MULTISPAN

DUAL PROCESS INDICATOR
DPI 1824

TECHNICAL SPECIFICATION

INPUT SPECIFICATION

Input Types (Dual)	J/K/RTD/RTD.1 0-10V DC,0-20mA DC,4-20mA DC
Resolution	Decimal point selectable: 0.1, 0.01, 0.001, 0001
Range	-999 to 9999 (For Analog I/P) J : 0 to 600°C K : 0 to 1200°C RTD : -99 to 400°C RTD.1 : -99.9 to 400.0°C
Indication Accuracy	±1% FSD ± 1 digit (FSD - Full Scale Deflection)

DISPLAY AND KEY

Display	UPPER: 4 digit, 7 seg, 0.8" RED LOWER:4 digit, 7 seg, 0.8" WHITE
Keys	SET,UP,DOWN,ENT

DIMENSION

Size	101 (H) x 101 (W) x 54 (D) mm
Panel Cutout	92 (H) x 92 (W) mm

POWER SUPPLY

Supply Voltage	100 to 270V AC, 50-60Hz
Power Consuption (VA Rating)	9VA @ 230V AC MAX

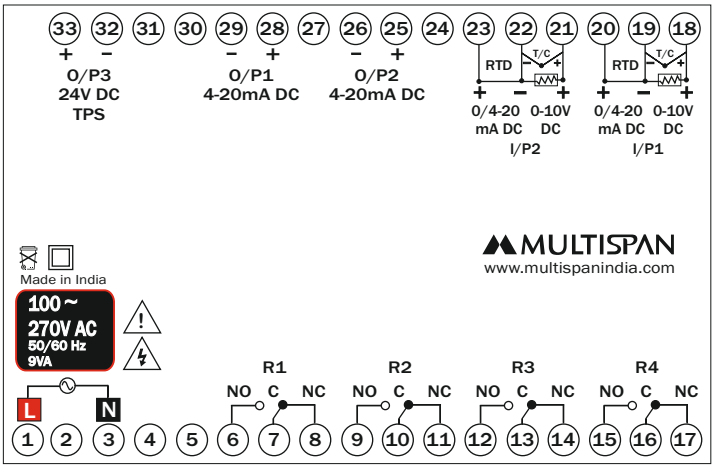
OUTPUT SPECIFICATION

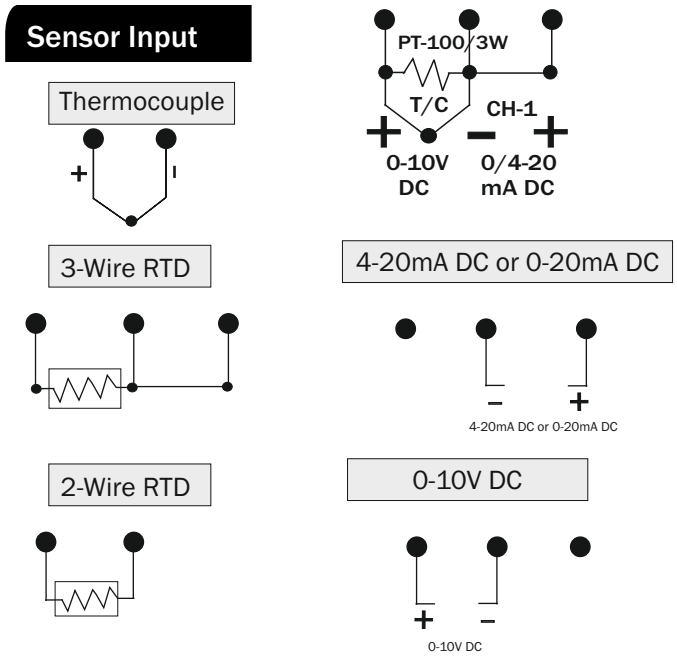
Relay Output	
Relay	4 nos.
Relay Type	1 C/O (NO-C-NC)
Rating	5A, 230V AC/30 V DC
Analog Output 1 & 2	
4 to 20mA DC	
Transmitter supply	
24V DC	

ENVIRONMENT CONDITION

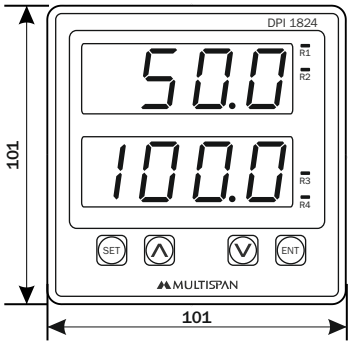
Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level	IP-65 (Front side) As per IS/IEC 60529 : 2001

TERMINAL CONNECTION

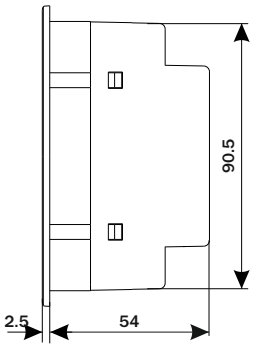




MECHANICAL INSTALLATION



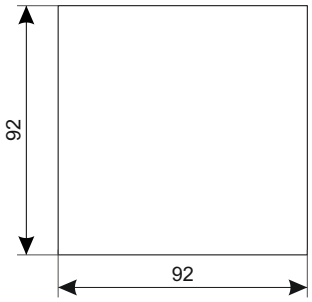
FRONT VIEW



RIGHT SIDE VIEW

All dimensions are in mm

Panel Cutout



FRONT PANEL DESCRIPTION

FUNCTION	SYMBOL
To Enter into parameter menu & set parameters value.	SET
To Increment parameter value.	∧
To decrement parameter value.	∨
To Save & Exit From Parameter Menu.	ENT

INSTALLATION GUIDELINES

1. This equipment, being built-in-type, normally becomes a part of main control panel and in such 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 GUIDELINES

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.

⚠ SAFETY PRECAUTION

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

⚠ WARNING : Risk of electric shock.

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 or greater. These wires should have insulations capacity made of at least 1.5kV.
4. A better anti-noise effect can be expected by using standard power supply cable for the instrument.

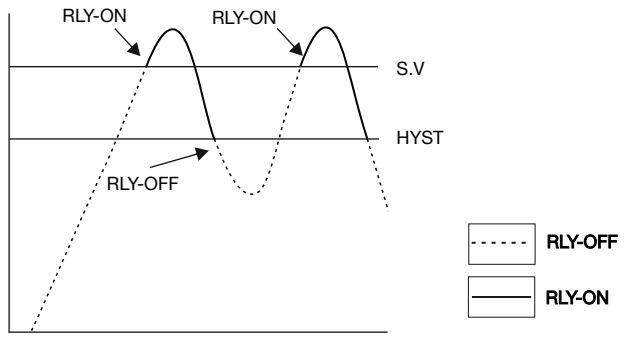
ERROR DISPLAY

When an error has occurred the display indicates error codes as given below.

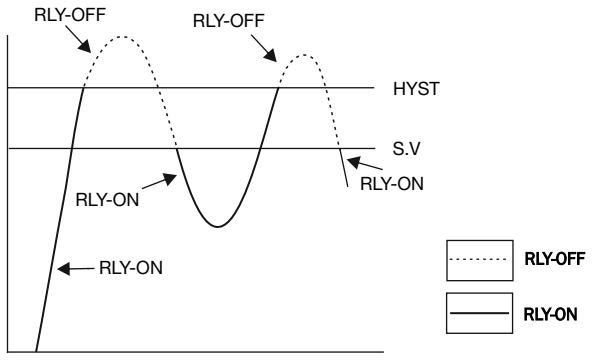
ERROR	MEANING
OPEn	Sensor is not connected Over range condition or sensor break
SrE	Sensor connection is reversed
OUEr	Over range condition For 0 to 10V DC exceed 10V DC For 4 to 20mA DC exceed 20mA DC
LOG	When I/P is 4 to 20mA DC is selected, than I/P signal is lower than SLL (0-5mA)

ALARM FUNCTION

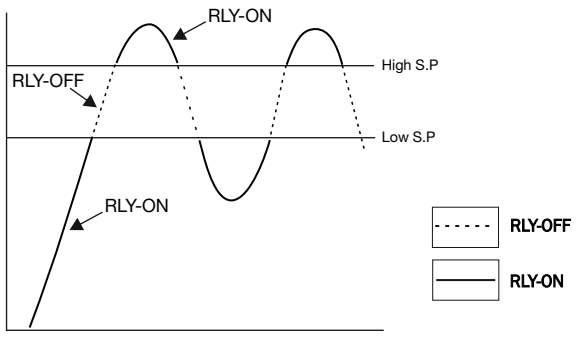
HIGH ALARM:



LOW ALARM:

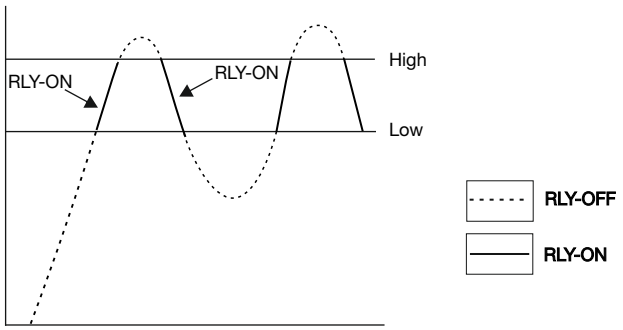


OUTBAND ALARM



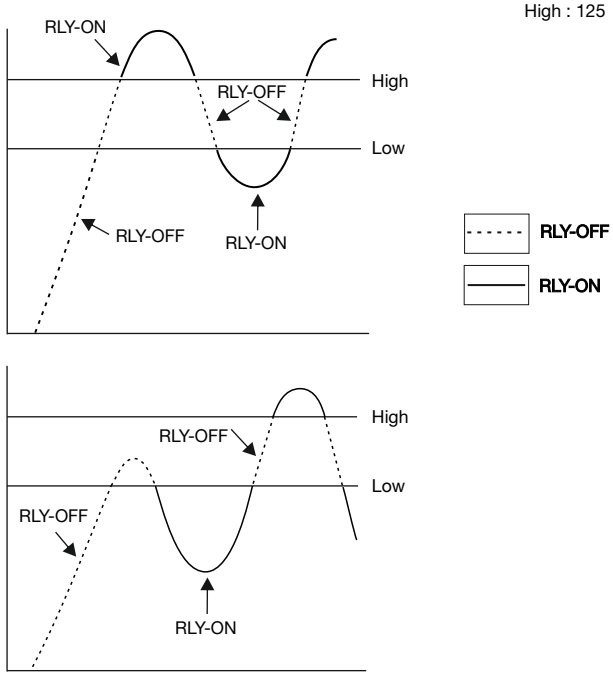
INBAND ALARM

Low : 75
High : 125

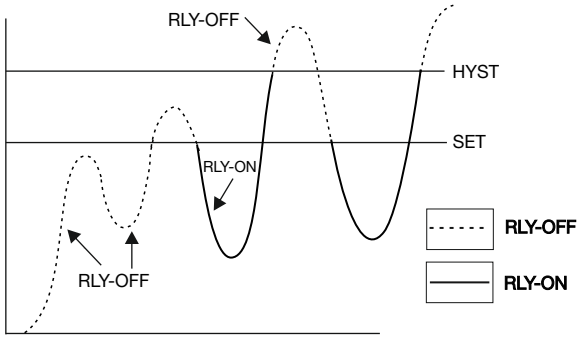


ABSOLUTE OUTBAND ALARM

Low : 75
High : 125



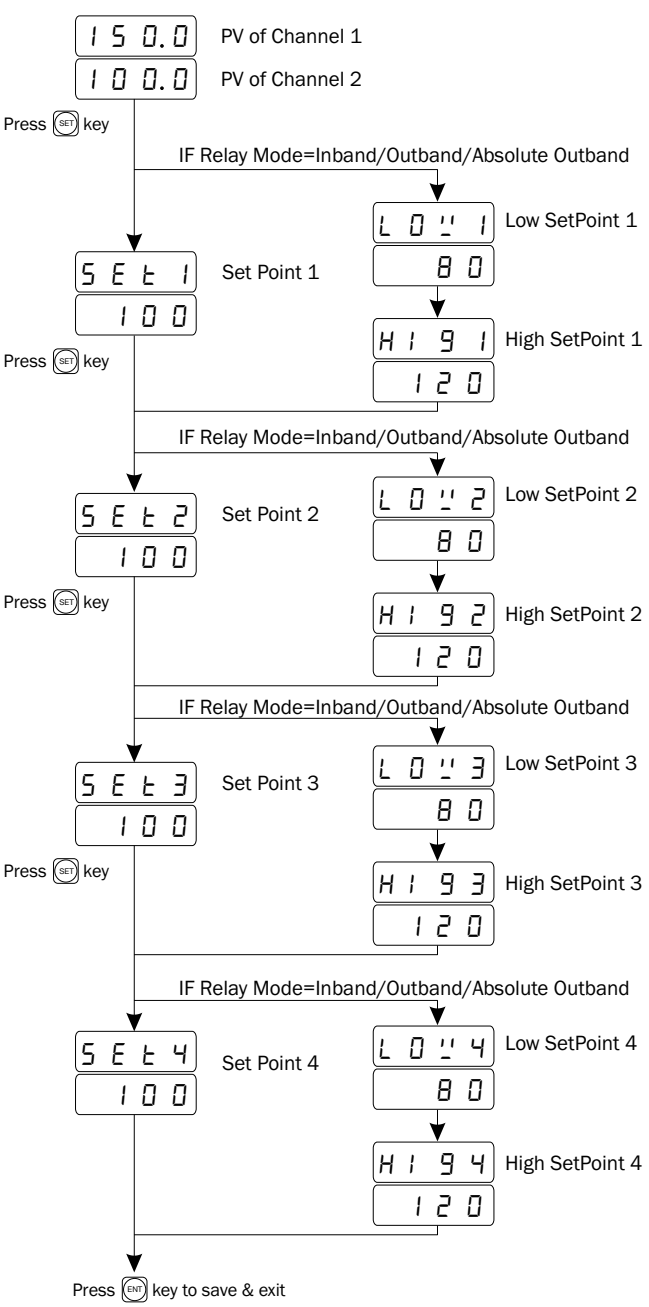
ABSOLUTE LOW ALARM



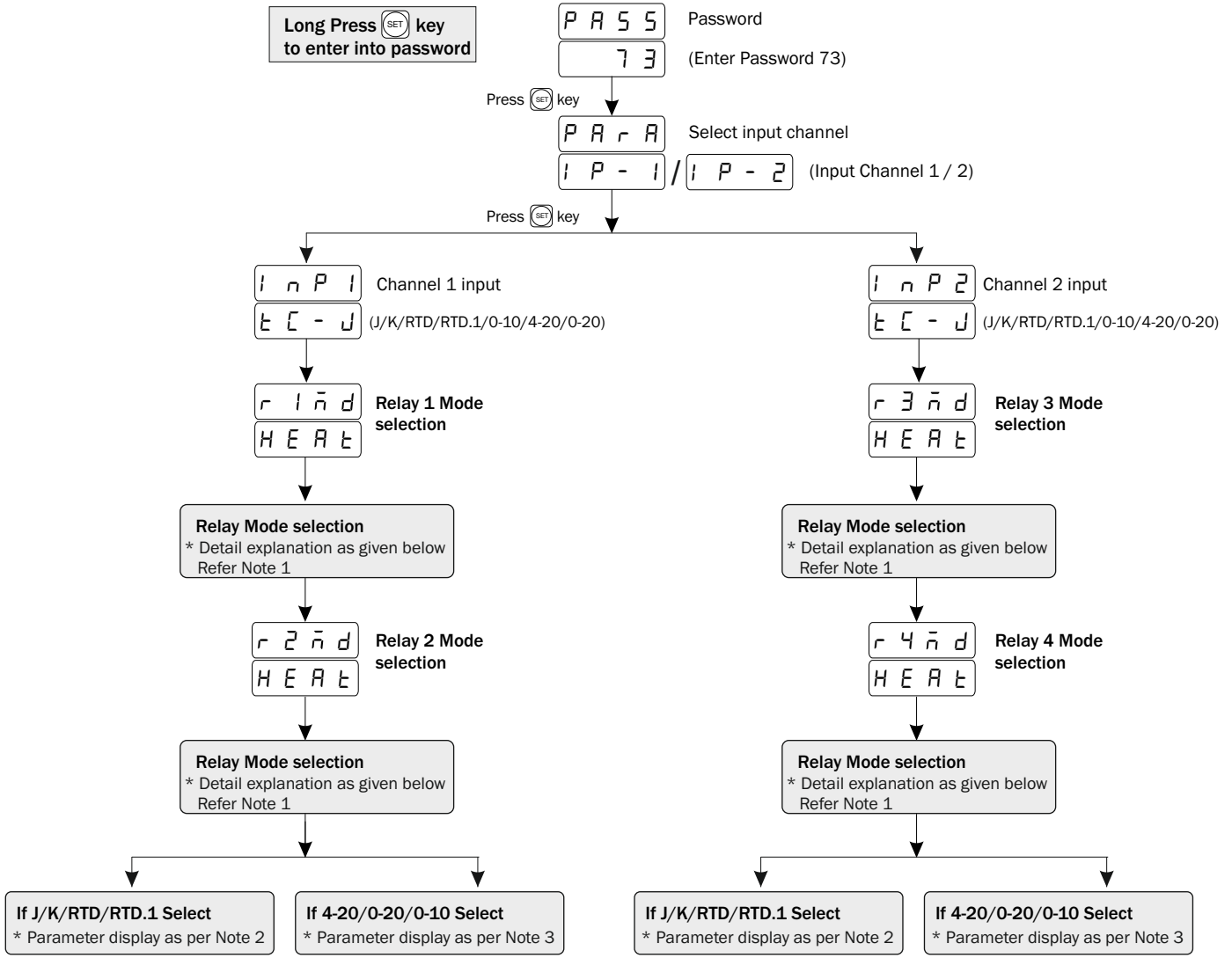
RANGE FOR CONTROL PARAMETER

Sr.	Parameter	Range for J,K,RTD	Range for RTD.1 Sensor	Range for Analog Input	
1	HYS 1,2,3,4	1 to 100°C	0.1 to 100.0°C	DP 3	0.001 to 0.999
				DP 2	0.01to 9.99
				DP 1	0.1 to 99.9
				DP 0	1 to 999
2	ALT 1,2,3,4	0 to 999 Sec	0 to 999 Sec	0 to 999 Sec	
3	Relay Delay Time 1,2,3,4	0 to 999 Sec	0 to 999 Sec		
4	SLL 1 & 2	J : 0 to 600°C K : 0 to 1200°C RTD : -99 to 400°C	-99.9 to 400.0°C	-999 to 9999	
5	SHL 1 & 2	J : 0 to 600°C K : 0 to 1200°C RTD : -99 to 400°C	-99.9 to 400.0°C	-999 to 9999	
6	LRG 1 & 2	-	-	-999 to 9999	
7	HRG 1 & 2	-	-	-999 to 9999	
8	OFST 1 & 2	-20 to 20°C	-20.0 to 20.0°C	DP 3	-0.999 to 0.999
				DP 2	-9.99 to 9.99
				DP 1	-99.9 to 99.9
				DP 0	-999 to 999
9	CRFC 1 & 2	-	-	DP 3	-0.999 to 0.999
				DP 2	-9.99 to 9.99
				DP 1	-99.9 to 99.9
				DP 0	-999 to 999
10	ASL 1 & 2	-	-	0.0 to 5.0mA	
11	RTL 1 & 2	J : 0 to 600°C K : 0 to 1200°C RTD : -99 to 400°C	-99.9 to 400.0°C	-999 to 9999	
12	RTH 1 & 2	J : 0 to 600°C K : 0 to 1200°C RTD : -99 to 400°C	-99.9 to 400.0°C	-999 to 9999	

SET POINT SETTING



PARAMETER SETTING

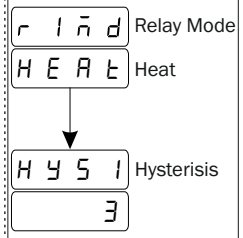


Note 1 : Relay Mode Selection

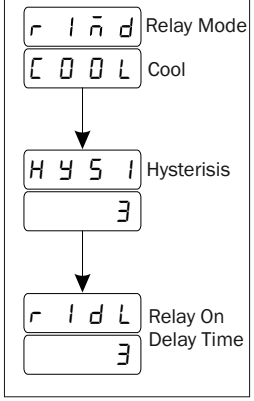
Relay Mode selection

Heat (HEAt)
Cool (COOL)
Low Alarm (LO.)
High (HIGH)
Outband (Ot- b)
Inband (In- b)
Absolute Low (Ab- L)
Absolute Outband (Ab- O)
OFF (OFF)

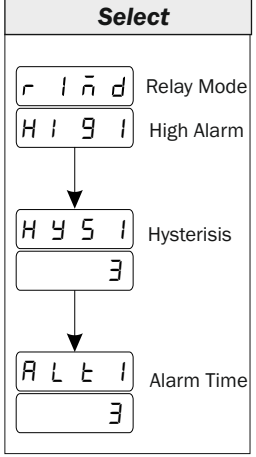
Heat Select



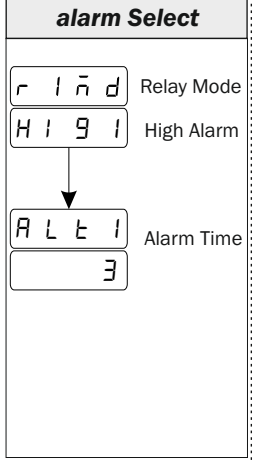
Cool Select



High/Low/ Absolute Low alarm Select

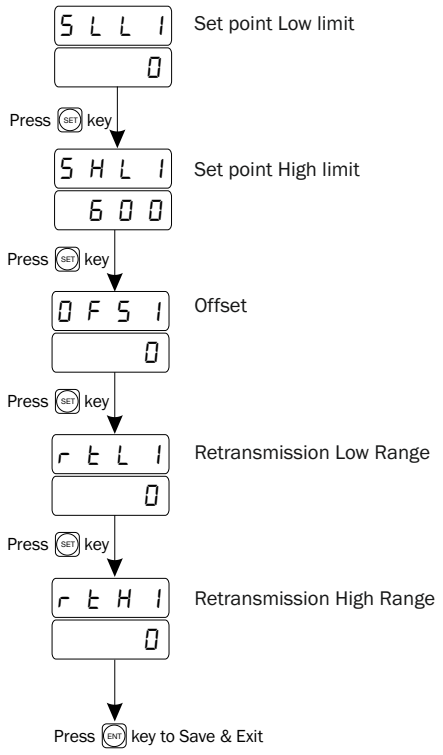


Inband/Outband/ Absolute Outband alarm Select



*Note : Parameter number is depend on relay number.
Example : If we set parameter of relay 1 mode , then its other parameter also have same number as Hysteresis 1, or alarm 1.

Note 2 : IF J/K/RTD/RTD.1 Select



Note 3 : IF 4-20/0-20/0-10 Select