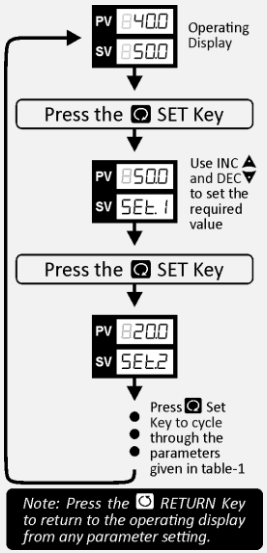
ProCON ALPHA

PROCESS CONTROLLER OPERATION MANUAL

Surya Insts

LEVEL 1:



LEVEL 2:

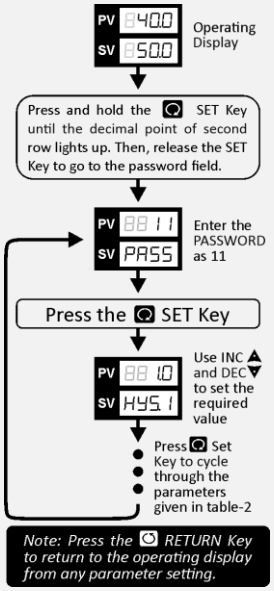


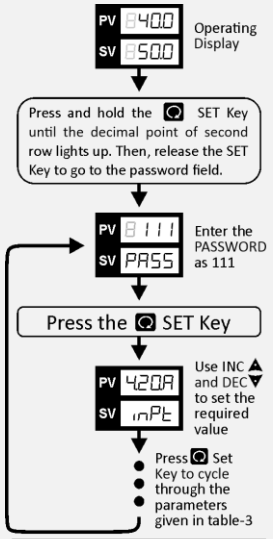
TABLE 1: LEVEL 1 PARAMETERS – SET POINTS

PARAMETER		RANGE & DEFAULT	DESCRIPTION
SYMBOL	NAME		
SEt. 1	Set Point 1	SP.LL ≤ SET.1 ≤ SP.HL Default: 50	Set Point 1 can be set between set point low limit (SP.LL) & set point high limit (SP.HL).
SEt.2	Set Point 2	SP.LL ≤ SET.2 ≤ SP.HL Default: 20	Set Point 2 can be set between set point low limit (SP.LL) & set point high limit (SP.HL).
SEt.3	Set Point 3	SP.LL ≤ SET.3 ≤ SP.HL Default: 20	Set Point 3 can be set between set point low limit (SP.LL) & set point high limit (SP.HL).
SEt.4	Set Point 4	SP.LL ≤ SET.4 ≤ SP.HL Default: 20	Set Point 4 can be set between set point low limit (SP.LL) & set point high limit (SP.HL).

TABLE 2: LEVEL 2 PARAMETERS – OUTPUT PARAMETERS

PARAMETER		RANGE & DEFAULT	DESCRIPTION
SYMBOL	NAME		
HYS. 1	Hysteresis 1	0.1 ≤ HYS.1 ≤ 25.0 Default: 1.0	Hysteresis can be set between 0.1 to 25.0
HYS.2	Hysteresis 2	0.1 ≤ HYS.2 ≤ 25.0 Default: 1.0	Hysteresis can be set between 0.1 to 25.0
HYS.3	Hysteresis 3	0.1 ≤ HYS.3 ≤ 25.0 Default: 1.0	Hysteresis can be set between 0.1 to 25.0
HYS.4	Hysteresis 4	0.1 ≤ HYS.4 ≤ 25.0 Default: 1.0	Hysteresis can be set between 0.1 to 25.0
o 1Fn	Output 1 Function	Options: 9 Modes Default: Heat	See Output Function Table for selecting desired output mode
o2Fn	Output 2 Function	Options: 9 Modes Default: Cool	See Output Function Table for selecting desired output mode
o3Fn	Output 3 Function	Options: 9 Modes Default: Alarm High	See Output Function Table for selecting desired output mode
o4Fn	Output 4 Function	Options: 9 Modes Default: Alarm Low	See Output Function Table for selecting desired output mode

LEVEL 3:



LEVEL 4:

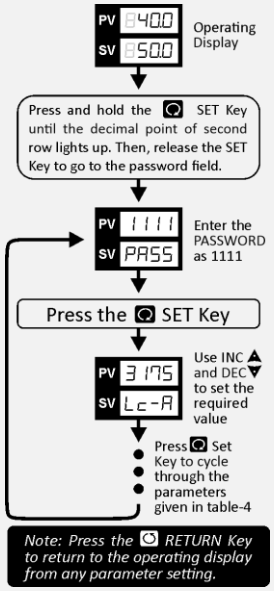


TABLE 3: LEVEL 3 PARAMETERS – INPUT PARAMATERS

PARAMETER		RANGE & DEFAULT	DESCRIPTION
SYMBOL	NAME		
inPt	Input Type	4.20.A – 4-20 mA 0.20.A – 0-20 mA 0.5.V – 0-5 V 0.10.V – 0-10V	It is a **read only** display. It describes the type of input. The input types available are: 4-20 mA, 0-20 mA, 0-5 V, 0-10 V, etc. Other inputs provided on request.
dP	Decimal Point	0 ≤ dP ≤ 3 Default: 1	The display resolution can be selected between 0 to 3 decimal points.
Sh iF	Shift/Offset	-50.0 ≤ Shif ≤ 50.0	It is used to correct for sensor errors.
SPLL	Set Point Low Limit	Lo.Sc ≤ SP.LL ≤ Hi.Sc Default: Lo.Sc	This is safety feature. It is used for limiting the lowest value of the SET POINT that can be set by the operator.
SPHL	Set Point High Limit	Lo.Sc ≤ SP.HL ≤ Hi.Sc Default: Hi.Sc	This is safety feature. It is used for limiting the highest value of the SET POINT that can be set by the operator.
Lo.Sc	Low Scale	-199.9 ≤ Lo.Sc ≤ 25.0 Default: 0.0	It is the value to be displayed for the low range of input.
H iSc	High Scale	25.0 ≤ Lo.Sc ≤ 999.9 Default: 100.0	It is the value to be displayed for the high range of input.

TABLE 4: LEVEL 4 PARAMETERS – CALIBRATION

PARAMETER		RANGE & DEFAULT	DESCRIPTION
SYMBOL	NAME		
Lc-A	Low Range Calibration	Read Only	Instrument is shipped with factory calibration. Contact Supplier for calibration procedure if required.
Hc-A	High Range Calibration	Read Only	Instrument is shipped with factory calibration. Contact Supplier for calibration procedure if required.

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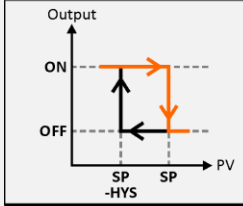
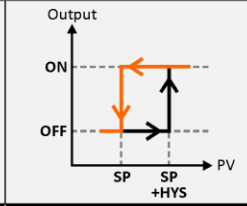
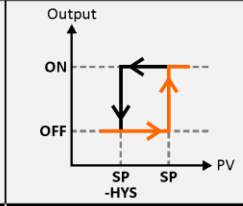
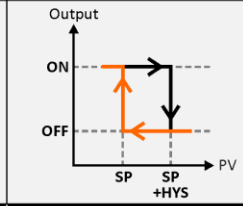
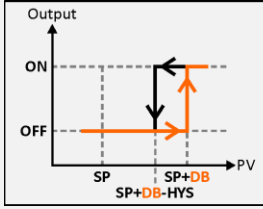
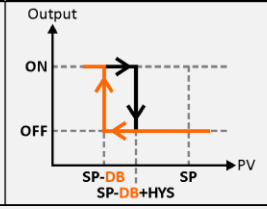
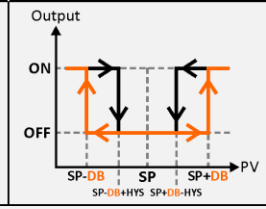
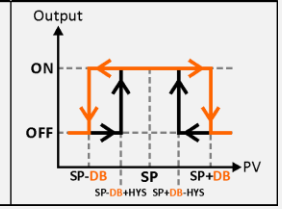
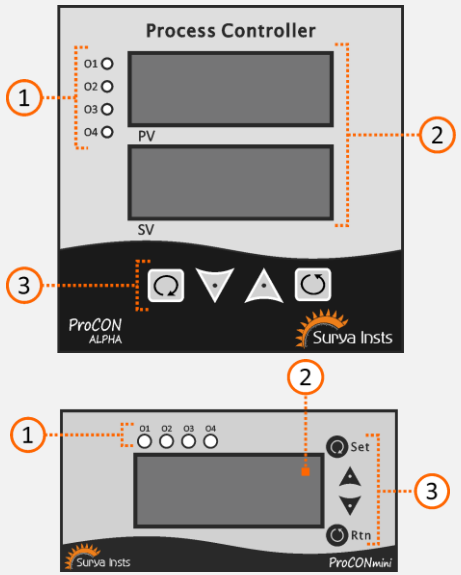
OUTPUT FUNCTION TABLE:

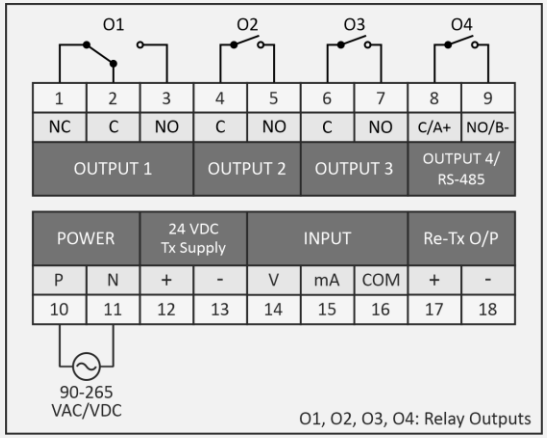
1. HEAT/HUMIDIFIER/ REVERSE	2. COOL/DE-HUMIDIFIER/ DIRECT	3. ALARM HIGH	4. ALARM LOW
			
5. DEVIATION HIGH	**6. DEVIATION LOW**	**7. DEVIATION BAND HIGH**	**8. DEVIATION BAND LOW**
			

INSTRUMENT INTERFACE DETAILS:



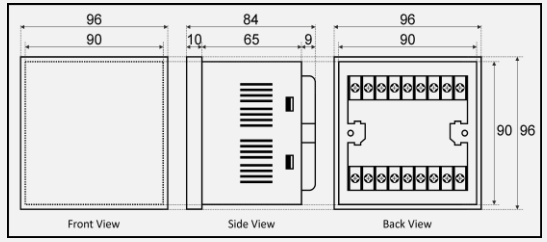
#	GROUP	SYMBOLS	DESCRIPTION
1	O/P Relay Status Indicating LEDS	O1	Output 1 Relay ON
		O2	Output 2 Relay ON
		O3	Output 3 Relay ON
		O4	Output 4 Relay ON
2	Display (4 x 7 Segment RED LED)	PV	Process Value: Displays the Sensor Values & Parameters
		SV	Set Value: Displays the Set Point Value
3	Keys		SET/ENTER Key
			DECREMENT Key
			INCREMENT Key
			RETURN Key

TERMINAL DIAGRAM:

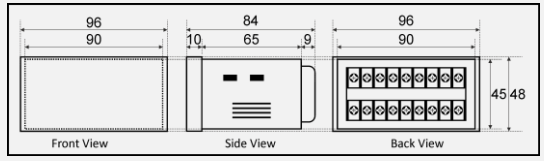


DIMENSIONS:

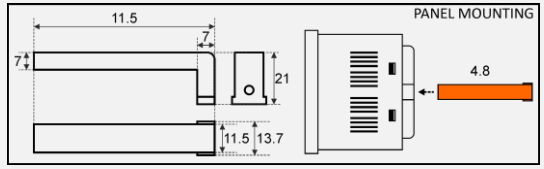
ProCON ALPHA:



ProCON mini:



MOUNTING:



FUNCTION	PIN #	PIN NAME	
Relay Output 1 (O1)	1	NC	
	2	C	
	3	NO	
Relay Output 2 (O2)	4	C	
	5	NO	
Relay Output 3 (O3)	6	C	
	7	NO	
Relay Output 4 (O4)/RS-485	8	C	A+
	9	NO	B-
Power	10	Phase (P)	
	11	Neutral (N)	
24 VDC Transmitter Supply (Drives Load up-to 45 mA)	12	+	
	13	-	
INPUT	14	V	
	15	mA	
	16	Common	
Re-Transmission Output	17	+	
	18	-	

ORDERING INFORMATION:

ProCON S-A-B-C-D-E

A	Input Type	B	No. of Outputs
1	4-20 mA	0	No Relay Output
2	0-20 mA	1	1 Relay Output
3	0-5 V	2	2 Relay Outputs
4	0-10 V	3	3 Relay Outputs
5	1-5 V	4	4 Relay Outputs
6	2-10 V		

C	Re-Transmission O/P	D	Communication
0	No Re-Tx O/P	0	None
1	Re-Tx O/P Present	1	RS-485
		2	TTL Communication

E	Transmitter Supply	S	Size
0	No Tx. Supply	ALPHA	96 * 96
1	24 V Tx. Supply	mini	48 * 96

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