

# PROCESS INDICATOR :PI (48\*96)



## Ordering Information:

Sr.No	CAT No.	Description
1	PIA200	180 to 270 VAC, Process Indicator, Analog Input (0-10VDC / 4-20mA)
2	PIT200	180 to 270 VAC, Process Indicator, Thermocouple & RTD input

**CAT No: PIA200W & PIT200W (Where W stands for White display)**

## PRODUCT DESCRIPTION:

Process Indicator PIA200 and PIT200 helps to indicate temperature, Flow, Level, RPM. Monitors the process by accepting inputs from sensor or from analog signals in process industries, with inbuilt hour meter functionality.

## FEATURES:

- Flush Mounting Version 48X96 mm with 7 segment display
- Thermocouple (J, k, T, R & S)/ RTD 3-wire (PT-100) sensor input
- Analog Input (0-10VDC/ 0-20mA/ 4-20mA)
- °C & °F temperature unit selectable
- Short depth of 65mm
- IP 20 (For terminal), IP 30 (For enclosure) & IP 65 (For Front Panel)
- Hour meter counter functionality
- Automatic Decimal Point Adjust

## CAUTION:

- When extending the thermocouple lead wires always use thermocouple compensation wires for wiring.
- For RTD sensor, use a wiring material with a small lead resistance (100 max per lead) & no resistance differentials among 3 wires.
- For 2 wire RTD sensor Short terminal RTD2 & RTD3 then connect to the Devices.
- Clean the product with a soft and clean cloth. Do not use isopropyl alcohol or any other cleaning agent.
- 20 min warm-up time after connecting thermocouple input.
- When replacing the sensor, please turn OFF the power.
- Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.
- Ensure the configure and connected input Sensor are same.

## SUITABILITY FOR USE:

These are products with Auto reset, hence never use the products for an application involving significant risk to life without ensuring that the system as a whole has been designed to address the risks and that our products are properly rated and installed for the intended use within the entire system or equipment.

## NOTE:

- The technical information provided in this document was correct at the time of publish.
- Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.

## TECHNICAL SPECIFICATION:

PIT200 / PIA200				
<b>Supply Characteristics:</b>				
Supply Voltage (Un)	180 to 270VAC			
Supply Frequency	47 / 63 Hz			
Power Consumption	5 VA max @ 230 VAC			
<b>Functional Characteristics:</b>				
Menu Password	60 Default (User Selectable)			
Sensor Measurement Range	Applicable for Cat_id: PIT200			
	J-type	°C °F	-200 to 950 -328 to 1742	
	K-type	°C °F	-200 to 1350 -328 to 2462	
	T-type	°C °F	-200 to 400 -328 to 752	
	R-type & S-type	°C °F	-200 to 850 -328 to 1562	
	RTD (Pt-100)	°C °F	0 to 1750 32 to 3182	
	Analog Input: Applicable for Cat_id: PIA200			
Voltage	0 to 10VDC			
Current	0 to 20mA, 4 to 20mA			
Resolution	J, K, T & Pt-100	0.1°/1°		
	R & S	1°		
	Analog inputs	1/0.1/0.01/0.001		
Measurement Accuracy	PIT200	RTD	±0.1% of F.S	± 1°C
		J, K & T	±0.25% of F.S	± 1°C
		R & S	±0.5% of F.S	± 2°C
	PIA200	Signal input	0.5% of F.S	
Temperature Unit	°C/°F selectable (Applicable for PIT200)			
Signal Sampling Time	168 ms			
Display	Seven Segment Display (Red Color)			
Front Keypad	4 Keys as ESC (■), DOWN (▼), UP (▲), ENTER (↵)			
Key de-bounce time	≥ 40 ms			

**TECHNICAL SPECIFICATION:**

PIT200 / PIA200			
<b>Functional Characteristics:</b>			
Resolution	J, K, T & Pt-100	0.1°/1°	
	R & S	1°	
	Analog inputs	1/0.1/0.01/0.001	
Measurement Accuracy	PIT200	RTD	±0.1% of F.S    ± 1°C
		J, K & T	±0.25% of F.S    ± 1°C
		R & S	±0.5% of F.S    ± 2°C
	PIA200	Signal input	0.5% of F.S
Temperature Unit	°C/°F selectable (Applicable for PIT200)		
Signal Sampling Time	168 ms		
Display	Seven Segment Display (Red Color)		
Front Keypad	4 Keys as ESC (■), DOWN (▼), UP (▲), ENTER (↵)		
Key de-bounce time	≥ 40 ms		
Error Indications	Sens	Sensor open/Break error	
	ovrg	Over range error	
	unrg	Under range error	
<b>Environmental Characteristics:</b>			
Operating Temperature	0 to 50 °c		
Storage Temperature	-20 to 75 °c		
Operating Humidity	85 % RH (Non-Condensing)		
Operating Altitude	2000 m (max)		
Pollution Degree	II		
Degree of Protection	IP 20: Terminal		
	IP 65: Front Facial		
	IP 30: Enclosure		
Enclosure	Flame Retardant (UL 94 V-0)		
<b>Other Characteristics:</b>			
Mounting (WXHxD) mm	48X96X65		
Weight (Un-Packed)	PIA200 : 144 gm PIT200 : 145 gm		
Operating Position	Horizontal (Readable)		

**FUNCTIONAL PARAMETERS:**

Parameter	Description	Default
<b>Input Menu: Input</b>		
SEnS	Sensor input setting	J
U	J-type	
K	K-type	
S	S-type	
r	r-type	
t	T-type	
Pt 1	Pt-100	
rRtE	RATE Range: 0.000 to 2.000	1.000
oFSt	OFFSet Range: -1999 to 9999	0
dP	Decimal Point Range: 0 to 1 for J, K, Pt1 & T 0 for R, S	0
Unit t	Temperature Unit Range: °C or °F	°C
Filt	Filter Range: 0 to 10	0
<b>Miscellaneous Menu: Miscellaneous</b>		
hcnt	Unit Range: OFF,day,hr	oFF
	hcth	oFF
	Counter Threshold Range: OFF to 9999	oFF
uEr	This Parameter will displays the Current Product Firmware Version	---
<b>Password Menu: Password</b>		
StRt	Password Status Range: EN or DIS EN: Enable DIS: Disable	En
SEt	Password Set Range: 0 to 9999	50
<b>Hiding Menu: Hiding</b>		
inp	Input Range: OFF or ON OFF: Inp menu will not hide ON: Inp menu will hide	oFF
misc	Miscellaneous Range:OFF or ON OFF: Misc menu will not hide ON: Misc menu will hide	oFF
<b>Password Menu: Password</b>		
Pwd	Password Range: OFF or ON OFF: PWD menu will not hide ON: PWD menu will hide	oFF
rSEt	Reset Range: OFF or ON OFF: Rset menu will not hide ON: Rset menu will hide	oFF
<b>Reset Menu: Reset</b>		
rSEt	Reset To reset the devices & load default setting (Press Enter key)	no
cnFm	After Confirm, If "Yes": Devices Reset and back to main Screen If " No": Back to main Screen	

The Functional parameter for cat\_id: PIA200 is same as above only input menu is different

i nP Menu: Input		
SEn5	Sensor input setting	
0_20	0 to 20mA	0_20
4_20	4 to 20mA	
0_10	0 to 10VDC	
iScL	Analog Input Low Scale Range: -1999 to ISCH Selectable low value for analog input	0
iSch	Analog Input High Scale Range: ISCL to 9999 Selectable high value for analog input	100.00
AirL	Analog Input Range Low Range: For 0_20: 0 to AirH For 4_20: 4 to AirH For 0_10: 0 to AirH Selectable low value for Display scaling	00.00
AirH	Analog Input Range High Range: For 0_20: AirL to 20 For 4_20: AirL to 20 For 0_10: AirL to 10 Selectable high value for Display scaling	20.00
rAtE	RATE Range: 0.000 to 2.000	1.000
oFSt	OFFSet Range: -1999 to 9999	0
dP	Decimal Point Range: 0 to 3 for V & I	0
Filt	Filter Range: 0 to 10	2

**EMI/EMC Compliance:**

Harmonic Current Emission	IEC 61000-3-2 (Class A)
ESD	IEC 61000-4-2 (Level III)
Radiated Susceptibility	IEC 61000-4-3 (Level III)
Electrical Fast Transients (Power Ports)	IEC 61000-4-4 (Level IV)
Surge	IEC 61000-4-5 (Level IV)
Conducted Susceptibility	IEC 61000-4-6 (Level III)
Power Frequency Magnetic Field	IEC 61000-4-8 (Class 4)
Voltage Dips/Interruption	IEC 61000-4-11
Voltage Dips (DC)	IEC 61000-4-29
Conducted & Radiated Emission	CISPR 11 (Class A)
Product Standard	IEC 61326-1

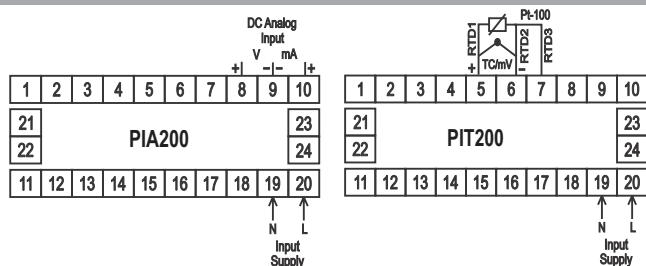
**Safety Compliance:**

Dielectric Strength (Input & Output)	IEC 60255-5
Impulse (Input & Output)	IEC 60255-5 (Level IV)
Single Fault	IEC 61010-1
Insulation Resistance	UL 508 (>100 MΩ)
Leakage Current	UL 508 (< 3 mA)

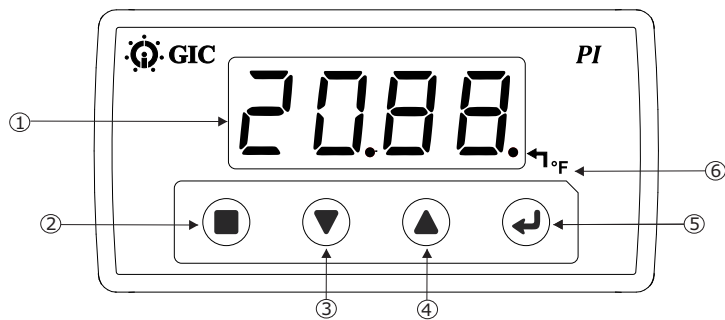
**Environmental Compliance:**

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6 (5g)

**CONNECTION DETAIL:**

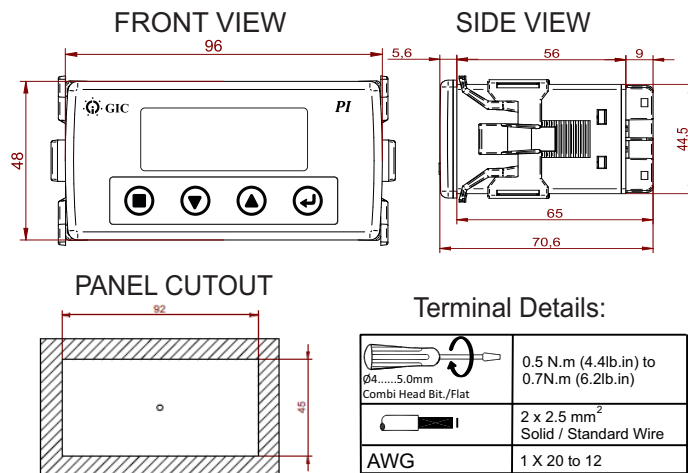


**FRONT FACIA:**

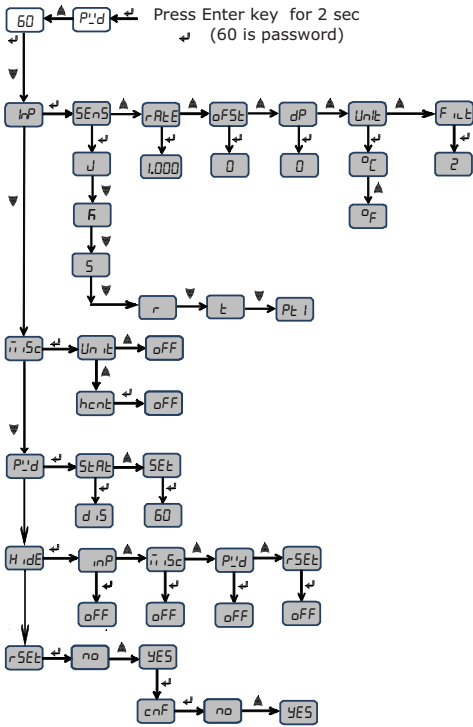


Sr. No.	Keys/ Indication	Description
1	PV	To displays the 'Process Value' & 'Menu'.
2	■	To exit from menu. To abort changed value or parameter. To return to home screen.
3	▼	To view parameter downward. To decrement/ change parameter value in edit mode. To view hour counter unit & threshold (Press for >2 sec )
4	▲	To view parameter upward. To increment/change parameter value in edit mode.
5	↵	To enter into main menu (Press for >2 sec ) To select and save parameter
6	°F	To indicates LED '°F' unit setting.

**MECHANICAL DIMENSIONS (in mm):**



**Cat\_id: PIT200**



**Rate (rATE) & Offset (oFSt):** This menu is used to adjust the PV value in cases where it is necessary for PV value to agree with another recorder or indicator, or when the sensor cannot be mounted in correct Location.  
 E.g. Sensor is mounted at a location, where less than actual temperature is observed.  
 Let us say actual temperature is 550 and sensor is located to such a location where the temperature is 500. This device will measure 500 and show the value accordingly. To observe the actual temperature, user should add offset of 50 to measured temperature value.  
 i.e. 500+50=550. Now device will show 550 instead of 500, Rate can be applied as slope; range is from 0.001 to 2.000. Display temp. = rATE \* Measured Temp + oFst

**HOURLY METER:** It is the number of hour/day that the instrument is turned ON. When the DUT reached to the threshold value (Programmable) the display will indicate an message of "INSP"(Inspection), to indicated that set threshold is completed and can start his necessary action. After acknowledge the hourly meter will continue to record the hours till new threshold is set. If counter threshold is edited then it will reset the current count.

**UNIT (Unit):** It is used to select day or hour.

**HOURLY METER THRESHOLD (hcnE):** It is used to set the threshold.

**ANALOG INPUT & DISPLAY SETTING**

E.g. We have few setting in Inp menu.

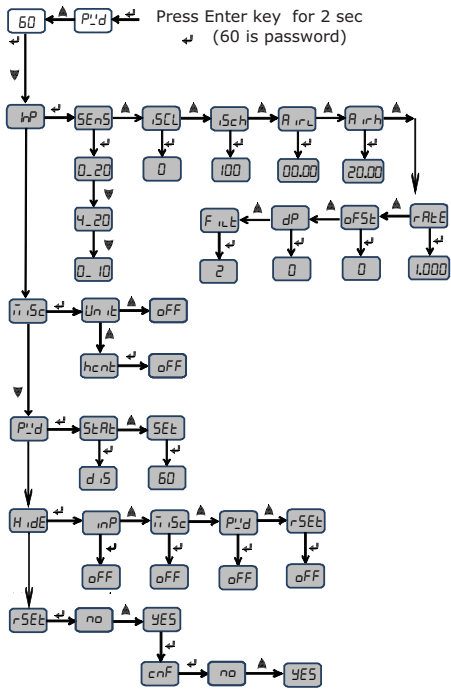
Sens = 0\_10 (0V to 10V) AlrL = 1,

Alrh = 10, (Selectable high & low value for analog input)

IScL = 0, ISch = 99 (Selectable high & low value for Display scaling value)

When analog input voltage is 1V then value on display will be 0. When analog input voltage is 10V, then value on display will be 99. This value will vary from 0 to 99 according to analog input.

**Cat\_id: PIA200**



E-Waste Regulatory notice: Kindly treat, recycle or dispose of this equipment in an environmentally sound manner after End of Life, as per WEEE (Waste and Electronic Equipment) regulations; or hand it over to General Industrial Controls Pvt. Ltd, through website <https://www.gicindia.com/get-in-touch/>



# PROCESS INDICATORS : PI (48\*96)



## Ordering Information:

Sr.No	CAT No	Description
1	PIB110	85-270V AC/DC, Process indicator, Analog Input (0-10VDC/0-20mA), Thermocouple, RTD & mV, 24VDC Sensor Supply
2	PIB120	85-270V AC/DC, Process indicator, Analog Input (0-10VDC/0-20mA), Thermocouple, RTD & mV, Alarm outputs-Analog (0-10V/0-5V, 0-20mA/4-20mA) & Relay 5A for alarm indication, 24VDC Sensor Supply)
3	PIB12C	85-270V AC/DC, Process indicator, Analog Input (0-10VDC/0-20mA), Thermocouple, RTD & mV, Alarm outputs-Analog (0-10V/0-5V, 0-20mA/4-20mA) & Relay 5A for alarm indication with Rs485 Modbus communication, 24VDC Sensor Supply)

**CAT No: PIB110W, PIB120W & PIB12CW (Where W stands for White display)**

## PRODUCT DESCRIPTION:

Process indicator Series with scalable analog input and output, monitors the process, indicates the temperature, level, flow and pressure, retransmits the analog output, provides alarm indication, with inbuilt hour meter functionality and RS485 Modbus communication.

## FEATURES:

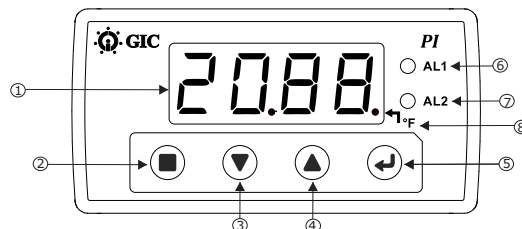
- Flush Mounting Version 48X96 mm with 7 segment display
- Thermocouple (J, k, T, R & S)/ RTD 3-wire (PT-100) sensor input
- Analog Input (0-10VDC/ 0-20mA/ 4-20mA), mV(Linear) -5 to 56mV
- Alarm Outputs, Analog (0-20mA/ 4-20mA or 0-10VDC/0-5VDC) and Relay 5A for alarm indication
- Configurable Band, Deviation Alarms
- °C & °F temperature unit selectable
- Short depth of 65mm
- RS485 Communication (applicable for Cat No: PIB12C)
- IP 20 (For terminal), IP 30 (For enclosure) & IP 65 (For Front Panel)
- 24 VDC (30mA) sensor supply
- Hour meter counter functionality
- Automatic Decimal Point Adjust

## CAUTION:

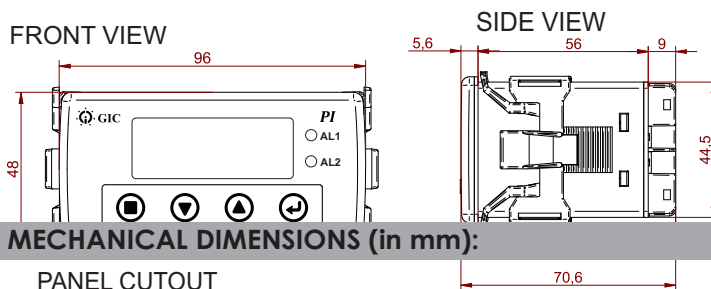
- When extending the thermocouple lead wires, Always use thermocouple compensation wires for wiring.
- For 2 wire RTD short terminal RTD2 & RTD3 and then connect to the devices.
- Clean the product with a soft and clean cloth. Do not use isopropyl alcohol or any other cleaning agent.
- 20 min warm-up time after connecting thermocouple input
- When replacing the sensor, please turn OFF the power.
- Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.
- Ensure the configure and connected input Sensor are same.
- For RTD sensor, Use a wiring material with small Lead resistance (1000 max per lead) & no resistance differentials among 3 wires



## FRONT FACIA:



Sr. No.	Keys/ Indication	Description
1	PV	To display the 'Process Value' & 'Menu'.
2	■	To exit from menu. To abort changed value or parameter. To return to home screen.
3	▲	To view parameter upward. To increment/change parameter value in edit mode.
4	▼	To view parameter downward. To decrement/change parameter value in edit mode. To view hour counter unit & threshold(Press for >2 sec )
5	↩	To enter into main menu (Press for >2 sec ) To select and save parameter
6	AL1	To indicate LED for Alarm 1.
7	AL2	To indicate LED for Alarm 2.
8	°F	To indicate LED '°F' unit setting.



## Terminal Details:

 0.5 N.m (4.4lb.in) to 0.7N.m (6.2lb.in)	 2 x 2.5 mm <sup>2</sup> Solid / Standard Wire
 AWG	1 X 20 to 12

**TECHNICAL SPECIFICATION:**

PIB110 / PIB120 / PIB12C			
Supply Characteristics:			
Supply Voltage (Un)	85 to 270 VAC/DC		
Supply Frequency	47 to 63 Hz		
Power Consumption	8 VA @ 230 VAC		
Functional Characteristics:			
Menu Password	60 Default (User Selectable)		
Sensor Inputs (IEC)	Thermocouple (J, K, T, R & S) RTD (Pt-100, 3-wire, 2-wire) For 2 wire RTD short terminal no 6 & 7		
Sensor Measurement Range	J-type	°C -200 to 950 °F -328 to 1742	
	K-type	°C -200 to 1350 °F -328 to 2462	
	T-type	°C -200 to 400 °F -328 to 752	
	R-type & S-type	°C 0 to 1750 °F 32 to 3182	
	RTD (Pt-100)	°C -200 to 850 °F -328 to 1562	
	Analog Input		
	Voltage	0 to 10VDC	
	Current	0 to 20mA, 4 to 20mA	
mV	-5 to 56mV		
Resolution	J, K, T & Pt-100	0.1°/1°	
	R & S	1°	
	Analog inputs	1/0.1/0.01/0.001	
Measurement Accuracy	RTD	±0.1% of F.S	± 1°C
	J, K & T	±0.25% of F.S	± 1°C
	R & S	±0.5% of F.S	± 2°C
	Signal input	0.5% of F.S	
20 min warm up			
Temperature Unit	°C/°F selectable		
Signal Sampling Time	168 ms		
Display	Seven Segment Display (Red Color)		
Front Keypad	4 Keys as ENTER (↵), UP (▲), DOWN (▼), ESC (■),		
Key de-bounce time	≥ 40 ms		
Error Indications	5Er5	Sensor open/Break error	
	Ur9	Over range error	
	Urr9	Under range error	
<b>Sensor Supply Characteristics:</b>			
Output Voltage	24 VDC (26.4 V Max.)		
Load Current	30 mA (Max)		
<b>Relay(Alarm Indication) Characteristics:</b> Applicable for cat No: PIB120 and PIB12C			
Contact Arrangement	1 C/O (SPDT)		
Contact Rating	5A(NO), 3A(NC), RES. @ 250VAC/ 24VDC		
Contact Material	Ag alloy (Cd free)		
Utilization Category (AC-15)	Ue Rated Voltage (V): 120 / 240		
	Ie Rated Current (A): 3.0 / 1.5		
Switching Frequency	1800 Operations/Hour		
Electrical Life	50,000 Operations		
Mechanical Life	5,000,000 Operations		
<b>Linear DC Output Characteristics:</b> Applicable for cat No: PIB120 and PIB12C			
Programmable output	Voltage: 0 to 10V/ 0 to 5V Current: 0 to 20 mA / 4 to 20mA		
Output update rate	100mS		
Accuracy of DC Output	0.25% of F.S.		
Min. load resistance (Voltage)	Min 30KΩ		
Max. load resistance (Current)	Max 600Ω		

**LED Indications(For Alarm Indication):**

AL1 and AL2 LED's are applicable for cat No: PIB120 and PIB12C

AL1 (Red LED)	ON	Relay output ON
AL2 (Red LED)	ON	Relay output ON
°F' (Red LED)	ON	Display °F' value
	OFF	Display °C' value

**Communication Characteristics:**

Applicable for cat No: PIB12C

Interface Standard	RS-485 (Modbus RTU)
Communication Address	1 to 247
Transmission Distance	Upto 1000 m
Transmission Speed	2400,4800, 9600, 19200 BPS
Parity	Even, Odd, None
Communication	Half Duplex

**Environmental Characteristics:**

Operating Temperature	0 to 50 °c
Storage Temperature	-20 to 75 °c
Operating Humidity	85 % RH (Non-Condensing)
Operating Altitude	2000 m (max)
Pollution Degree	II
Degree of Protection	IP 20: Terminal
	IP 65: Front Facial
	IP 30: Enclosure
Enclosure	Flame Retardant (UL 94 V-0)

**Other Characteristics:**

Mounting (HXWXD)	48X96X65 (mm)
Weight (Un-Packed)	PIB110 :160 gm
	PIB120 :200 gm
	PIB12C :200 gm
Operating Position	Horizontal (Readable)

**EMI/EMC Compliance:**

Harmonic Current Emission	IEC 61000-3-2 (Class A)
ESD	IEC 61000-4-2 (Level II)
Radiated Susceptibility	IEC 61000-4-3 (Level III)
Electrical Fast Transients (Power Ports)	IEC 61000-4-4 (Level IV)
Surge	IEC 61000-4-5 (Level IV)
Conducted Susceptibility	IEC 61000-4-6 (Level III)
Power Frequency Magnetic Field	IEC 61000-4-8 (Class 4)
Voltage Dips/Interruption	IEC 61000-4-11
Voltage Dips (DC)	IEC 61000-4-29
Conducted & Radiated Emission	CISPR 11 (Class A)
Product Standard	IEC 61326-1

**Safety Compliance:**

Dielectric Strength (Input & Output)	IEC 60255-5
Impulse (Input & Output)	IEC 60255-5 (Level IV)
Single Fault	IEC 61010-1
Insulation Resistance	UL 508 (>100 MΩ)
Leakage Current	UL 508 (< 3 mA)

**Environmental Compliance:**

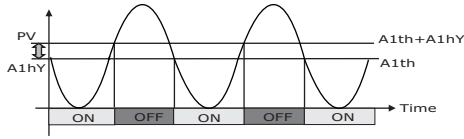
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6 (5g)

## ALARM MENU:

### Alarm Types:

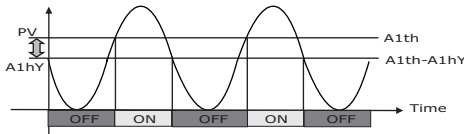
1. Absolute low ("AbLo" on display): Alarm is activated if PV goes below A1th and is deactivated if PV goes above (A1th+A1hy).

Menu	Sub menu	Option
AL1	A1Y	AbLo



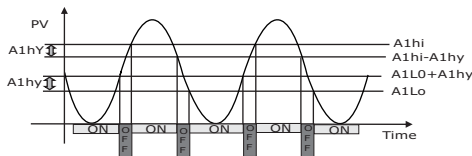
2. Absolute high ("Abhi" on display): Alarm is activated if PV goes above A1th and is deactivated if PV goes below (A1th-A1hy).

Menu	Sub menu	Option
AL1	A1Y	Abhi



3. Absolute band ("AbbA" on display): Alarm is activated if PV goes above A1hi or below A1Lo. It is deactivated if it goes below (A1hi-A1hy) or above (A1Lo+A1hy).

Menu	Sub menu	Options
AL1	A1Y	AbbA



Menu	Sub menu	Options
AL1	A1Y	AbLo Abhi AbbA

AL Menu: This Menu is applicable for Cat No: PIB120 & PIB12C

A1EY	Alarm 1 type: Range: 1. AbLo: Absolute low 2. Abhi: Absolute high 3. AbbA: Absolute band	AbLo
A1FN	Alarm 1 function: 0 : Alarm on Error +1: Acknowledge alarm +2: Delayed alarm +4: Latch alarm +8: No alarm at power on Range: 0-15	0
A1Lo	Alarm 1 low level Range: -1999 to A1th	-1999
A1th	Alarm 1 Threshold Range: A1Lo to A1Hi	0
A1hi	Alarm 1 high level Range: A1th to 9999	9999
A1hy	Alarm 1 hysteresis Range: OFF to 9999	1
A1AN	Alarm 1 Annunciator Range: LED, DISP, OFF LED: LED blinks at 0.2 Sec after alarm occurrence DISP: Message gets displayed On Screen and LED gets ON after alarm occurrence OFF: LED is continuous ON	OFF
A1dL	Alarm 1 delay Range: OFF to 9999 s	OFF

## Alarm Functions:

Sr.No	Value	Details	Applications
1	0	<b>Normal</b> <b>Activation:</b> When alarm condition occurs. <b>Deactivation:</b> When the alarm condition Disappear.	Normal
2	1	<b>Acknowledge</b> <b>Activation:</b> When alarm condition occurs. <b>Deactivation:</b> 1)When the alarm condition disappear. 2)When configurable key is programmed for acknowledgment and it is pressed in alarm condition.	To ignore the alarm Condition
3	2	<b>Delayed</b> <b>Activation:</b> Delayed by time set in A1dL parameter after occurrence of the alarm condition. <b>Deactivation:</b> When the alarm condition disappear. Note: During the delay if the alarm condition disappears, alarm will not generated.	To delay the alarm generated, some times alarm can be generated for shorter time due to some disturbance in system
4	4	<b>Latched</b> <b>Activation:</b> When alarm condition occurs. <b>Deactivation:</b> When configurable key is programmed for acknowledgment and it is pressed in alarm condition. Note: Alarm will not automatically deactivated once generated.	To record or draw attention of alarm generation condition every time. since no automatic of alarm
5	8	<b>No alarm at Power ON</b> <b>Activation:</b> IF alarm condition exist at power on, alarm will not be activated. Once devices comes out of alarm condition after power on, there after alarm will be activated at every occurrence of the alarm condition. <b>Deactivation:</b> Alarm will be deactivated in no alarm condition.	To avoid alarm after power on. Since possibility of alarm condition after every power on.

**Note:** Alarm types and functions are explained for alarm

1. The explanation for AL1 is same as AL2.

2. Binary addition of alarm function allows Combination of different function.

Eg. If it is required to have no alarm at power On [8] and Delayed [2], set function as 10.

## FUNCTIONAL PARAMETERS:

Parameter	Description	Default
InP Menu: Input		
SEn5	Sensor input setting	J
J	J-type	
K	K-type	
S	S-type	
r	r-type	
t	T-type	
Pt1	Pt-100	
0_20	0 to 20mA	0
4_20	4 to 20mA	
0_10	0 to 10VDC	
56mV	56mV Analog input	
iScL	Analog Input Low Scale Range: -1999 to ISCH	0
iScH	Analog Input High Scale Range: ISCL to 9999	100
AirL	Analog Input Range Low Range: For 0_20: 0 to AirH For 4_20: 4 to AirH For 0_10: 0 to AirH For 56mV: -5 to AirH	0.00
AirH	Analog Input Range High Range: For 0_20: AirL to 20 For 4_20: AirL to 20 For 0_10: AirL to 10 For 56mV: AirL to 56	20.00

rRtE	RATE Range: 0.000 to 2.000	1.000
oFSt	OFFSet Range: -1999 to 9999	0
dP	Decimal Point Range: 0 to 3 for V, I & mV 0 to 1 for J, K, Pt1 & T 0 for R, S	0
Unit	Temperature Unit Range: °C or °F	°C
PuL0	Process Value Low Range: -1999 to 9999 Corresponds to 0 or 4mA / 0VDC	0
PuHi	Process Value High Range: -1999 to 9999 Corresponds to 20mA / 10VDC	100
Filt	Filter Range: 0 to 10	0
OP Menu: Output		
oP1	Output 1 Range: OFF A1NO(Alarm 1 Normally open) A1NC(Alarm 1 Normally Close) A2NO(Alarm 2 Normally open) A2NC(Alarm 2 Normally Close) SMER(Sensor Measurement Error)	oFF
oP2	Output 2 Range: OFF A1NO(Alarm 1 Normally open) A1NC(Alarm 1 Normally Close) A2NO(Alarm 2 Normally open) A2NC(Alarm 2 Normally Close) SMER(Sensor Measurement Error)	oFF
oP3	Output 3 Range: V005(0 to 5 VDC) V010(0 to 10 VDC) I020(0 to 20 mA) I420(4 to 20 mA)	u005
MAN	Manual mode Range: ON, OFF	oFF
SErr	Sensor Error Range: Low, High (Note: the parameter will only be visible if manual mode is OFF) When ever sensor error conditions occurs in that case analog o/p will be High (for e.g 5 VDC)	high
PtAg	Percentage Error Range: 0.0 to 100.0 (Note: The parameter will only be visible if manual mode is ON) if PtAg: 50 & OP3: V005 then, When ever sensor error conditions occurs in that case analog o/p will be 2.5VDC (Percentage value of Analog o/P )	0
Misc Menu: Miscellaneous		
hcnt	Unit Unit Range: OFF,day,hr	oFF
	hcth Counter Threshold Range: OFF to 9999	oFF
uEr	This Parameter will displays the Current Product Firmware Version	---
Modb Menu: Modbus		
Addr	Address (Devices ID) Range: 1 to 247	1

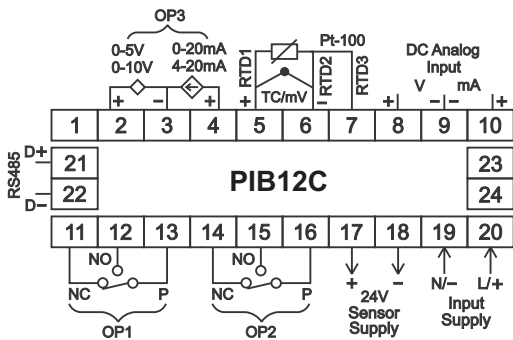
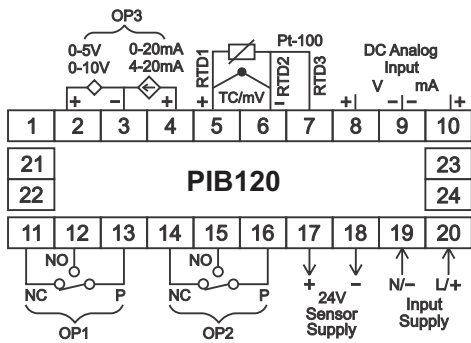
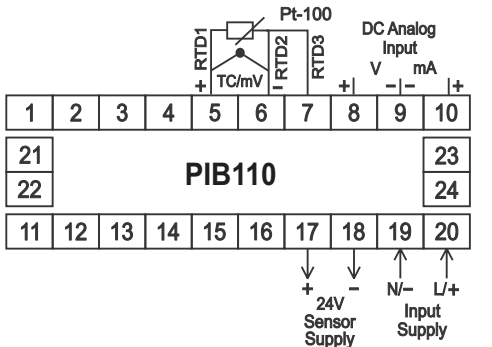
bRud	Baud rate Range: 24, 48, 96, 192 24: 2400 baud rate 48: 4800 baud rate 96: 9600 baud rate 192: 19200 baud rate	96
PARt	Parity Range: None, Odd, Even None: None Parity odd : Odd Parity Even : Even parity	nonE
StPb	Number of stop bits Range: 1 to 2	1
Pw'd Menu: Password		
StRt	Password Status Range: EN or DIS EN: Enable DIS: Disable	En
SEt	Password Set Range: 0 to 9999	50
HidE Menu: Hiding		
inp	Input Range: OFF or ON OFF: Inp menu will not hide ON : Inp menu will hide	oFF
AL1	Alarm1 Range: OFF or ON OFF: AL1 menu will not hide ON : AL1 menu will hide	oFF
AL2	Alarm2 Range: OFF or ON OFF: AL2 menu will not hide ON : AL2 menu will hide	oFF
oP	Output Range: OFF or ON OFF: OP menu will not hide ON : OP menu will hide	oFF
Misc	Miscellaneous Range: OFF or ON OFF: Misc menu will not hide ON : Misc menu will hide	oFF
Modb	Modbus Range: OFF or ON OFF: Modb menu will not hide ON : Modb menu will hide	oFF
Pw'd	Password Range: OFF or ON OFF: PWD menu will not hide ON : PWD menu will hide	oFF
rSEt	Reset Range: OFF or ON OFF: Rset menu will not hide ON : Rset menu will hide	oFF
rSEt Menu: Reset		
rSEt	Reset To reset the devices & load default setting (Press Enter key) If "Yes" : Will display Confirm reset If "No" : Will get to menu After Confirm, If "Yes" : Devices Reset and back to main Screen If " No" : Back to main Screen	no



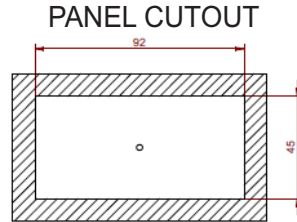
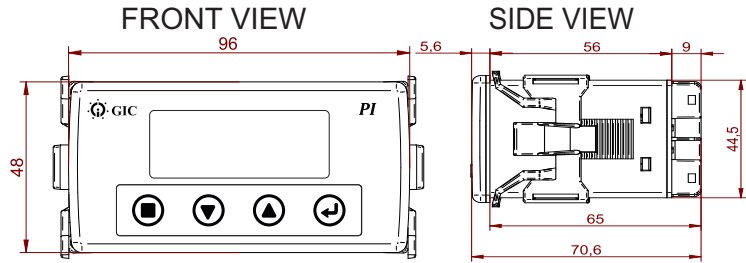
The Functional parameter for cat\_id: PIA200 is same as above only input menu is different

InP Menu: Input		
SEn5	Sensor input setting	4_20
0_20	0 to 20mA	
4_20	4 to 20mA	
0_10	0 to 10VDC	
iScL	Analog Input Low Scale Range: -1999 to ISCH Selectable low value for analog input	0
iScH	Analog Input High Scale Range: ISCL to 9999 Selectable high value for analog input	100.00
AirL	Analog Input Range Low Range: For 0_20: 0 to AirH For 4_20: 4 to AirH For 0_10: 0 to AirH Selectable low value for Display scaling	00.00
AirH	Analog Input Range High Range: For 0_20: AirL to 20 For 4_20: AirL to 20 For 0_10: AirL to 10 Selectable high value for Display scaling	20.00
rAtE	RATE Range: 0.000 to 2.000	1.000
oFSt	OFFSet Range: -1999 to 9999	0
dP	Decimal Point Range: 0 to 3 for V & I	0
Filt	Filter Range: 0 to 10	2

**CONNECTION DIAGRAM:**



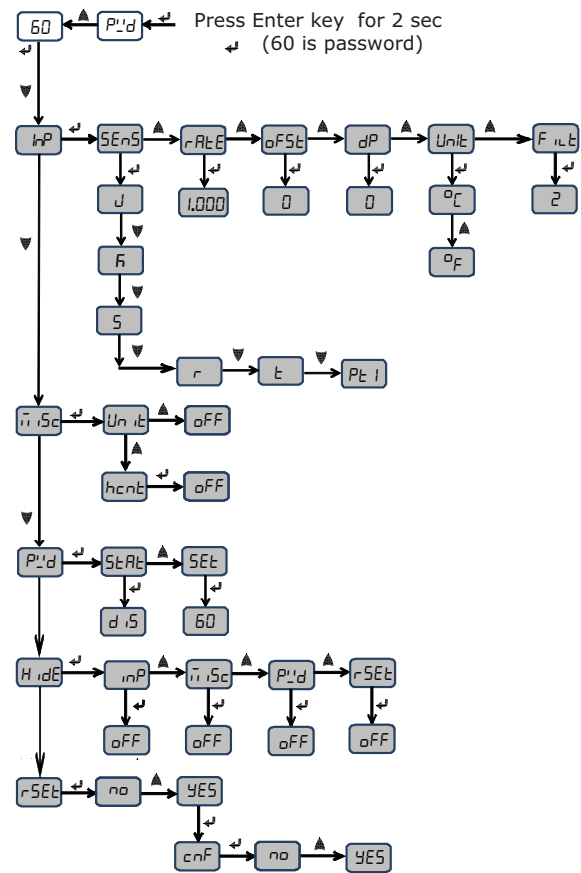
**MECHANICAL DIMENSIONS (in mm):**



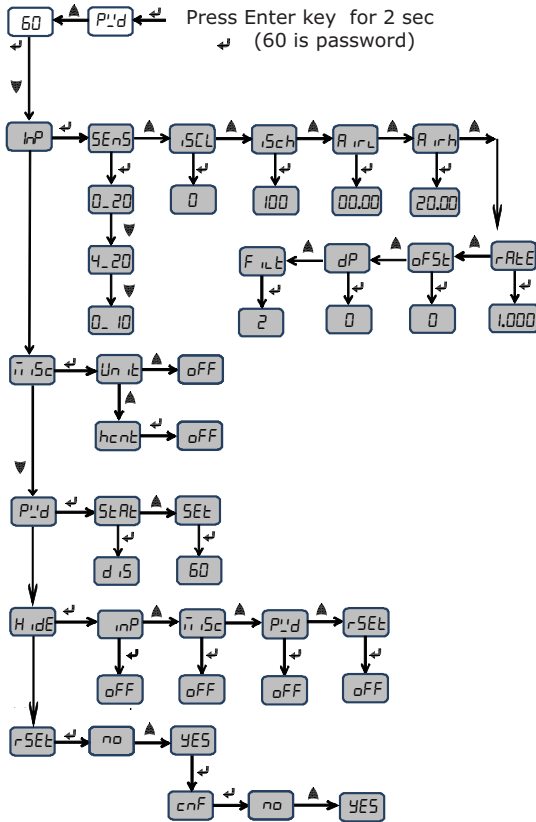
**Terminal Details:**

Ø4.....5.0mm Combi Head Bit./Flat	0.5 N.m (4.4lb.in) to 0.7N.m (6.2lb.in)
	2 x 2.5 mm <sup>2</sup> Solid / Standard Wire
AWG	1 X 20 to 12

**FUNCTION MENU:**



## Cat\_id: PIA200



## DESCRIPTION & DEFINATION:

**Rate (rATE) & Offset (oFSt):** This menu is used to adjust the PV value in cases where it is necessary for PV value to agree with another recorder or indicator, or when the sensor cannot be mounted incorrect Location.

E.g. Sensor is mounted at a location, where less than actual temperature is observed.

Let us say actual temperature is 550 and sensor is located to such a location where the temperature is 500. This device will measure 500 and show the value accordingly. To observe the actual temperature, user should add offset of 50 to measured temperature value. i.e.  $500 + 50 = 550$ . Now device will show 550 instead of 500, Rate can be applied as slope; range is from 0.001 to 2.000. Display temp. =  $rATE * \text{Measured Temp} + oFst$

**HOURLY METER:** It is the number of hour/day that the instrument is turned ON. When the DUT reached to the threshold value (Programmable) the display will indicate an message of "INSP"(Inspection), to indicated that set threshold is completed and can start his necessary action. After acknowledge the hour meter will continue to record the hours till new threshold is set. If counter threshold is edited then it will reset the current count.

**UNIT (Unit):** It is used to select day or hour.

**HOURLY METER THRESHOLD (hcnb):** It is used to set the threshold.

**ANALOG INPUT & DISPLAY SETTING** E.g. We have few setting in Inp menu.

Sens = 0\_10 (0V to 10V) Airl = 1, Alrh = 10, (Selectable high & low value for analog input) ISCL = 0, ISch = 99 (Selectable high & low value for Display scaling value)

When analog input voltage is 1V then value on display will be 0.

When analog input voltage is 10V, then value on display will be 99. This value will vary from 0 to 99 according to analog input.