

USER'S OPERATING MANUAL FOR DIGITAL TEMPERATURE INDICATOR

(Models: TI-33 / 44 / 77 / 88 / 99)



TI - 33
(36 X 72)



TI - 44
(48 X 48)



TI - 77
(72 X 72)



TI - 88
(48 X 96)



TI - 99
(96 X 96)

SPECIFICATIONS: -

1. **DISPLAY TYPE** : 4-Digit 7 segment LED (RED)

Model No.	TI-33	TI-44	TI-77	TI-88	TI-99
Display Height	0.39"	0.30"	0.39"	0.56"	0.56"

2. INPUT

Sensor Input : TC:J,K,R,S,N,T,B & RTD: Pt-100
Range : Refer below table

Sensor Type	Range	Resolution	Accuracy
Fe-k(J) T/C	0 ~ 760°C	1 °C	± 1 °C
Cr-AL(K) T/C	-99 ~ 1300°C	1 °C	
(R) T/C	0 ~ 1700°C	1 °C	
(S) T/C	0 ~ 1700°C	1 °C	
TC - N	-99 ~ 1300°C	1 °C	
TC - T	-99 ~ 400°C	1 °C	
TC - B	0 ~ 1800°C	1 °C	± 0.3 °C
Pt-100(RTD)	-100 ~ 450°C	1 °C	
Pt-100(RTD 0.1)	-99.9 ~ 450.0°C	0.1 °C	

Sampling Time : 125 msec.
Resolution : 1°C/0.1°C(Only for RTD)
CJC for TC : Built in automatic
LWC for Pt-100 : Built in upto 18E max.
Digital Filter : 1 to 10 Sec.

1. ENVIRONMENTAL

Operating Range : 0 ~50°C, 5~90% Rh
Storage Humidity : 95% Rh (Non-condensing)

2. POWER SUPPLY

Supply Voltage : 90~270VAC, 50/60Hz.
Consumption : 4W Maximum.

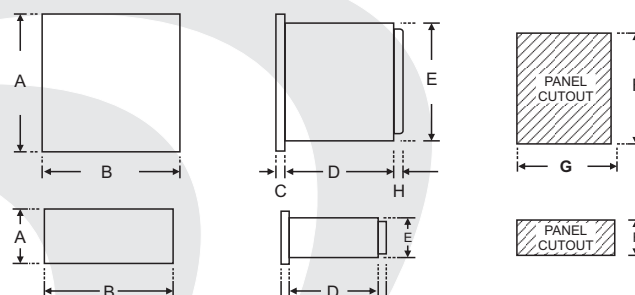
3. PHYSICAL

Housing : ABS Plastic.

Model No.	TI-33	TI-44	TI-77	TI-88	TI-99
Weight (gms.)	200	240	240	240	240

MECHANICAL INSTALLATION

MODEL:-TI-33 / TI-44 / TI-77 / TI-88 / TI-99



OVER ALL DIMENSIONS & PANEL CUT OUT (IN MM)

TABLE : 1

Model	A	B	C	D	E	F	G	H
TI-33	36	72	5	79	21	32	68	9
TI-44	48	48	3	70	45	45	45	9
TI-77	72	72	10	65	66	68	68	9
TI-88	48	96	10	53	43	44	92	9
TI-99	100	100	4.5	50	90	90	92	9

ELECTRICAL INSTALLATION

TI-33

TI-44

TI-77

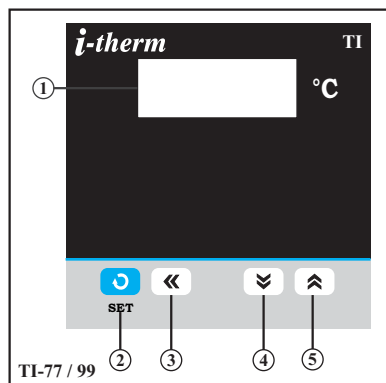
TI-88

TI-99

GENERAL

- ❖ The controller must be configured correctly for intended operation. Incorrect configuration could result in damage to the equipment or the process under control or it may lead to personnel injury.
- ❖ The controller is generally part of control panel and in such a case the terminals should not remain accessible to the user after installation.

FRONT PANEL LAYOUT



FRONT PANEL LAYOUT DESCRIPTION :

Sr.	NAME	FUNCTION
1	DISPLAY	(1) Measured value of selected input or Error messages. (2) Parameters Value/code in program mode.
2	SET KEY	(1) To access Configuration mode along with UP key. (2) To scroll the parameter & to store its value.
3	SHIFT KEY	(1) To increase/alter parameter value in program mode with Up / Dn Key. (2) Press for 3Sec in Programming this will help to go back to previous parameter.
4	DOWN KEY	(1) To decrease/alter parameter value in program mode.
5	UP KEY	(1) To increase/alter parameter value in program mode. (2) To Enter in configuration mode (with SET key) .

CONFIGURATION LIST : (1) To enter in this mode, Press and hold SET & UP key simultaneously for 3 sec.
(2) Press UP or DOWN key to scroll between parameter options.
(3) Press SET key to store the current parameter & move on to the next parameter.

(All following selected parameter's code shown in shaded will be displayed for 1 sec. followed by their values / options)

PARA METER	DISPLAY	DESCRIPTION	DEFAULT																																	
LOCK CODE	LOCK > 0	Set this parameter to 15 (Default LOCK CODE) to access Config. List. User has a choice to set different Lock Code in the range 1 ~ 9999 via USER LOCK CODE in Config. List.	15																																	
INPUT TYPE	InPt > TC-J TC-P TC-r TC-S TC-n TC-t TC-b rtd rtd.i	This parameter value is set according to the type of sensor (Thermocouple or RTD Input) connected to the Controller's Input Terminals. <table border="1"> <thead> <tr> <th>Sensor Type</th><th>Range</th><th>Resolution</th><th>Accuracy</th></tr> </thead> <tbody> <tr> <td>Fe-k(J) T/C</td><td>0 ~ 760°C</td><td>1 °C</td><td rowspan="7">± 1 °C</td></tr> <tr> <td>Cr-AL(K) T/C</td><td>-99 ~ 1300°C</td><td>1 °C</td></tr> <tr> <td>(R) T/C</td><td>0 ~ 1700°C</td><td>1 °C</td></tr> <tr> <td>(S) T/C</td><td>0 ~ 1700°C</td><td>1 °C</td></tr> <tr> <td>TC - N</td><td>-99 ~ 1300°C</td><td>1 °C</td></tr> <tr> <td>TC - T</td><td>-99 ~ 400°C</td><td>1 °C</td></tr> <tr> <td>TC - B</td><td>0 ~ 1800°C</td><td>1 °C</td></tr> <tr> <td>Pt-100(RTD)</td><td>-100 ~ 450°C</td><td>1 °C</td><td rowspan="2">± 0.3 °C</td></tr> <tr> <td>Pt-100(RTD 0.1)</td><td>-99.9 ~ 450.0°C</td><td>0.1 °C</td></tr> </tbody> </table>	Sensor Type	Range	Resolution	Accuracy	Fe-k(J) T/C	0 ~ 760°C	1 °C	± 1 °C	Cr-AL(K) T/C	-99 ~ 1300°C	1 °C	(R) T/C	0 ~ 1700°C	1 °C	(S) T/C	0 ~ 1700°C	1 °C	TC - N	-99 ~ 1300°C	1 °C	TC - T	-99 ~ 400°C	1 °C	TC - B	0 ~ 1800°C	1 °C	Pt-100(RTD)	-100 ~ 450°C	1 °C	± 0.3 °C	Pt-100(RTD 0.1)	-99.9 ~ 450.0°C	0.1 °C	TC-J
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PROCESS VALUE OFFSET	OFSt > 0	Function of this parameter is to add/subtract a constant value to the measured PV to obtain Final PV for control applications. This parameter value needs to be altered for one of the following reason : (i) To compensate for known thermal gradient. (ii)To match the display values with another recorder or indicator measuring the same PV.	0 °C																																	
INPUT FILTER	FLtr > 1	Controller is equipped with an adaptive digital filter which is used to filter out any extraneous pulses on the PV. Filtered PV Value is used for all PV dependent functions. If PV signal is fluctuating due to noise, increase the filter time constant value.	4																																	
USER LOCK CODE	ULCP > 15	Default USER LOCK CODE is 15 to access Control & Configuration List. User has a choice to set its own USER LOCK CODE between 1 to 9999, this is to prevent unauthorized access of Control & Configuration List.	15																																	

To Change Offset Value, Press and hold SET & DOWN key simultaneously for 3 sec.

PARA METER	DISPLAY	DESCRIPTION	DEFAULT
LOCK CODE	LOCK > 0	Set this parameter to 55 (Default LOCK CODE) to access Config. List. User has a choice to set different Lock Code in the range 1 ~ 9999 via USER LOCK CODE in Config. List.	55
PROCESS VALUE OFFSET	OFSt > 0	Function of this parameter is to add/subtract a constant value to the measured PV to obtain Final PV for control applications. This parameter value needs to be altered for one of the following reason : (i) To compensate for known thermal gradient. (ii)To match the display values with another recorder or indicator measuring the same PV.	0 °C



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