

MINISENSOR4-MCU™ Controller

The Tempatron MINISENSOR4-MCU™ analogue controllers are twin setpoint, dual output units for 4-20mA or 0-10Vdc input signals from temperature, pressure, humidity, flow, velocity or position sensors. Alternatively, two open collector or voltage free contact switch sensors can also be used. They combine analogue potentiometer setting simplicity with microprocessor based, digital timing software and have 7 different output modes (which can be selected via jumper links) including a fully, user programmable option. They are available to DIN rail mount or in a chassis mounting pcb version that measures only 70mm x 45mm. Both models are 12-24Vdc powered and have a 16 Amp changeover relay output which is isolated from the supply voltage, an optocoupler output (which can also be used as a PWM output to drive an analogue or digital panel meter) and an LED to indicate the input value or control status.

Models Available

MINISENSOR4-MCU-D

Analogue Sensor Controller (DIN Rail)

MINISENSOR4-MCU-P

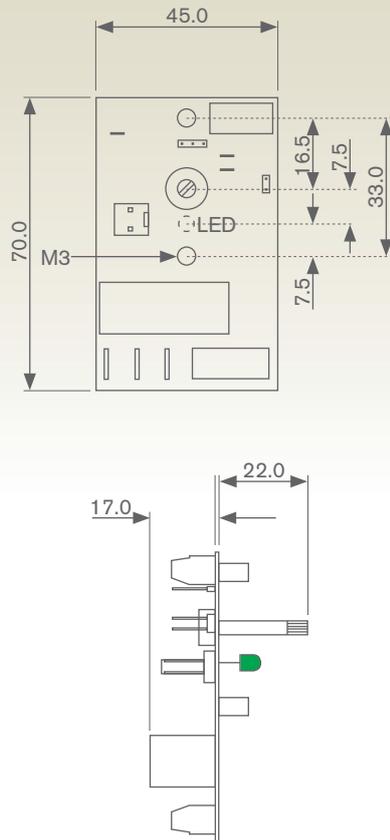
Analogue Sensor Controller (PCB)

Product Features

- DIN rail mounting
- PCB model ideal for OEM applications
- 4-20mA or 0-10Vdc input
- MYTIME™ programming feature
- SMARTCYCLE™ sequencing control
- 16 Amp changeover relay output
- 12 to 24Vdc powered
- LOCKPOT™ operation feature
- LED to indicate value or control status
- Optional remote LED (pcb model only)
- Dual optocoupler output upon request

For dual setpoint control applications using industry standard DC sensors

Dimensions - PCB version

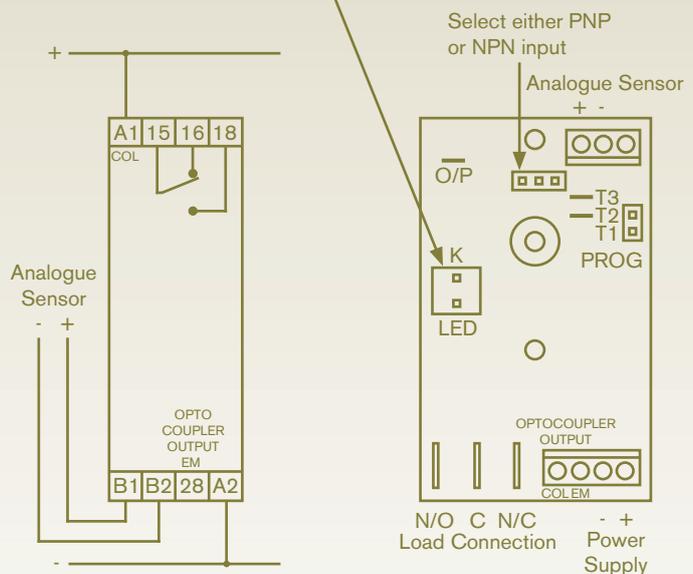


All dimensions in mm

Connections

The unit is set for onboard LED indication.

To select **remote LED** indication, 'spin cut' the copper pad adjacent to the LED to disconnect the onboard LED. Connect the remote LED to the 2-pin **LED** Molex header (ensuring LED cathode is connected to pin **K**).



Ordering information

Model	Code	Description
	MINISENSOR4-MCU-D	Universal Analogue Sensor Controller DIN Rail Mounting
	MINISENSOR4-MCU-P	Universal Analogue Sensor Controller PCB
Example	MINISENSOR4-MCU-P	

Output Options

T1 Relay/optocoupler outputs, single setpoint, same control polarity (link T2, T3 and O/P)

T1R Relay/optocoupler outputs, single setpoint, opposite control polarity (link T2 and T3)

T2 Optocoupler lower setpoint outputs, relay upper setpoint output, same control polarity (link T3 and O/P)

T2R Optocoupler lower setpoint outputs, relay upper setpoint output, opposite control polarity (link T3 only)

T3 Relay lower setpoint outputs, optocoupler upper setpoint output, same control polarity (link T2 and O/P)

T3R Optocoupler lower setpoint outputs, relay upper setpoint output, opposite control polarity (link T2 only)

T4 SMARTCYCLE™ automatic sequencing control feature with programmable MYTIME™ relay and optocoupler control (programmable) (link O/P only)

T4R Relay control output, optocoupler pulse width modulation output (no links)

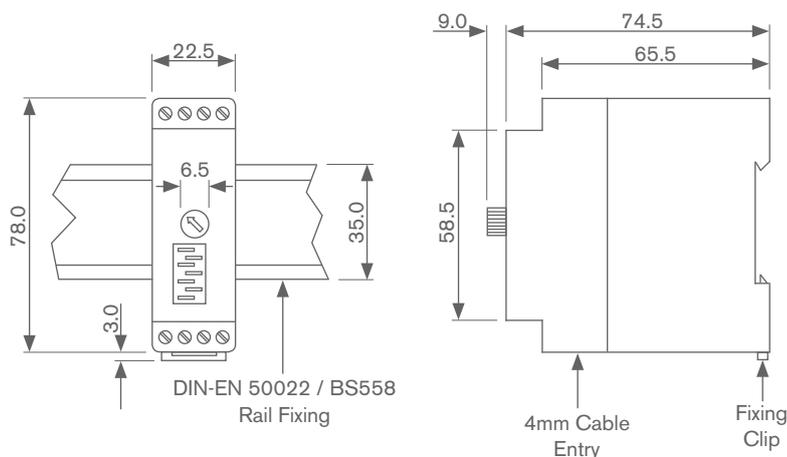
SMARTCYCLE™ Automatic Sequencing Control Feature

The inbuilt SMARTCYCLE feature provides a complete system solution to a wide variety of cyclic control applications such as automatic tank fill/drain cycling, air compressor reservoir maximum/minimum pressure control and preset mechanical position cycling control.

Switch Sensor Adaptor Module

A separate adaptor module is available which allows the use of two solid state, open collector/volt free contact switch sensors in place of a single analogue sensor.

Dimensions - DIN rail mounting version



All dimensions in mm

Specification

Power Supply Voltage:

- 12 to 24Vdc

Burden:

- 7.5mA nominal (outputs off)
- 45mA nominal (outputs active)

Sensor Input:

- 0-10Vdc, 30kohm (factory set)
- 4-20mA, 240ohm (remove LOOP link)
- On/Off switch sensor (upon request)

Setpoint Adjustment:

- Upper setpoint 0-100% analogue input (on-board potentiometer)
- Lower setpoint 5-90% (in 5% steps) below upper setpoint (programmable)

Relay Output:

- Single pole changeover relay contact
- 16A at 240Vac/30Vdc (resistive)

Optocoupler Output:

- 50V, 10mA

Status LED Indication:

- Display analogue input status: (0, 20, 40, 60, 80, 100%) - factory set
- Display control status: (<low setpoint, between setpoints, >high setpoint) - programmable

Electrical Connections on PCB version:

- Three 6.3mm blades for relay output (N/C, C, N/O)
- 4 way screw terminals for DC supply and opto isolator output
- 3 way screw terminals for analogue sensor input and DC supply output
- 2-pin molex connector for remote LED
- 2-pin header for programming plug

Mounting:

- Two M3 fixing pillars spaced 33mm

Operating Temperature:

- -20°C to 65°C

Enclosure Code:

- DIN Rail: case IP50, terminals IP10
- PCB: IP00

Weight:

- 35g

Specification subject to change without notice.

Tempatron: Eltime House, Hall Road, Maldon, Essex, CM9 4NF UK.

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