Dual Input pH/ORP Monitor

TP4-PH   Measures pH, ORP (Redox), Temperature.

Description

Model TP4-PH monitor allows for a direct input of one or two pH or ORP (Redox) electrodes and one temperature sensor. If required one input can be set to measure pH and the other ORP. Alternative 4-20mA inputs are provided allowing connection of one or two 4-20mA transmitters instead of direct electrode inputs.

Calibration and set up is achieved by the user via front panel pushbuttons, using easy to follow on display message prompts.

Special functions such as peak hold and display hold are provided via an external control input. The front panel **P** pushbutton is also programmable to perform maximum and minimum memory functions. The input may be calibrated to display directly in pH units or mV for ORP measurement. All calibration and other instrument setup values are retained in non volatile memory. A programmable digital filter improves stability by smoothing out short term interference. Four setpoint output relays are provided, form C, rated 5A, 240VAC (resistive load). Relays 1 and 2 may be selected for use as conventional alarm relay operation or PI control output operation. A 4-20mA output (configurable as retransmission or PI control), is provided as standard. The output can operate from input 1, input 2 or temperature. Non-isolated RS232 communications is also provided as standard. The TP4 may be installed on a convenient flat wall or may be panel mounted using an optional panel mount kit.

Features

- pH and/or ORP electrode inputs or 4-20mA transmitter inputs (the front panel ▲ and ▼ buttons allow toggling between input 1, input 2 and temperature readings)
- 4-20mA output included as standard, configurable as either retransmission or PI control output
- RS232 communications included as standard
- Pushbutton calibration and setup
- 4 Setpoint relays (form C, voltage free contacts)
- Relays 1and 2 are configurable as either alarm (on/off) or PI control (pulse width or frequency output)
- Choice of single point or two point calibration methods
- Temperature sensor input for auto temperature compensation
- Digital filter (improves stability)
- Security lockout of keypad programming functions
- Isolation between inputs,
- 240VAC, 110VAC, or DC operation
- High brightness 6 digit 20mm LED display
- Display readable from 10 metres away
- Rugged IP65 enclosure
- Optional isolated RS485 retransmission
- Optional inbuilt Data Logger
- 2 year guarantee

Quality Endorsed Company — Certified System — ISO9001:2008 SAI GLOBAL

AUSTRALIAN OWNED / AUSTRALIAN MADE — AIC

EMC COMPLIANT

TP4-PH-3.1-0

Specifications

Technical Specifications

pH & ORP Input	One or two high impedance electrode inputs (pH or ORP) with BNC connection or alternative one or two 4-20mA transmitter inputs
Temp. input:	Pt100, Pt1000, 3kΩ Balco or LM335 sensors or manual temperature compensation
Input resistance:	Greater than $10^{10}\Omega$
Sample Rate:	1 sample per second
A/D Conversion:	20,000 count quad slope
Microprocessor:	MC68HC11 CMOS
Ambient Temperature:	-10°C to 60°C
Humidity:	5 to 95% non condensing
Display:	6 digit red LED, 20mm digit height
Power Supply:	AC 240 or 110V 45/65Hz DC isolated 12 to 48V or DC non-isolated 15 to 24V (factory configured)
Power Usage:	AC supply 15VA max DC supply 10VA max
Outputs (standard):	4 x relays (form A) rated 5A max. 240VAC resistive Isolated 4-20mA retransmission RS232 communications (non-isol) - choice of ASCII or Modbus RTU
Relay Action:	Programmable N.O. or N.C.

Output Options

Isolated Output:	RS485 serial communications. Choice of ASCII or Modbus RTU protocols (factory configured)
Isolated Output:	Data logging option with serial communications

Physical Characteristics

Case size:	253mm(w) x 145mm(h) x 85mm(d) to 121mm(d)
Connections:	Plug in screw terminals (maximum 2.5mm^2 wire)
Weight:	1.3kg

TP4-PH Order Codes

TP4-PH – ☐ – ☐

Power Supplies
TP4-PH – | XXX | – | ☐ |

240VAC	240
110VAC	110
12 to 48VDC	DC
15 to 24DC non-isolated	DCN

Options
TP4-PH – | ☐ | – | XXX |

RS485 Serial Communications	4
Data Logger, RS232 version 32k memory	DL2-1
Data Logger, RS232 version 128k memory	DL2-2
Data Logger, R485 version 32k memory	DL4-1
Data Logger, R485 version 128k memory	DL4-2

Panel Mounting Options

Panel Mounting Kit	LD-MTG-PM-KIT
Hood Removal	LD-HOOD-REMOVAL

Weight: 1.3kg

Front view instrument shown with optional case for flush mounting

Rear view

Panel cut out dimensions 240 X 130 (-0.0/+0.5mm)

Instrument front bezel outline