



CONFIGURATION PARAMETERS : PAGE 12	
Parameters	Settings (Default Value)
Control Output Type C_DP	rLY Relay SSr SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
Control Logic Ctrl	rEu Reverse dir Direct (Default : Reverse)
Input Type lnPt	Refer Table 1 (Default : Type K)
Unit Selection for PV Unit	°C °C °F °F (Default : °C)
Resolution for PV rSLn	Refer Table 1 (Default : 1)
PV Range Low rLo	-1999 to 9999 (Default : 0)
PV Range High rHi	-1999 to 9999 (Default : 1000)
Setpoint Low Limit SPLo	Min. Range for the selected Input Type to Setpoint High Limit (Default : -200)
Setpoint High Limit SPHi	Setpoint Low to Max. Range for the selected Input Type (Default : 1300)
Offset for PV OFSt	-1999 to 9999 (Default : 0)
Digital Filter for PV Flt	0.5 to 25.0 Seconds (in steps of 0.5 Seconds) (Default : 1.0 Sec.)
Sensor Break (Open) Strategy SbrP	SbOP Sensor Break Output Power HOLD Hold (Default : Sensor Break Output Power)
Sensor Break Output Power SbOP	-100.0 to 100.0 (Default : 0.0)

CONTROL PARAMETERS : PAGE 10	
Parameters	Settings (Default Value)
Proportional Band Pb	0 to 9999 (Default : 50)
Hysteresis HYSb	1 to 999 (Default : 2)
Integral Time It	0 to 1000 (Default : 100)
Derivative Time dt	0 to 250 (Default : 25)
Cycle Time Ct	0.5 to 120.0 Seconds (in steps of 0.5 secs.) (Default : 20.0 Sec.)
Relative Cool Gain rELC	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time CLCt	0.5 to 120.0 Seconds (in steps of 0.5 secs.) (Default : 20.0 sec.)

Parameters	Settings (Default Value)
Heat Power Low PL	0 to Power High (Default : 0)
Heat Power High PH	Power Low to 100 (Default : 100)
Cool Power Low CPL	0 to Power High (Default : 0)
Cool Power High CPH	Power Low to 100 (Default : 100)

SUPERVISORY PARAMETERS : PAGE 13	
Parameters	Settings (Default Value)
Self-Tune Command tUnE	no No YES Yes (Default : No)
Overshoot Inhibit oSh	dSbL Disable EnbL Enable (Default : Disable)
Overshoot Inhibit Factor O.hF	1.0 to 2.0 (Default : 1.2)
Set-up Mode (SP Adjustment on Lower Readout) SPLr	EnbL Enable dSbL Disable (Default : Enable)
SP Adjustment on Operator Page SPOP	EnbL Enable dSbL Disable (Default : Enable)
Manual (Hand) Mode HRnd	dSbL Disable EnbL Enable (Default : Disable)
Alarm SP Adjustment on Operator Page ALSP	dSbL Disable EnbL Enable (Default : Disable)
Standby Mode Stby	dSbL Disable EnbL Enable (Default : Disable)
Profile Abort Command on Operator Page Abrt	dSbL Disable EnbL Enable (Default : Disable)
Auxiliary Setpoint or Serial Comm. Option Selection OPtn	nonE None SrLC Serial Comm. AUSP Auxiliary Setpoint (Default : None)
Baud Rate BAUD	12 1200 24 2400 48 4800 96 9600 (Default : 9.6)
Controller ID Number id	1 to 127 (Default : 1)
Communication Write Enable ConE	no No YES Yes (Default : No)

OP2 & OP3 FUNCTION PARAMETERS : PAGE 15	
Parameters	Settings (Default Value)
Output-2 Function Selection OP2F	ALrñ Alarm CLCon Cool Control (Default : Alarm)
Output-2 Type OP2t	rLY Relay SSr SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
Output-3 Function Selection OP3F	ALrñ Alarm rEC Recorder Output (Default : Alarm)
Recorder Output Transmission trns	Pw Process Value SP Setpoint (Default : Process Value)
Recorder Output Type rECo	0-20 0 to 20mA 4-20 4 to 20mA 0-5 0 to 5 Volts 0-10 0 to 10 Volts (Default : 0 to 20mA)
Recorder Low rECL	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Recorder High rECH	Min. to Max. Range Specified for the Selected Input Type (Default : 1300)

ALARM PARAMETERS : PAGE 11	
Parameters	Settings (Default Value)
Alarm-1 Type AL_1	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bRnd Window Band EOP End of Profile (Default : None)
Alarm-1 Setpoint ALSP	Min. to Max. Range specified for the selected Input Type (Default : -200 For Process Low: -200 For Process High: 1300)
Alarm-1 Deviation Band ALdE	-999 to 999 (Default : 3)
Alarm-1 Band ALbA	3 to 999 (Default : 3)
Alarm-1 Hysteresis ALHY	1 to 999 (Default : 2)
Alarm-1 Logic ALL	dir Direct rEu Reverse (Default : Direct)
Alarm-1 Inhibit ALih	YES Yes no No (Default : Yes)
Alarm-2 Type AL_2	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bRnd Window Band EOP End of Profile (Default : None)

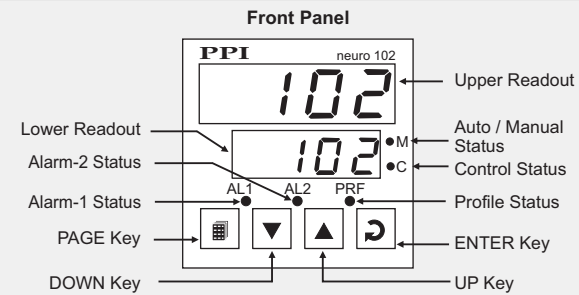
Parameters	Settings (Default Value)
Alarm-2 Setpoint A2SP	Min. to Max. Range specified for the selected Input Type (Default : -200 For Process Low: -200 For Process High: 1300)
Alarm-2 Deviation A2dE	-999 to 999 (Default : 3)
Alarm-2 Band A2bA	3 to 999 (Default : 3)
Alarm-2 Hysteresis A2HY	1 to 999 (Default : 2)
Alarm-2 Logic A2L	dir Direct rEu Reverse (Default : Direct)
Alarm-2 Inhibit A2ih	YES Yes no No (Default : Yes)

PROFILE PARAMETERS : PAGE 14	
Parameters	Settings (Default Value)
Profile mode selection PrOP	dSbL Disable EnbL Enable (Default : Disable)
Ramp Hold Band rband	0 to 250 (Default : 0)
Soak Hold Band Sband	0 to 250 (Default : 0)
Ramp Rate-1 r.r.t.1	0.00 to 99.99 (Default : 0.00)
Target Setpoint-1 tSP.1	Min. to Max. Range Specified For the Selected Input Type (Default : -200)
Soak Time-1 SOt.1	0 to 9999 (Default : 0)
Ramp Rate-2 r.r.t.2	0.00 to 99.99 (Default : 0.00)
Target Setpoint-2 tSP.2	Min. to Max. Range Specified For the Selected Input Type (Default : -200)
Soak Time-2 SOt.2	0 to 9999 (Default : 0)
Ramp Rate-3 r.r.t.3	0.00 to 99.99 (Default : 0.00)
Target Setpoint-3 tSP.3	Min. to Max. Range Specified For the Selected Input Type (Default : -200)
Soak Time-3 SOt.3	0 to 9999 (Default : 0)
Ramp Rate-4 r.r.t.4	0.00 to 99.99 (Default : 0.00)
Target Setpoint-4 tSP.4	Min. to Max. Range Specified For the Selected Input Type (Default : -200)
Soak Time-4 SOt.4	0 to 9999 (Default : 0)
Output Off OPDF	no No YES Yes (Default : No)

OPERATOR PAGE PARAMETERS : PAGE 0	
Parameters	Settings (Default Value)
Stand by Mode Stby	no No YES Yes (Default : No)
Profile Start Command Strt	no No YES Yes (Default : No)
Profile Abort Command Abrt	no No YES Yes (Default : No)
Control Setpoint SP	Setpoint Low to Setpoint High (Default : -200)
Auxiliary Setpoint A_SP	Setpoint Low to Setpoint High (Default : -200)
Alarm-1 Setpoint ALSP	Throughout the range for the selected Input Type (Default : -200 For Process Low : -200 For Process High : 1300)
Alarm-1 Deviation ALdE	-999 to 999 (Default : 3)
Alarm-1 Band ALbA	3 to 999 (Default : 3)
Alarm-2 Setpoint A2SP	Throughout the range for the selected Input Type (Default : -200 For Process Low : -200 For Process High : 1300)
Alarm-2 Deviation A2dE	-999 to 999 (Default : 3)
Alarm-2 Band A2bA	3 to 999 (Default : 3)

TABLE - 1		
Option	Range (Min. to Max.)	Resolution
tC_U J Type T/C	0 to +760°C / +32 to +1400°F	Fixed 1°C / 1°F
tC_P K Type T/C	-200 to +1300°C / -328 to +2372°F	
tC_t T Type T/C	-200 to +350°C / -328 to +662°F	
tC_r R Type T/C	0 to +1700°C / +32 to +3092°F	
tC_S S Type T/C	0 to +1700°C / +32 to +3092°F	
tC_b B Type T/C	+200 to +1700°C / +392 to +3092°F	User settable 1°C / 1°F or 0.1°C / 0.1°F
tC_n N Type T/C	0 to +1300°C / +32 to +2372°F	
rESu	Reserved for customer specific Thermocouple type not listed above.	
rtd RTD Pt100	-199 to +600°C / -328 to +1112°F or -199.9 to 600.0°C / -199.9 to 999.9°F	
0-20 0 to 20mA DC	-1999 to +9999 units	
4-20 4 to 20mA DC		
0050 0 to 50mV DC		
0200 0 to 200mV DC		
1.25 0 to 1.25V DC		
5.0 0 to 5.0V DC		
10.0 0 to 10.0V DC		

FRONT PANEL LAYOUT



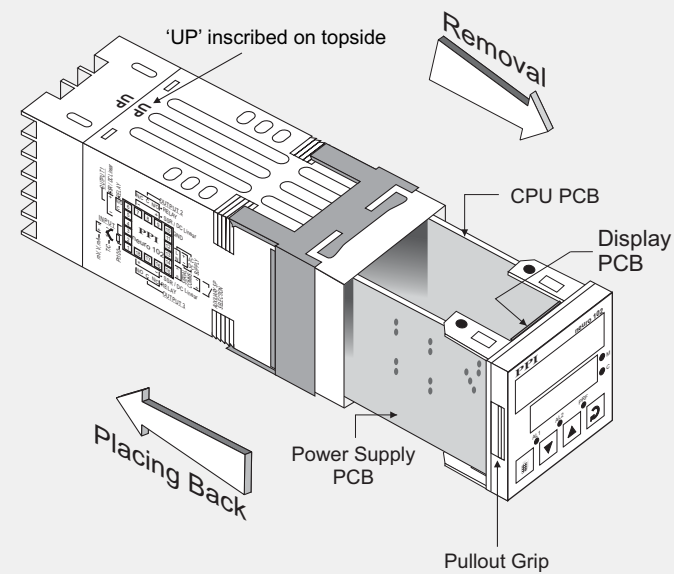
Keys Operation

Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed speeds up the change.
	ENTER	Press to store the set parameter value and to scroll to the next parameter on the PAGE.

PV Error Indications

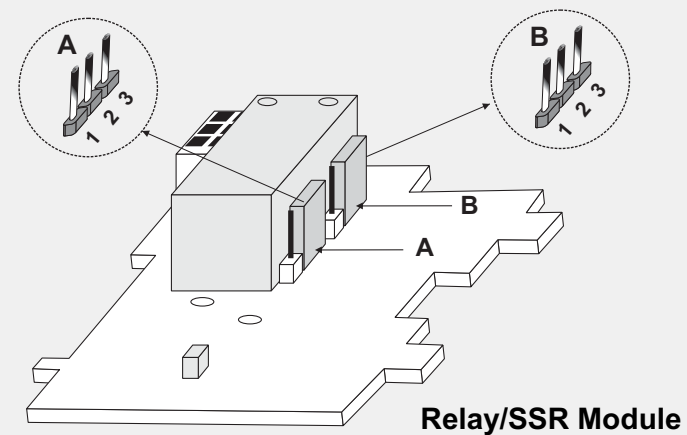
Message	PV Error Type
	Over-range (PV above Max. Range)
	Under-range (PV below Min. Range)
	Open (Sensor open / broken)

ENCLOSURE ASSEMBLY



JUMPER SETTINGS

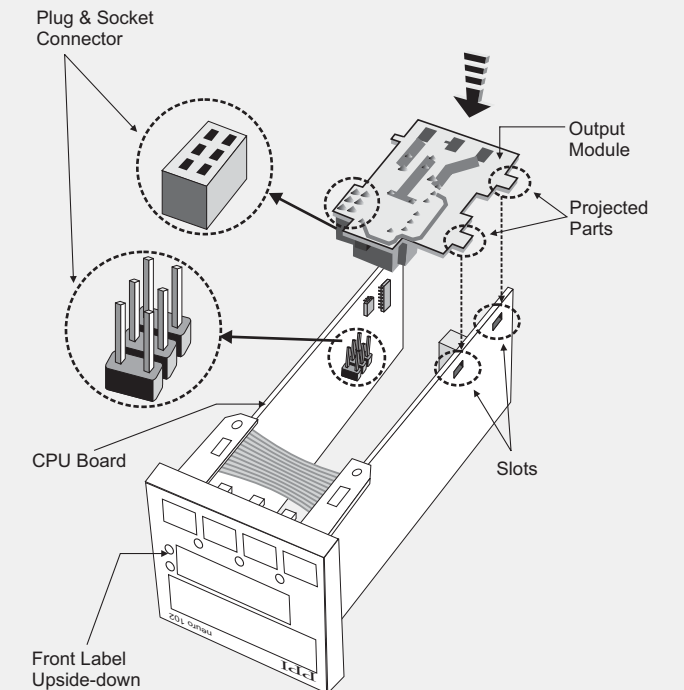
OUTPUT-2 & OUTPUT-3



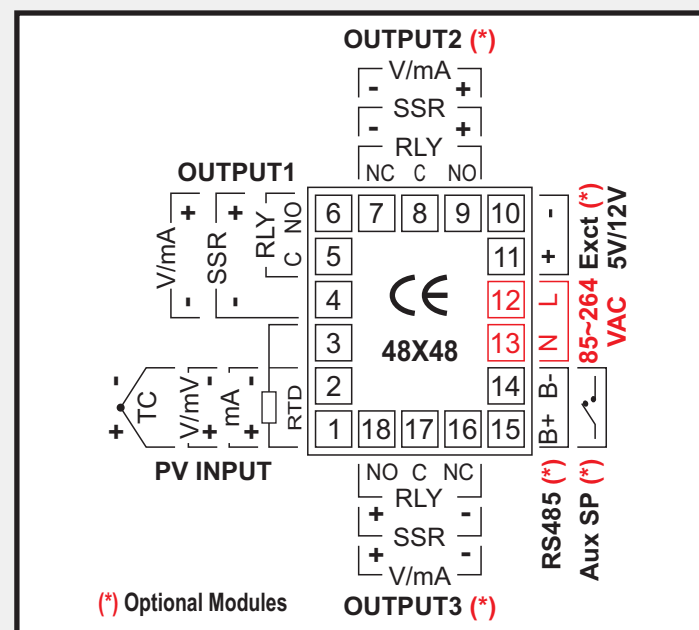
Output Type	Jumper Setting - A	Jumper Setting - B
Relay		
SSR		

MOUNTING DETAILS

OUTPUT-3 MODULE

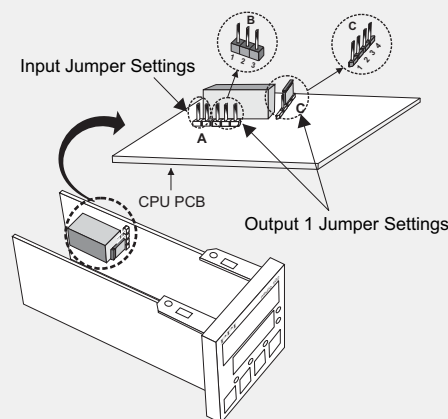


ELECTRICAL CONNECTIONS

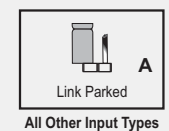
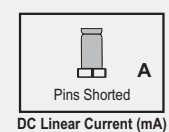


JUMPER SETTINGS

INPUT & OUTPUT-1



Input Jumper Settings

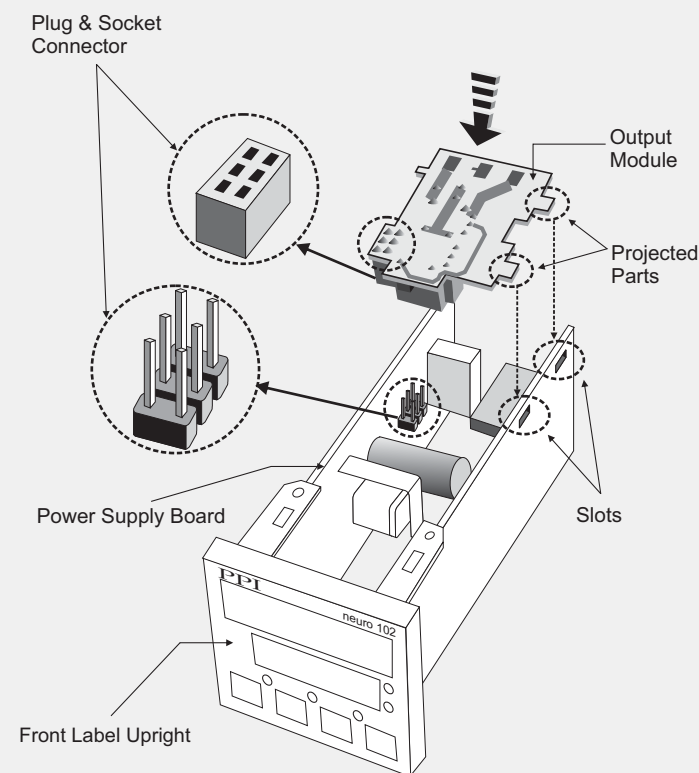


Output - 1 Jumper Settings

Output Type	Jumper Setting - A	Jumper Setting - B
Relay		
SSR Drive		
DC Linear Current (or Voltage)		

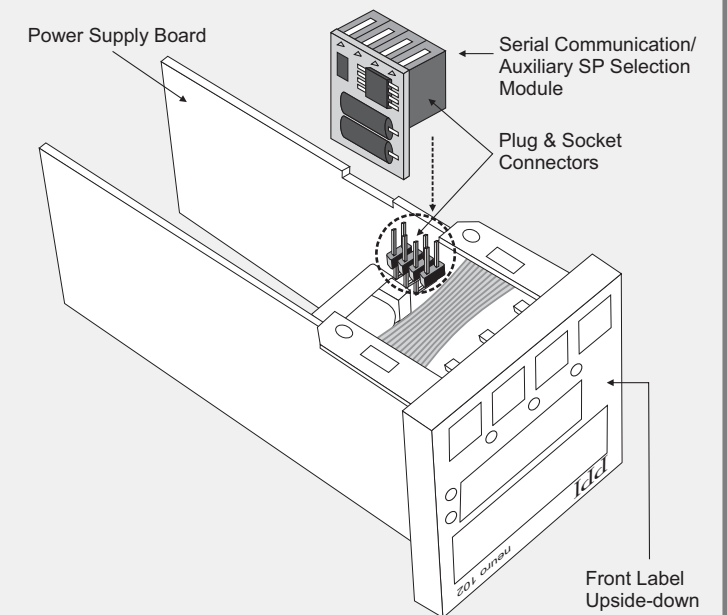
MOUNTING DETAILS

OUTPUT-2 MODULE



MOUNTING DETAILS

SERIAL COMM. MODULE





CONFIGURATION PARAMETERS : PAGE 12

Parameters	Settings (Default Value)
Control Output Type C_DP	rLy Relay SSr SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
Control Logic CtrL	rEu Reverse dir Direct (Default : Reverse)
Input Type inpT	Refer Table 1 (Default : Type K)
Unit Selection for PV Unit	°C °C °F °F (Default : °C)
Resolution for PV rSLn	Refer Table 1 (Default : 1)
PV Range Low rLo	-1999 to 9999 (Default : 0)
PV Range High rHi	-1999 to 9999 (Default : 1000)
Setpoint Low Limit SPLo	Min. Range for the selected Input Type to Setpoint High Limit (Default : -200)
Setpoint High Limit SPHi	Setpoint Low to Max. Range for the selected Input Type (Default : 1300)
Offset for PV OFSt	-1999 to 9999 (Default : 0)
Digital Filter for PV Flt	0.5 to 25.0 Seconds (in steps of 0.5 Seconds) (Default : 1.0 Sec.)
Sensor Break (Open) Strategy SbrP	SbOP Sensor Break Output Power HOLD Hold (Default : Sensor Break Output Power)
Sensor Break Output Power SbOP	-100.0 to 100.0 (Default : 0.0)

CONTROL PARAMETERS : PAGE 10

Parameters	Settings (Default Value)
Proportional Band Pb	0 to 9999 (Default : 50)
Hysteresis HYS	1 to 999 (Default : 2)
Integral Time It	0 to 1000 (Default : 100)
Derivative Time dt	0 to 250 (Default : 25)
Cycle Time Ct	0.5 to 120.0 Seconds (in steps of 0.5 secs.) (Default : 20.0 Sec.)
Relative Cool Gain rELC	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time CCt	0.5 to 120.0 Seconds (in steps of 0.5 secs.) (Default : 20.0 sec.)

Parameters	Settings (Default Value)
Heat Power Low PL	0 to Power High (Default : 0)
Heat Power High PH	Power Low to 100 (Default : 100)
Cool Power Low CPL	0 to Power High (Default : 0)
Cool Power High CPH	Power Low to 100 (Default : 100)

SUPERVISORY PARAMETERS : PAGE 13

Parameters	Settings (Default Value)
Self-Tune Command tUnE	no No YES Yes (Default : No)
Overshoot Inhibit oSh	dSbL Disable EnbL Enable (Default : Disable)
Overshoot Inhibit Factor O_hF	1.0 to 2.0 (Default : 1.2)
Set-up Mode (SP Adjustment on Lower Readout) SPLR	EnbL Enable dSbL Disable (Default : Enable)
SP Adjustment on Operator Page SPOP	EnbL Enable dSbL Disable (Default : Enable)
Manual (Hand) Mode HRnd	dSbL Disable EnbL Enable (Default : Disable)
Alarm SP Adjustment on Operator Page ALSP	dSbL Disable EnbL Enable (Default : Disable)
Standby Mode Stby	dSbL Disable EnbL Enable (Default : Disable)
Profile Abort Command on Operator Page Abrt	dSbL Disable EnbL Enable (Default : Disable)
Auxiliary Setpoint or Serial Comm. Option Selection OPtn	nonE None SrLC Serial Comm. AUSP Auxiliary Setpoint (Default : None)
Baud Rate baud	12 1200 24 2400 48 4800 96 9600 (Default : 9.6)
Controller ID Number id	1 to 127 (Default : 1)
Communication Write Enable ConE	no No YES Yes (Default : No)

OP2 & OP3 FUNCTION PARAMETERS : PAGE 15

Parameters	Settings (Default Value)
Output-2 Function Selection OP2F	ALrn Alarm CLcn Cool Control (Default : Alarm)
Output-2 Type OP2t	rLy Relay SSr SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
Output-3 Function Selection OP3F	ALrn Alarm rEC Recorder Output (Default : Alarm)
Recorder Output Transmission trns	Pw Process Value SP Setpoint (Default : Process Value)
Recorder Output Type rECt	0-20 0 to 20mA 4-20 4 to 20mA 0-5 0 to 5 Volts 0-10 0 to 10 Volts (Default : 0 to 20mA)
Recorder Low rECL	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Recorder High rECH	Min. to Max. Range Specified for the Selected Input Type (Default : 1300)

ALARM PARAMETERS : PAGE 11

Parameters	Settings (Default Value)
Alarm-1 Type AL_1	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bRnd Window Band EOP End of Profile (Default : None)
Alarm-1 Setpoint A1SP	Min. to Max. Range specified for the selected Input Type (Default : For Process Low: -200 For Process High: 1300)
Alarm-1 Deviation Band A1dE	-999 to 999 (Default : 3)
Alarm-1 Band A1bA	3 to 999 (Default : 3)
Alarm-1 Hysteresis A1HY	1 to 999 (Default : 2)
Alarm-1 Logic A1L	dir Direct rEu Reverse (Default : Direct)
Alarm-1 Inhibit A1h	YES Yes no No (Default : Yes)
Alarm-2 Type AL_2	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bRnd Window Band EOP End of Profile (Default : None)

Parameters	Settings (Default Value)
Alarm-2 Setpoint A2SP	Min. to Max. Range specified for the selected Input Type (Default : For Process Low: -200 For Process High: 1300)
Alarm-2 Deviation A2dE	-999 to 999 (Default : 3)
Alarm-2 Band A2bA	3 to 999 (Default : 3)
Alarm-2 Hysteresis A2HY	1 to 999 (Default : 2)
Alarm-2 Logic A2L	dir Direct rEu Reverse (Default : Direct)
Alarm-2 Inhibit A2h	YES Yes no No (Default : Yes)

PROFILE PARAMETERS : PAGE 14

Parameters	Settings (Default Value)
Profile mode selection PrDF	dSbL Disable EnbL Enable (Default : Disable)
Ramp Hold Band rband	0 to 250 (Default : 0)
Soak Hold Band Sband	0 to 250 (Default : 0)
Ramp Rate-1 r.r.t.1	0.00 to 99.99 (Default : 0.00)
Target Setpoint-1 tSP.1	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Soak Time-1 SOt.1	0 to 9999 (Default : 0)
Ramp Rate-2 r.r.t.2	0.00 to 99.99 (Default : 0.00)
Target Setpoint-2 tSP.2	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Soak Time-2 SOt.2	0 to 9999 (Default : 0)
Ramp Rate-3 r.r.t.3	0.00 to 99.99 (Default : 0.00)
Target Setpoint-3 tSP.3	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Soak Time-3 SOt.3	0 to 9999 (Default : 0)
Ramp Rate-4 r.r.t.4	0.00 to 99.99 (Default : 0.00)
Target Setpoint-4 tSP.4	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Soak Time-4 SOt.4	0 to 9999 (Default : 0)
Output Off OPOF	no No YES Yes (Default : No)

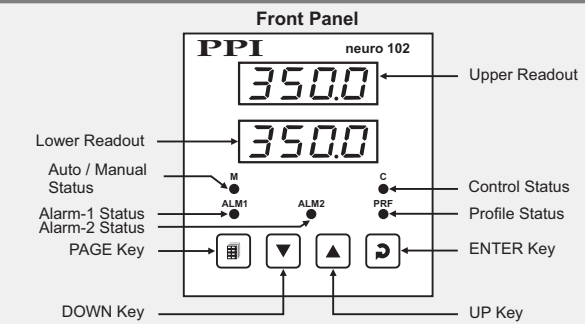
OPERATOR PAGE PARAMETERS : PAGE 0

Parameters	Settings (Default Value)
Stand by Mode Stby	no No YES Yes (Default : No)
Profile Start Command Strt	no No YES Yes (Default : No)
Profile Abort Command Abrt	no No YES Yes (Default : No)
Control Setpoint SP	Setpoint Low to Setpoint High (Default : -200)
Auxiliary Setpoint A.SP	Setpoint Low to Setpoint High (Default : -200)
Alarm-1 Setpoint A1SP	Throughout the range for the selected Input Type (Default : For Process Low : -200 For Process High : 1300)
Alarm-1 Deviation A1dE	-999 to 999 (Default : 3)
Alarm-1 Band A1bA	3 to 999 (Default : 3)
Alarm-2 Setpoint A2SP	Throughout the range for the selected Input Type (Default : For Process Low : -200 For Process High : 1300)
Alarm-2 Deviation A2dE	-999 to 999 (Default : 3)
Alarm-2 Band A2bA	3 to 999 (Default : 3)

TABLE - 1

Option	Range (Min. to Max.)	Resolution
tC_U J Type T/C	0 to +760°C / +32 to +1400°F	Fixed 1°C / 1°F
tC_P K Type T/C	-200 to +1300°C / -328 to +2372°F	
tC_t T Type T/C	-200 to +350°C / -328 to +662°F	
tC_r R Type T/C	0 to +1700°C / +32 to +3092°F	
tC_S S Type T/C	0 to +1700°C / +32 to +3092°F	User settable 1°C / 1°F or 0.1°C / 0.1°F
tC_b B Type T/C	+200 to +1700°C / +392 to +3092°F	
tC_n N Type T/C	0 to +1300°C / +32 to +2372°F	
rESu	Reserved for customer specific Thermocouple type not listed above.	
rtd RTD Pt100	-199 to +600°C / -328 to +1112°F or -199.9 to 600.0°C / -199.9 to 999.9°F	User settable 1 / 0.1 / 0.01 / 0.001 units
0-20	0 to 20mA DC	
4-20	4 to 20mA DC	
0050	0 to 50mV DC	
0200	0 to 200mV DC	User settable 1 / 0.1 / 0.01 / 0.001 units
1.25	0 to 1.25V DC	
5.0	0 to 5.0V DC	
10.0	0 to 10.0V DC	

FRONT PANEL LAYOUT



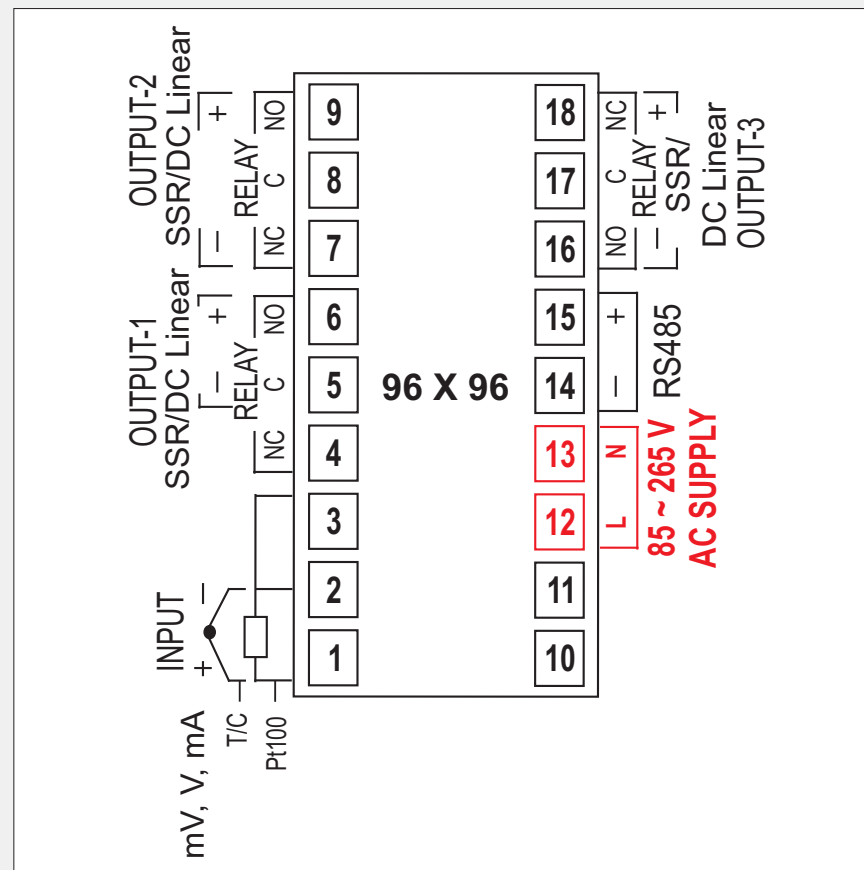
Keys Operation

Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed speeds up the change.
	ENTER	Press to store the set parameter value and to scroll to the next parameter on the PAGE.

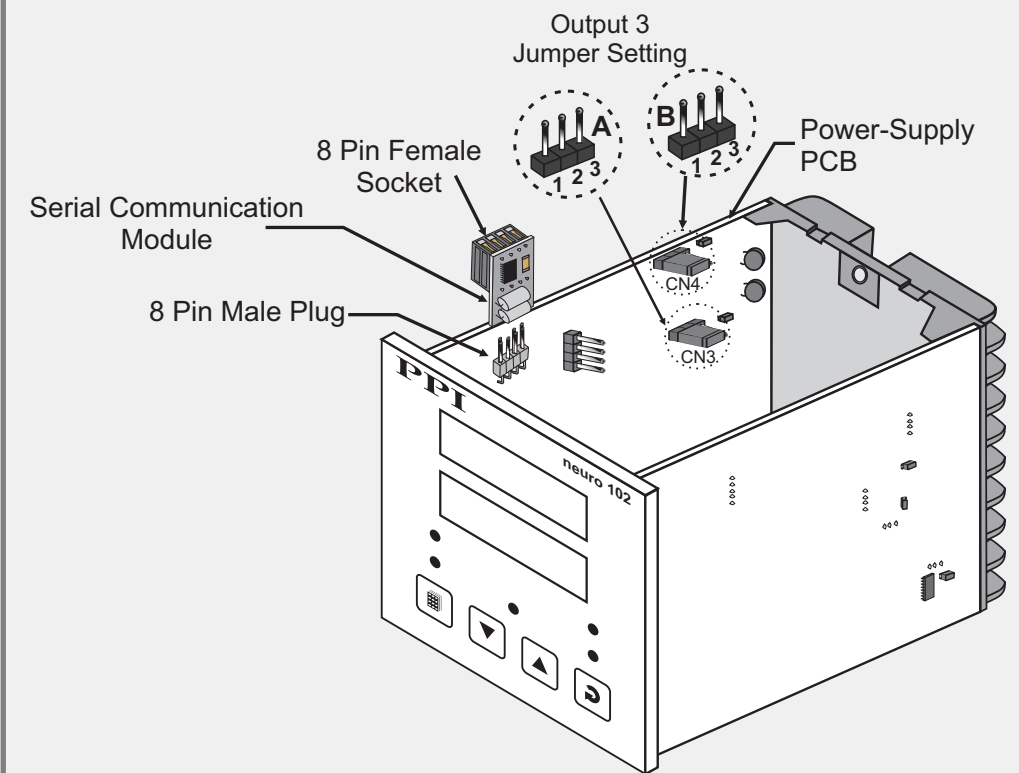
PV Error Indications

Message	PV Error Type
	Over-range (PV above Max. Range)
	Under-range (PV below Min. Range)
	Open (Sensor open / broken)

ELECTRICAL CONNECTIONS



SERIAL COMMUNICATION MODULE



INPUT & OUTPUT HARDWARE JUMPER SETTINGS

Input

Input Type	Jumper 'A' Setting
Thermocouple, RTD Pt100, mV & V	
DC Linear Current (mA)	

Output-2

Output Type	Jumper Setting - D	Jumper Setting - E
Relay		
SSR		

Output-1

Output Type	Jumper Setting - B	Jumper Setting - C
Relay		
SSR Drive		
DC Linear Current (or Voltage)		

Output-3

Output Type	Jumper Setting - A	Jumper Setting - B
Relay		
SSR		

