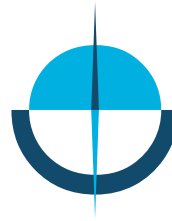# ProceX

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CE

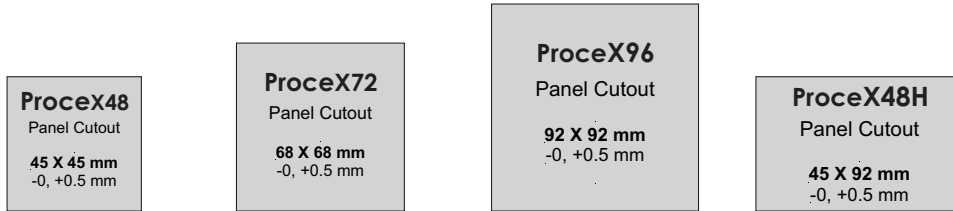User Manual

CONTENTS

<div align="center">

Section 1
PANEL MOUNTING & ELECTRICAL CONNECTIONS

</div>

PANEL CUTOUTS

<div align="center">

Figure 1.1

</div>

ProceX48
Panel Cutout

45 X 45 mm
-0, +0.5 mm

ProceX72
Panel Cutout

68 X 68 mm
-0, +0.5 mm

ProceX96
Panel Cutout

92 X 92 mm
-0, +0.5 mm

ProceX48H
Panel Cutout

45 X 92 mm
-0, +0.5 mm

ELECTRICAL CONNECTIONS

<div align="center">
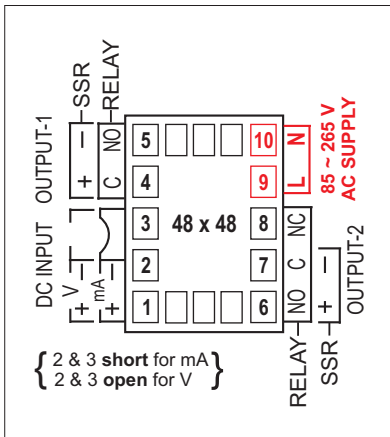
Figure 1.2(a)

</div>

<div align="center">

Figure 1.2(b)

</div>

<div align="center">

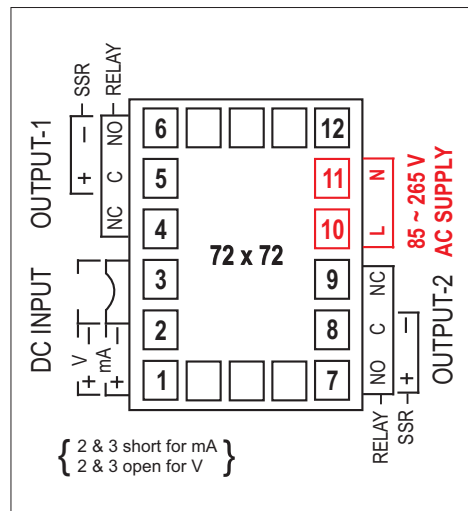*Figure 1.2(c)*

</div>

<div align="center">

Figure 1.2(d)

</div>

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Section 2
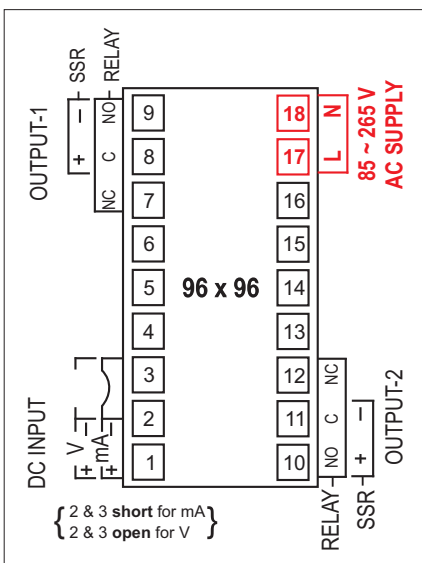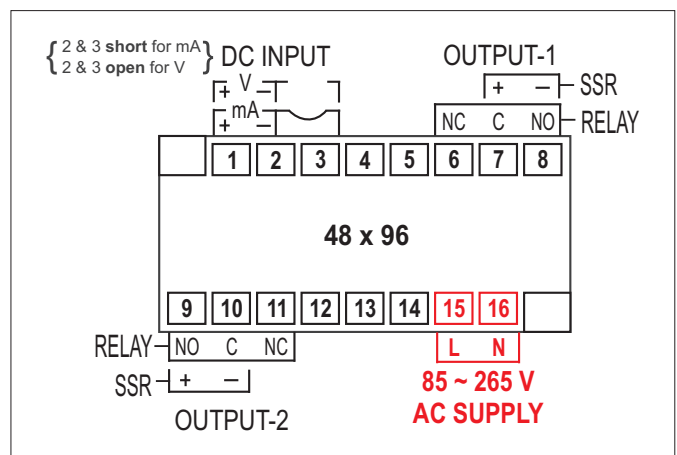# FRONT PANEL AND OPERATION

</div>

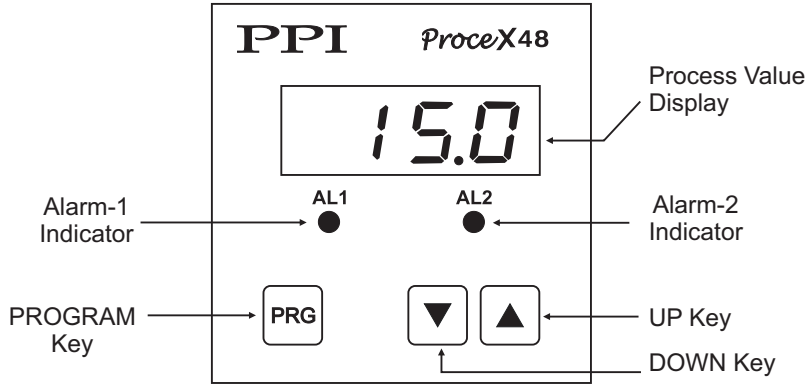## PROCEX48 / PROCEX72 / PROCEX96

<div align="center">

Figure 2.1(a)

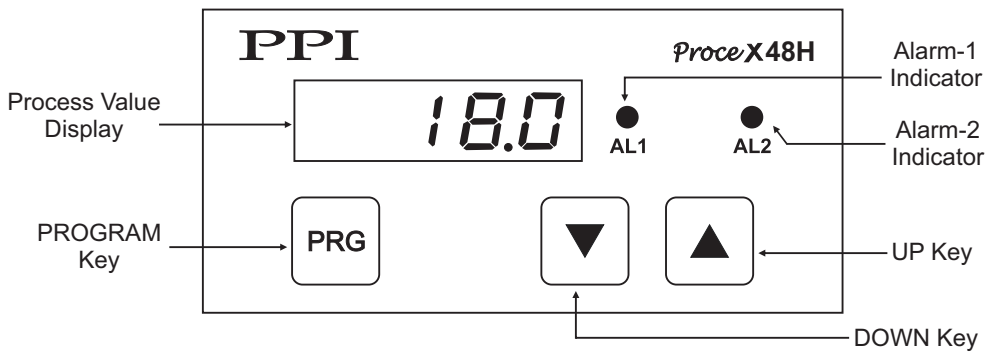</div>

PROCEX48H

<div align="center">

Figure 2.1(b)

</div>

<div align="center">

Table 2.1
KEY DEFINITIONS

</div>

Symbol	Key	Function
PRG	PROGRAM MODE	Keep pressed for approximately 5 seconds to enter / exit Set-up mode.
▼	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; holding the key pressed speeds up the change.
▲	UP	Press to increase the parameter value. Pressing once increases the value by one count; holding the key pressed speeds up the change.

MAIN MODE DISPLAY

Upon switching on the power to the Indicator, all displays and indicators are lit on for approximately 3 seconds. This is followed by the indication of the Indicator model name $\boxed{ProC}$ for approximately 1 second. The Indicator now enters MAIN Mode wherein the display shows the PV proportional to the Input DC signal within user set Range Low and Range High Limits.

<div align="center">

2

</div>

PV ERROR INDICATION

In case of PV Error the following messages are flashed.

Table 2.2

Message	PV Error Type
Or	Over-range (PV above Max. Range)
Ur	Under-range (PV below Min. Range)

Section 3
PARAMETER SETTINGS

The Indicator offers various parameters for setting-up the configuration and operation modes. Each parameter has a unique name and a settable value. For example, the parameter 'Input Type' is identified by its name $\boxed{InPt}$ and has the settable values '0-20mA / 4-20mA / 0-5V / 0-10V'.

Further, the parameters are organized under different groups. Each group of parameters is called PAGE. Each page is assigned a unique number for its identification and access. The various pages along with their parameters are described later.

Follow the steps below for setting / changing any parameter value.

1.   Keep PRG key pressed (approximately 5 seconds) until display shows PAGE ($\boxed{PAGE}$). Release the key.

2.   Press PRG key again. Display shows page number 0.

3.   Press PRG key if page 0 is the desired page number (operator page) or use UP / DOWN keys to set the desired page number and then press PRG key. The display now shows the name for the first parameter in the page.

4.   Use UP / DOWN keys to select the desired parameter name.

5.   Press PRG key. The display now shows the value for the selected parameter.

6.   Use UP / DOWN keys to change the parameter value.

7.   Press PRG key to save the new value. The display shows the name for the next parameter in the list.

8.   Repeat steps 4 to 7 for any other parameter settings, if required.

9.   For returning to Main Mode, keep PRG key pressed (approximately 3 seconds) until the display starts showing PV.

The following figures step-wise show an example of changing the value for the parameter 'Resolution' from '1' to '0.1'. The parameter 'Resolution' is available on PAGE-12 and is second in the list. Notice that from MAIN Mode the appropriate page number is selected first and then the desired parameter name is selected for changing the value. Finally, PRG key is used to return back to MAIN Mode.
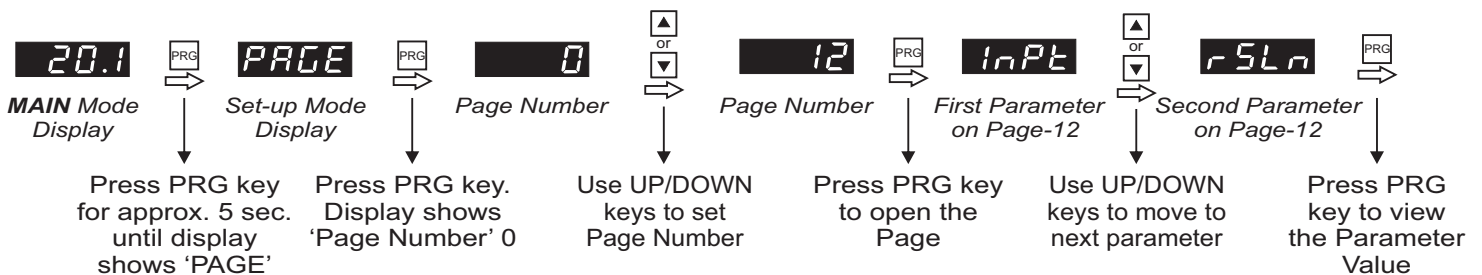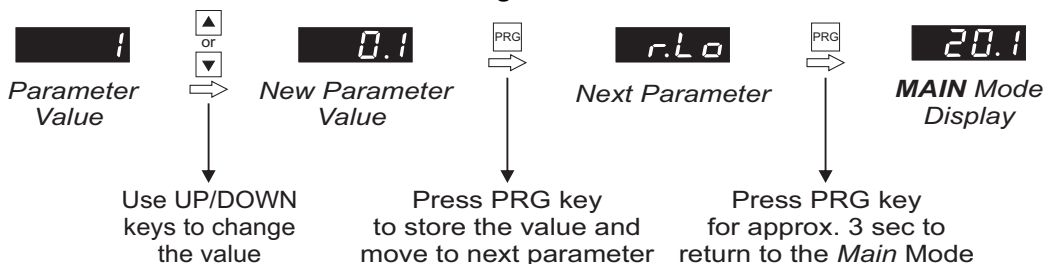
Figure 3.1

MAIN Mode Display	Set-up Mode Display	Page Number		Page Number	First Parameter on Page-12		Second Parameter on Page-12	

Press PRG key for approx. 5 sec. until display shows 'PAGE' — Press PRG key. Display shows 'Page Number' 0 — Use UP/DOWN keys to set Page Number — Press PRG key to open the Page — Use UP/DOWN keys to move to next parameter — Press PRG key to view the Parameter Value

Figure 3.2

Parameter Value — New Parameter Value — Next Parameter — **MAIN** Mode Display

Use UP/DOWN keys to change the value — Press PRG key to store the value and move to next parameter — Press PRG key for approx. 3 sec to return to the *Main* Mode

Table 3.1
PAGE - 0 : OPERATOR PARAMETERS

Parameter Description		Settings
ALARM-1 SETPOINT Available only if selected 'Alarm-1 type' is either 'Process High' or 'Process Low'. This parameter value sets the Upper (Process High) or Lower (Process Low) Alarm Limit.	`A 1.5P`	-1999 to 9999 (with selected Resolution)
ALARM-2 SETPOINT Available only if selected 'Alarm-2 type' is either 'Process High' or 'Process Low'. This parameter value sets the Upper (Process High) or Lower (Process Low) Alarm Limit.	`A2.5P`	-1999 to 9999 (with selected Resolution)

Table 3.2
PAGE - 1 : PV MIN / MAX PARAMETERS

Parameter Description		Settings
MAXIMUM PROCESS VALUE This gives the maximum PV recorded since Power-up or last reset	`Hi`	View Only
MINIMUM PROCESS VALUE This gives the minimum PV recorded since Power-up or last reset.	`Lo`	View Only
RESET PV MONITOR This command resets Maximum value and Minimum value to the instantaneous Process Value.	`r5t`	`no` No `YES` Yes

Table 3.3
PAGE - 12 : INPUT CONFIGURATION PARAMETERS

Parameter Description		Settings
INPUT TYPE The Indicator is factory calibrated for DC Voltage (0-5V / 0-10V) and DC Current (0-20mA / 4-20mA). Select the appropriate input type as per the type of Input Signal. *Note :* For DC Voltage Input, keep Terminals 2 & 3 open. For DC Current Input, keep terminals 2 & 3 shorted.	`InPt`	***Controller Version :*** `0 - 20` 0 - 20 mA `4 - 20` 4 - 20 mA `0 - 5` 0 - 5 V `0 - 10` 0 - 10 V
RESOLUTION Decimal Point for the displayed value.	`r5Ln`	`1` 1 `0.1` 0.1 `0.01` 0.01 `0.001` 0.001

Parameter Description		Settings
DC RANGE LOW **AND** **DC RANGE HIGH** Set Range High as the value corresponding to Maximum input signal level and Range Low as the value corresponding to Minimum input signal level.	`r.Lo` `r.hi`	-1999 to 9999 (with selected Resolution)
OFFSET FOR PV Zero offset for measured PV. Displayed PV = Actual PV + Offset	`OFSt`	-1999 to 9999 (with selected Resolution)

Table 3.4

PAGE - 11 : ALARM PARAMETERS

Parameter Description		Settings	

ALARM-1 TYPE
 	
Type for Alarm-1.
	`A1.CL`	`nonE`
		`P_Lo`
		`P_hi`
			None
			Process Low
			Process High

ALARM-1 HYSTERESIS Differential (dead) band between the ON and OFF alarm states. Keep it large enough to avoid frequent switching.	`A1.HY`	1 to 999 (with selected Resolution)	
ALARM-1 LOGIC *Normal* : The alarm-1 output remains ON under alarm conditions; OFF otherwise. *Reverse* : The alarm-1 output remains OFF under alarm conditions; ON otherwise.	`A1.LG`	`norn` `rEu`	Normal Reverse
ALARM-1 INHIBIT *Yes* : The alarm-1 is suppressed during start-up alarm conditions. *No* : The alarm-1 is not suppressed during start-up alarm conditions.	`A1.ih`	`no` `YES`	No Yes

ALARM-2 TYPE
 	
Type for Alarm-2.
	`A2.CL`	`nonE`
		`P_Lo`
		`P_hi`
			None
			Process Low
			Process High

ALARM-2 HYSTERESIS Same as Alarm-1 Hysteresis.	`A2.HY`	1 to 999 (with selected Resolution)	
ALARM-2 LOGIC Same as Alarm-1 Logic.	`A2.LG`	`norn` `rEu`	Normal Reverse
ALARM-2 INHIBIT Same as Alarm-1 Inhibit.	`A2.ih`	`no` `YES`	No Yes

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