: 6 digit red LED, 20mm digit height

Ambient Temp: -10 to 60°C

Humidity: 5 to 95% non condensing

Power Supply: AC 240V or 110V 45/65Hz  
12-48 VDC (isolated)  
(supply type factory configured)

Power Usage: AC supply 15VA max,  
DC supply 10VA max.

Outputs standard: 4 x relay, Form C rated 5A resistive  
4-20mA retransmission isolated from input and power supply  
RS232 serial comms. non isolated

Relay Action: Programmable N.O. or N.C.

Display: 6 digit red LED, 20mm digit height

## OPTIONAL OUTPUTS

Retransmission: RS485 serial isolated or Data Logger (download via serial output) 32k or 128k memory. The serial output is also able to download time, date and reading information directly to a printer and is configurable to suit many printer types

## PHYSICAL CHARACTERISTICS

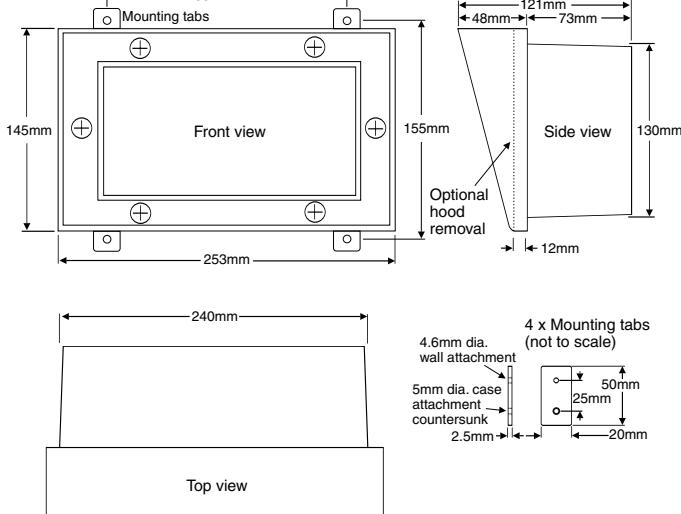
Case Size: 253 x 145 x 121mm (max)

Connections: Plug in screw terminals

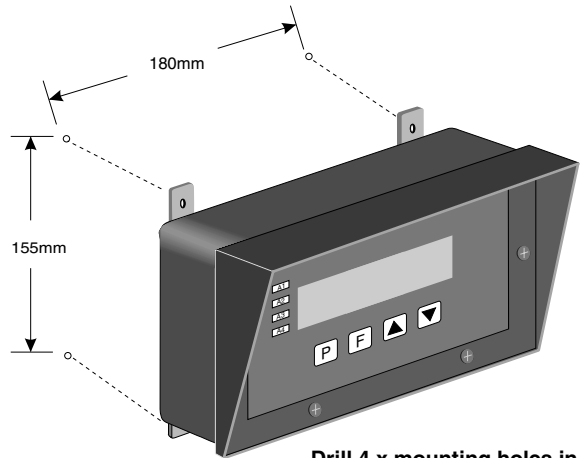
Weight: 1.3 kgs

Panel Cut Out: If panel mounting is required an optional panel mount kit is available and instrument may be ordered without the front hood. Panel cut out dimensions are: 240 x 130mm (-0.00/+0.5mm)

## Case Dimensions

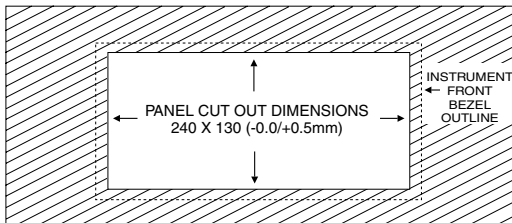
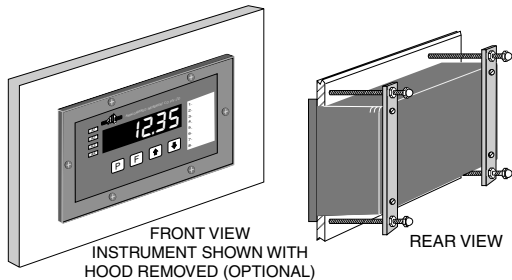


## Mechanical Installation



Drill 4 x mounting holes in position shown  
180mm(w) x 155mm(h)

## Optional Panel Mount Kit



## ORDER CODE

TP4 - W T -    - 6 E -

### POWER SUPPLY

TP4 - W T -    - 6 E -

240 VAC . . . . .  2  4  0

110 VAC . . . . .  1  1  0

12- 48 VDC, isolated . . . . .  D  C

### OPTIONS

TP4 - W T -    - 6 E -

RS485 Serial Output . . . . .  4

Data Logger RS232 Version 32k Memory . . . . .  D  L  3  2  K

Data Logger RS232 Version 128k Memory . . . . .  D  L  1  2  8  K

Data Logger RS485 Version 32k Memory . . . . .  D  L  3  2  K  4

Data Logger RS485 Version 128k Memory . . . . .  D  L  1  2  8  K  4

Panel mount kit - order code . . . . . LD-MTG-PM-KIT

Hood removal - order code . . . . . LD-HOOD-REMOVAL