

KEYS

S3 – DEC Key
 S2 – INC Key
 S1 – SET key
 R1 – Relay1 Status
 PWR – Relay2 Status

CONTROL SETTINGS MODE

All settings to be done using Increment (↑) and Decrement (↓) keys.
 Press ENTER key to save the parameters.

KEY	DISPLAY	ALTERNATE DISPLAY	FUNCTION
POWER ON	K		Initialization of the controller, shows type i/p sensor type
	Process Value	Set Value	The display shows process value corresponds to input or 'OPEN' if sensor open or 'IPLO' below process value is below lower range or 'IPHI' if process value is above than higher range.
SET	St1	(Preset Value)	The Set-point of Relay 1 is displayed with the factory preset value. Use increment (↑) & decrement (↓) keys to change set point. Press ENTER key to save the parameter.
SET	St2	(Preset Value)	The Set-point of Relay 2 is displayed with the factory preset value . Use increment (↑) & decrement (↓) keys to change set point. Press ENTER key to save the parameter.
SET	Process Value		The instrument comes out of control setting mode and display process value corresponds to the input feed.

PARAMETER SETTINGS MODE

All settings to be done using Increment (↑) and Decrement (↓) keys.

KEY	UPPER DISPLAY	LOWER DISPLAY	FUNCTION
POWER ON	K		Initialization of the controller, shows type i/p sensor type
	Process Value	Set Value	The display shows process value corresponds to input or 'OPEN' if sensor open or 'IPLO' below process value is below lower range or 'IPHI' if process value is above than higher range.
Press and hold the Increment (↑) Decrement (↓) keys for 4 seconds	SEn	K	Options are as follows: - T/C– S ----- Thermocouple type S sensor T/C– Γ ----- Thermocouple type R sensor T/C– † ----- Thermocouple type K sensor T/C– J ----- Thermocouple type J sensor Γtd 1 ----- 1° RTD Pt-100 [three-wire] sensor Γtd.1 ----- 0.1° RTD Pt-100 [three-wire] sensor AnLG ----- 4 to 20mADC I/P Press ENTER key to save the parameter.
SET	dP	1000	Set the Decimal Position. [Options are : 0 / 1 / 2 / 3]. These numbers indicate the position of the Decimal with respect to the Least Significant Digit (right-most digit). e.g., 0 indicates No Decimal Point. (For Current & Voltage Input only) Press ENTER key to save the parameter.
SET	IPC	0000	Set the input correction which directly add or subtract from display reading if necessary. This is offset set count to displayed value. You can set from -999 to 9999 counts. Press ENTER key to save the parameter.
SET	LO †	nO	This is lock setting for Auto tune PID Control. In Unlock condition you can auto tune PID controller directly from Decrement switch. nO – Auto Tune in PID Control is unlocked Yes – Auto Tune in PID Control is Locked Press ENTER key to save the parameter.

SET	ΓnGL	0000	Lower range used for 4 to 20mA Retransmission Output & Setting limits for Set Points. T/C- S ----- 0 to (rngl - 1) T/C- Γ ----- 0 to (rngl - 1) T/C- † ----- 0 to (rngl - 1) T/C- J ----- 0 to (rngl - 1) Γtd 1 ----- -99 to (rngl - 1) Γtd.1 ----- -99.9 to (rngl - 1) AnLG ----- -999 to (rngl - 1) Press ENTER key to save the parameter.
SET	ΓnGH	1200	Higher range used for 4 to 20mA Retransmission Output & Setting limits for Set Points. T/C- S ----- (rngl + 1) to 1750 T/C- Γ ----- (rngl + 1) to 1750 T/C- † ----- (rngl + 1) to 1200 T/C- J ----- (rngl + 1) to 750 Γtd 1 ----- (rngl + 1) to 400 Γtd.1 ----- (rngl + 1) to 400.0 AnLG ----- (rngl + 1) to 9999 Press ENTER key to save the parameter.
SET	C - OP	Cnt Γ	4 to 20mA Output Type Selection. Cnt Γ - Control PID Output temP - Retransmission Output Press ENTER key to save the parameter.
SET	Con1	PId	Type of Control O/P1. Options are: - HEt - Heating Control Logic COL - Cooling Control Logic PId - PID Control OFF - No Control Press ENTER key to save the parameter.
SET	HY1	[User Setting]	Hysteresis in temperature to be set for control action of Relay-1 (between 0001 to 0100). Hysteresis for each Relay may be set independently. (Option available for Heating, Cooling Control Only) Press ENTER key to save the parameter.
SET	dL1	[User Setting]	Hysteresis in time to be set for control action of Relay-1 (between 0001 to 0254 seconds). (Option available for Heating, Cooling Control Only) Press ENTER key to save the parameter.
SET	CY-t	[User Setting]	Set the Cycle Time for PID control action. The Cycle Time can be set from 0001 to 0060 seconds. [Default Value is 10Seconds] (Option available for PID Control Only) Press ENTER key to save the parameter.
SET	P-G	[User Setting]	Set the Proportional Gain for PID Control Action. The Proportional Gain can be set from 000.0 to 010.0. [Default Value is 0000] (Option available for PID Control Only) Press ENTER key to save the parameter.
SET	In-t	[User Setting]	Set the Integral Gain for PID Control Action. The Integral Gain be set from 000.0 to 010.0. [Default Value is 000.8] (Option available for PID Control Only) Press ENTER key to save the parameter.
SET	dΓ-t	[User Setting]	Set the Derivative Gain for PID Control Action. The Integral Gain be set from 000.0 to 010.0. [Default Value is 010.0] (Option available for PID Control Only) Press ENTER key to save the parameter.
SET	Con2	HEt	Type of Control O/P2. Options are: - HEt - Heating Control Logic COL - Cooling Control Logic OFF - For Single Relay Operation Press ENTER key to save the parameter.
SET	HY2	[User Setting]	Hysteresis to be set for control action of Relay-2 (between 0001 to 0100). Hysteresis for each Relay may be set independently. Press ENTER key to save the parameter.
SET	ID	0001	Slave ID of unit. Use increment (↑) & decrement (↓) keys to change the slave ID.(0000 to 0254) Press ENTER key to save the parameter.
SET	Process Value		The instrument come out of control setting mode and display process value corresponds to input feed.

RETRANSMISSION O/P CALIBRATION MODE

Connect current multi-meter across 4 to 20mA output terminals. Press SET Key at power initialization of the controller to enter into retransmission output calibration mode.

KEY	DISPLAY	ALTERNATE DISPLAY	FUNCTION
POWER ON	K		Initialization of the controller, shows type i/p sensor type
SET	ZeFO	(Preset Value)	Use increment (↑) & decrement (↓) keys to get 4mA on the multi-meter. Press ENTER to save zero calibration point of retransmission o/p.
SET	Span	(Preset Value)	Use increment (↑) & decrement (↓) keys to get 20mA on the multi-meter. Press ENTER to save span calibration point of retransmission o/p.
SET	Repeat above procedure until you get correct output in both the sequences.		
After finishing the calibration, leave the controller in this mode. After 30 seconds the controller will automatically Exit to the normal mode.			

DISPLAY MESSAGES

The explanation of the various Display Messages that would be visible on the instrument

DISPLAY	DESCRIPTION
IPLO	Input signal below lower range setting
IPHI	Input Signal higher than higher range setting
OPEn	No Signal or I/P Wire Break or Sensor Burn Out
tUnE	Instrument is in Auto Tune PID Control

TERMINAL CONNECTION

Terminal No. 1 – NA
 Terminal No. 2 – RTD3(W)/TC+
 Terminal No. 3 – RTD2(W)/TC-/ mA+
 Terminal No. 4 – RTD1(R)/mA-
 Terminal No. 5,6,7,8,9- NA
 Terminal No. 10 – Line
 Terminal No. 11 – Neutral
 Terminal No. 12 – EARTH
 Terminal No. 13 – SSR +
 Terminal No. 14- SSR -
 Terminal No. 15- NA
 Terminal No. 16- + BUZ
 Terminal No. 17- - BUZ
 Terminal No. 18 - NA