MULTISPAN

Product Manual

PID CONTROLLER

PID 4201-1C

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Technical Specification

Model	PID-4201-1C
Display	UPPER:- 4 Digit 7 seg 0.56", Red LED Display LOWER:- 4 Digit 7 seg 0.33", green LED Display
Size (mm)	48 (H) X 48 (W) X 95 (D) mm
Panel Cutout	45 X 45 mm
Input	J ,K ,PT,PT.1
Range	Temperature:J type: 0 to 600°C/ K type: 0 to 1200°C PT type: -99 to 400°C /PT.1:- -99.9 to 400.0 Ampere : 0.0 to 30.0 A (1 CT)
Control Action	PID/ ON-OFF (selectable)
Output	1relay parallel SSR,230V AC,5A;SSR,12V DC,30mA
Power Supply	100 to 250V AC,50/60 Hz, Approx 3VA
Protection Level	IP-65 (Front side) As per IS/IEC 60529 : 2001
Operating Temperature	0°C To 55°C
Relative Humidity	Up to 95% RH Non Condensing

Working :-

1) If Sensor Connection is reverse, Display will show "5rE" message.
2) If Sensor is not connected, Display will show OPEn message.
3) While pressing ENT key for 5 Sec. Lower Display start scrolling and show set Temperature (For Exa. ' 150',150° is setpoint) and ampere (For Exa. 'A 08.0', 8 Amp is actual current).
4) If ENT key press for 5 Sec. Then lower Display hold on any one value, To show other value press ENT key.
5) Every time the instrument is turned ON, Following pattern will be displayed

POWER ON

All digit segment will be turned ON for 1 sec

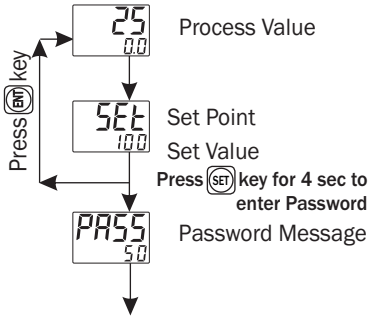
Previous or default sensor input and control action will be displayed for 2 sec

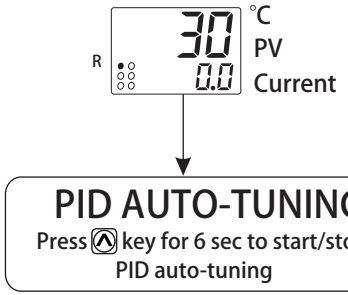
Process Value
Current

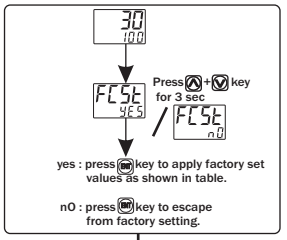
Key Operation

1) Press (SET) key to go parameter setting.
2) Press (∧) or (∨) key to change value or to select option.
3) Press (SET) key to save change in setting
4) **Press (∧) key for 6 sec to start/stop PID AUTO TUNING**
5) Press (∧) + (∨) key for 3 sec to go to factory setting mode.

Set Point Setting



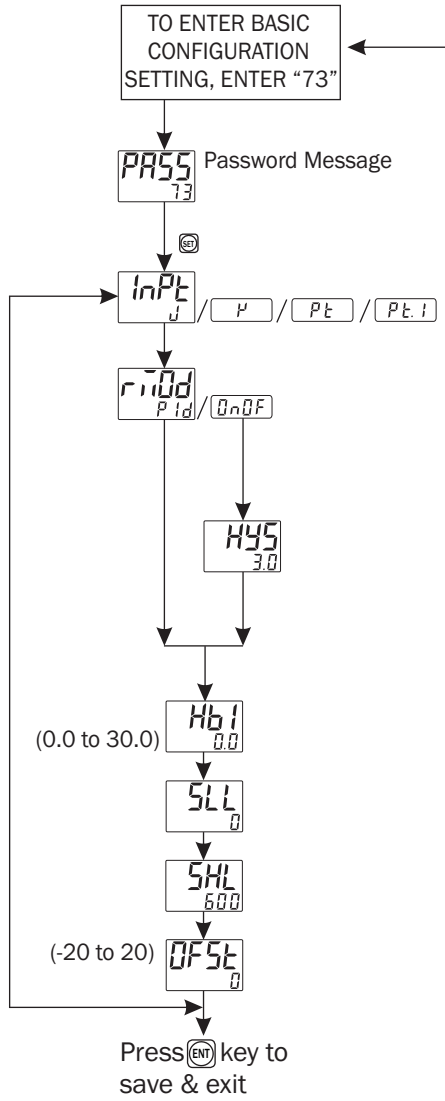




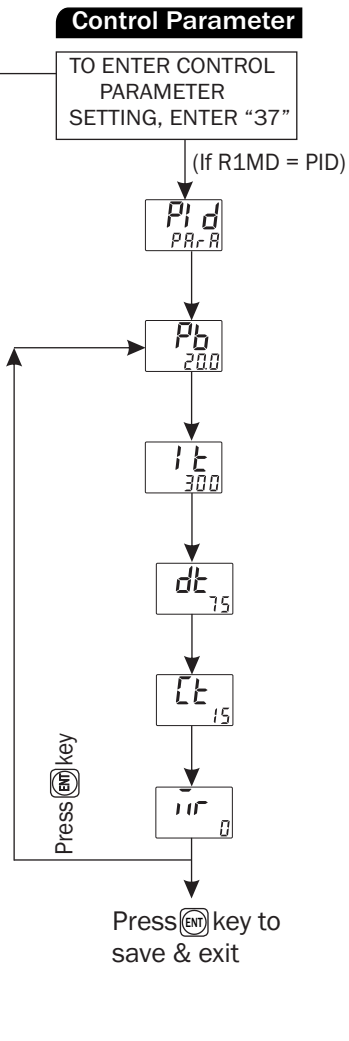
Factory Setting

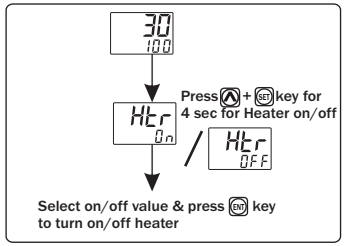
FACTORY SETTING		
SR	PARAMETER	VALUES
1	PB	20.0
2	IT	300
3	DT	75
4	CT	15 SEC.
5	MR	0°C
6	OFFSET	0°C
7	HYSTERESIS	3°0

Basic Configuration



Control Parameter



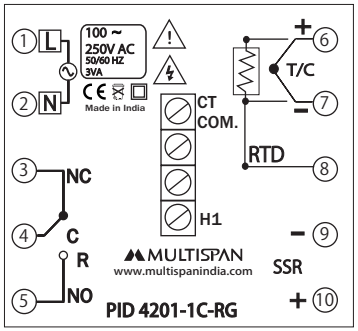


Sr.	Parameter	Description
1	InPt	Input
2	J	J
3	K	K
4	Pt	PT
5	Pt.1	PT.1
6	rMOd	Relay Mode
7	PId	PID Action
8	OnOF	ON-OFF Action
9	HYS	Hysterisis
10	Hbl	Heater break indicator
11	On	ON
12	OFF	OFF
13	Pb	Proportional Band for PID Action
14	It	Integral Time for PID Action
15	dt	Derivative Time for PID Action
16	Ct	Cycle Time for PID Action
17	PASS	Password
18	SHL	Set High Limit
19	SLL	Set Low Limit
20	OFCt	Offset
21	Htr	Heater

Range of the parameter

Sr	Parameter	Range for J,K,PT
1	PB	0.0 to 999.9
2	IT	0 to 9999
3	DT	0 to 9999
4	CT	4 sec to 99 sec
5	MR	-9 to +9
6	Off-set correction	-20°C To 20°C
7	HYS	1 to 100

Connection Diagram



Safety Precautions

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment .

=> Read complete instructions prior to installation and operation of the unit.

⚠ **WARNING** : Risk of electric shock.

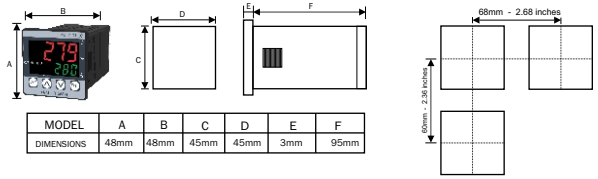
Warning Guidelines

1) To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
2) To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
3) Cable used for connection to power source, must have a cross section of 1mm^2 or greater. These wires should have insulations capacity made of at least 1.5kV.
4) When extending the thermocouple lead wires, always use thermocouple compensation wires for wiring for the RTD type, use a wiring material with a small lead resistance (5Ω max per line)and no resistance differentials among three wires should be present.
5) A better anti-noise effect can be expected by using standard power supply cable for the instrument.

Installation Guidelines

1) This equipment, being built-in-type, normally becomes a part of main control panel and such in case the terminals do not remain accessible to the end user after installation and internal wiring.
2) Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
3) Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
4) Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

Mechanical Installation



MODEL	A	B	C	D	E	F
DIMENSIONS	48mm	48mm	45mm	45mm	3mm	95mm

1) Prepare the panel cutout with proper dimensions as show above.
2) Fit the unit into the panel with the help of clamp given.
3) The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process by products.
4) Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1.2 N.m.
5) Do not connect anything to unused terminals.

Maintenance

1) The equipment should be cleaned regularly to avoid blockage of ventilating parts.
2) Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
3) Fusible resistor must not be replaced by operator.

Product improvement and upgrade is a constant procedure. So for more updated operating information and support, Please contact our helpline : +91-9978991474/76/82 or Email at service@multispanindia.com Ver: 1912