

# Fuzzy Advanced PID Controller MI-4850

Compact size



- Shortest 1/16 DIN controller
- Waterproof front
- High Sampling rate
- 4-digit Process Value and 4-digit Setting Value display
- 6 LEDs: Auto Tuning, Manual mode, Alarm 1 and 2 and Control 1 and 2
- 3 input model products:
  - Thermocouple J, K, T, E, B, R, S, N, C
  - RTDPT-100 DIN or JIS
  - Linear with programmable scale (V, mV or mA)
- Standby and Latch mode can be combined with
- 8 different alarm functions
  - Optional to four set-point alarm outputs
  - Ramp to set point and soak functions
- Soft-start function
- Fuzzy enhanced PID Controller
- Two alarm output
- Auto / Manual Bumpless Transfer
- Power supply: 90-264VAC, 50/60HZ



The MI-4850 PID Enhanced Controller offer many features and performance capabilities to suit a wide range of industrial applications. Available in three different models to handle various analog inputs including: Thermocouples (all common types and standard, total of 9 types), DC Voltage/Current and RTD sensors (both standards DIN and JIS).

The optional additions bellows allows ordering the controller for a wide range of applications and operator needs. Output 2, optional, for cooling control, Process Value (PV) or Setpoint Retransmission, 4-20mA remote setpoint input (SP-2), RS-485 communication.

## Applications :

Indicator / Controller for temperature, Humidity, Pressure, Air-Conditioning, DC Current / Voltage, ...etc

# Technical Specifications

Specifications:	
<b>Input:</b>	Thermocouple: J, K, T, E, B, R, S, N, C Pt100: 2 or 3 wire connection Current: 0mA to 20mA Voltage: -60mVDC to 60mVDC or -10VDC to 10VDC
<b>Sampling Rate:</b>	100mSec.
<b>Control :</b>	Proportional band: 0.0 ~ 300.0% F.S, 0.0% = ON/OFF mode) Integral time: 0 ~ 3,000 sec. Derivative time: 0 ~ 1,000 sec. Hysteresis: 0.0 ~ 999.9 or 0.0 ~ 9,999 Cycle Time: 0 ~ 60 sec.
<b>Output Cycle Time :</b>	Relay: 15 sec. Pulsed voltage to drive SSR: 1sec. Continuous current (Voltage): 0 sec.
<b>Output:</b>	Relay contact output: 2A / 240 VAC Pulsed Voltage Output: DC 0/24V (Resistive 250Ω min.) Current Output: 4~20mA; (Resistive 600Ω max.) Continuous Voltage Output: 0~50mV; 1~5V; 0~10V (Resistive 600Ω min.)
<b>General:</b>	Rated Voltage: AC 90~265VAC 50 / 60HZ. 4VA max. Ambient Temperature: 0~50°C Ambient Humidity: 0~85 % Weight: 100g (3.5 oz) Housing material: ABS plastic. L 94V0

Alarm Function:
Energized / de-energized with 1s~99m 59s delay time
Alarm OFF
Process high alarm
Process low alarm
Deviation high alarm
Deviation Low Alarm
Inside deviation band alarm
Outside deviation band alarm

Alarm Mode:
Normal mode
Standby mode
Latch mode
Standby and Latch mode

Input Measuring range and Accuracy			
Signal	Max. Temp. Range (C)	Max. Temp Range (F)	Accuracy
T/C J	-50C ~ 1,000C	-58F ~ 1,832F	±1° C
T/C K*	-50C ~ 1,370C	-58F ~ 2,498F	±1° C
T/C T	-270C ~ 400C	-454F ~ 752F	±1° C
T/C E	-50C ~ 700C	-58F ~ 1,382F	±1° C
T/C B	0C ~ 1,750C	32F ~ 3,182F	± 2° C**
T/C R	0C ~ 1,750C	32F ~ 3,182F	± 2° C
T/C S	0C ~ 1,750C	32F ~ 3,182F	± 2° C
T/C N	-50C ~ 1,300C	-58F ~ 2,372F	± 2° C
T/C C	-50C ~ 1,800C	-58F ~ 3,272F	± 2° C
Pt100	-200C ~ 600C	-328F ~ 1,112F	± 0.2° C
Current	0.000 to 24.000mADC		±3 μA
mV	-60mVDC to 60mVDC		±0.01mV
Voltage	-10.000VDC to 10.000VDC		±1mV

\* Factory setting

\*\* For T/C type B, Accuracy is not guaranteed between 0 to 400° C (0 to 752° F)



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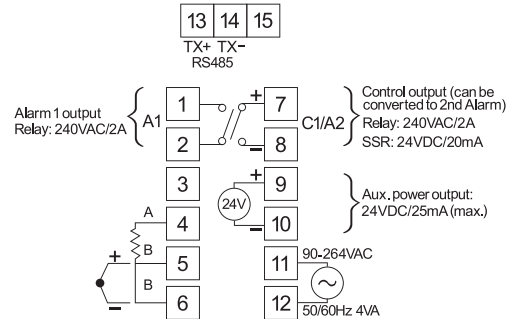
Email: info@michshur.com www.michshur.com

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# Technical Specifications

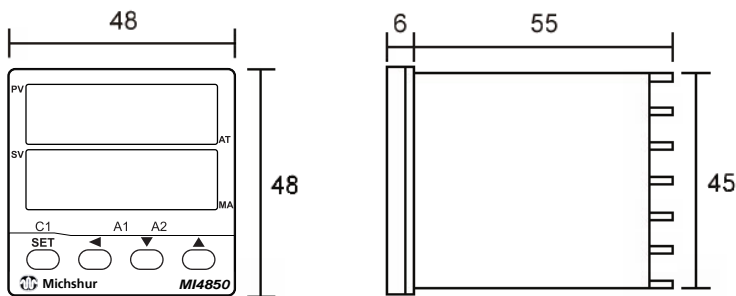
Digital Communication	
Interface based on EIA RS-485	
Protocol: MODBUS RTU mode	
Data format: Start bit - 1	
Data bit - 8	
Parity - none	
Stop bit - 2	
Baud rate: 2,400, 4,800, 9,600, 19,200	

## Wiring Diagram:



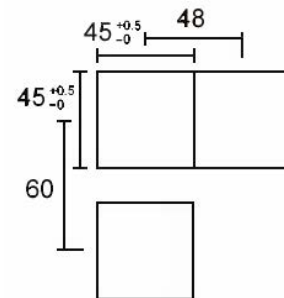
## Dimensions:

(Unit: mm)



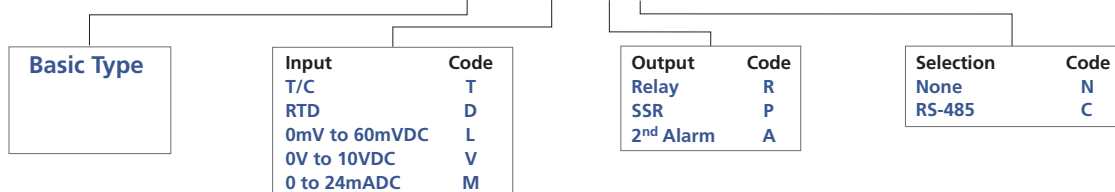
## Panel Cutout:

(Unit: mm)



## How to order:

### MI-4850 - T - R - N



Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.

Modifications may take place and materials specified may be replaced by others without prior notice.



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