



# DIGITAL INDICATOR TRM-006



## TRM-006 (DIN 48x96 SIZE)

Most advance digital indicator with new function

### ■Main Features

- Many kind of input selectable (8 Termocouple, 2 R.T.D. Current Voltage)
- 4 bright LED digits 15mm  
Clearly readable from a distance even in large bright light.
- Peak and bottom hold function  
Minimum value of PV(measuring value) is memorised after electric power is at "ON" condition, and functions of Peak Hold/Bottom Hold are provided for necessary confirmation to be required.

### ●Digital PV filter

If electric noise is come in to the input, its noise effect is reduces. And digital PV filter is provided to make the response delay for rapid change of the input.

- Optional functions ensure a wide range of applications RS-485 communication, 2 Alarm setting, Transfer output of 4 kinds, and 5V or 12VDC for sensor.

### ■Front panel



PV	Process value indication
Character	Character indication for display or setting
AL1	Alarm 1 for low or high limit
AL2	Alarm 2 for low or high limit
COM	Showing communication operate time
MAX	Showing of peak value
MIN	Showing of bottom value
Mode Key	Call mode key character
Shift Key	Using switchover to parameter mode
▲ / ▼	Up down key for setting of alarm value and change of selection of other functions

### ■Standard Specifications

PV Input	Kind of input	Thermocouple	K, J, E, T, R, S, N, W5Re/W26Re
		R.T.D	Pt100, JPt100
		Current	4~20mADC
		Voltage	0~5V, 0~10V, 0~10mV, 1~5VDC
		Sampling time	0.5Sec
	Complement function	PV correct, Digital PV filter, PV hold	
	Input resistance	Thermocouple	1M ohm min from +side on terminal
		Current	250 ohm min from A side on terminal
		Voltage	500k ohm min(1-5V, 0-1V, 0-5VDC) 1M ohm min from + side on terminal(0-10V, 0-10mVDC)
		Balae current	Thermocouple
	Balae current	R.T.D	0.2mA
		Current	9nA
		Voltage	±9nA max(1-5V, 0-1V, 0-5VDC) 0.18µsA(0-10mV)
		External resistance	Thermocouple
	R.T.D		5 ohm max for on wire
	Burnout	Thermocouple	Up scale
		R.T.D	
		Current	PV Input
		Voltage	Input "0" is 0-1V, 0-10V, 0-5VDC / Down scale is 0-5VDC / Up scale is 0-10mV
	Digital PV filter	Setting range	0 to 99 sec (Time constant filter is OFF at 0). Unit : sec
PV holding	Selectable 4 kinds	Non holding, Peak holding, Bottom holding, Peak and bottom holding.	

<b>Display Setting</b>	Indication method	4 digits, 7 segments LED, Letter 15mm height, green		
	Character	4 digits, 7 segments LED, Letter 8mm height, red		
	Al 1	Red LED	showing for alarm operation	
	Al 2	Red LED	showing for alarm 2 operations	
	COM	Green LED	showing for communication operation	
	Min	Red LED	showing for bottom value	
	Max	Red LED	showing for peak value	
	Indicating accuracy	Thermocouple	$\pm 0.3\% + 1$ digit or $\pm 3^{\circ}\text{C}(\pm 6^{\circ}\text{F})$ under indicating value	
		R. T. D	$\pm 0.3\% + 1$ digit or $\pm 0.9^{\circ}\text{C}(\pm 1.8^{\circ}\text{F})$ under indicating value	
		Current	$\pm 0.3\% + 1$ digit under indicating value	
Voltage				
Setting	Key operation for all setting			
Lock method	3 modes (no lock, all lock, parameter display lock)			
<b>Memory element</b>	EEPROM			
<b>Isolation between input and output</b>	Isolation : Between each output and digital circuit . No isolation : Between Input and digital circuit			
<b>Power supply</b>	85 to 264 VAC 50/60, 24VAC/DC is special factory option			
<b>Power consumption</b>	10VAC max at 264VAC			
<b>Ambient temperature &amp; humidity</b>	0 to 55°C, 35 to 85% RH(not dew)			
<b>Insulation resistance</b>	Between ground terminal and power or measure terminal 20M ohm by 500VDC			
<b>Dielectric strength</b>	Between ground terminal and power or measure terminal 10VAC in 1 min			

## Optional function

Alarm AL1.AL2.	Sensitivity	10%of full span max.	Communication method	Protocol	TOHO's specification
	Output rating	250VDC 0.5A(load resistance) or 125VAC(load resistance)		Network	RS485 Multi-drop way with two lines 1 : 31 address max
	Relay contact	1a contact, 220VDC 0.5(load resistance) or 60VDC (load resistance)		Transmission code	ASCII(without BCCdata)
Transfer Outputs	Output voltage	1 to 5V, 0 to 10V, 0 to 10mVDC		Interface method	Transmission line : Three wire (T/R : 2, signal ground : 1)
	Current	4 to 20mADC			Com speed : 1200, 2400, 4800, 9600, BPS selectable
	Output resolution	Indicating and more		Character	Com distance : 500M max
	Output response time	600mSec max	Start bit : 1 bit fixed		
Sensor drive voltage	Output accuracy	$\pm 0.3\%$	Stop bit : Selectable 1/2		
	Voltage 5VDC	Load resistance 500 ohm min Output sensitivity within $\pm 5\%$	Data length : Selectable 7/8		
	Voltage 12VDC	Load resistance 1.2k ohm min Output sensitivity within $\pm 5\%$	Parity bit : Non, an even number		
			Check BCC : Non or with		
			Transmission address : Setting between 1 to 99		

## Alarm Contact Output

<b>1</b> Absolute value high and low limit	<b>2</b> Absolute value high limit	<b>3</b> Absolute value low limit	<b>4</b> Absolute value high and low limit range
Sensitivity Sensitivity L H	Sensitivity H	Sensitivity L	Sensitivity Sensitivity L H

Selectable above 4 kinds and select 1 item following additional alarm functions

- |                           |                                      |                           |  |
|---------------------------|--------------------------------------|---------------------------|--|
| <b>0</b> Non              | <b>1</b> Holding                     | <b>2</b> Buzzer           | <b>3</b> Awaiting sequence                       |
| <b>4</b> Holding & buzzer | <b>5</b> Holding & awaiting sequence | <b>6</b> Holding & buzzer | <b>7</b> Holding & awaiting sequence plus buzzer |

## Terminals



