



CONFIGURATION PARAMETERS : PAGE 12	
Parameters	Settings (Default Value)
Control Output (OP1) Type <b>COP</b>	<b>rLY</b> Relay <b>SSR</b> SSR <b>0-20</b> 0 - 20mA <b>4-20</b> 4 - 20mA <b>0-5</b> 0 - 5 V <b>0-10</b> 0 - 10 V (Default : Relay)
Control Action <b>CAct</b>	<b>OnOff</b> On-Off <b>PULS</b> Pulse <b>PID</b> PID (Default : PID)
Control Logic <b>Ctrl</b>	<b>rEv</b> Reverse <b>dir</b> Direct (Default : Reverse)
Input Type <b>inpT</b>	Refer Table 1 (Default : Type K)
PV Resolution <b>rSLn</b>	Refer Table 1 (Default : 1)
PV Units <b>Unit</b>	<b>°C</b> °C <b>°F</b> °F (Default : °C)
PV Range Low <b>rLo</b>	-19999 to PV Range High (Default : 0)
PV Range High <b>rHi</b>	PV Range Low to 9999 (Default : 1000)
Setpoint Low Limit <b>SPLo</b>	Min. Range for the selected Input Type to Setpoint High Limit (Default : -200.0)
Setpoint High Limit <b>SPHi</b>	Setpoint Low Limit to Max. Range for the selected Input Type (Default : 1376.0)
Offset for PV <b>OFSt</b>	-199 to 999 or -1999.9 to 9999.9 (Default : 0)
Digital Filter Time Constant <b>Flt</b>	0.5 to 60.0 Seconds (in steps of 0.5 Seconds) (Default : 2.0 Sec.)
Sensor Break Output Power <b>SbOP</b>	0 to 100 or -100.0 to 100.0 (Default : 0)

CONTROL PARAMETERS : PAGE 10	
Parameters	Settings (Default Value)
Proportional Band <b>Pb</b>	0.1 to 999.9 Units (Default : 50 units)
Integral Time <b>It</b>	0 to 3600 Seconds (Default : 100 Sec.)
Derivative Time <b>dt</b>	0 to 600 Seconds (Default : 16 Sec.)
Cycle Time <b>Ct</b>	0.5 to 100.0 Seconds (in steps of 0.5 secs.) (Default : 10.0 Sec.)
Relative Cool Gain <b>rELC</b>	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time <b>CCt</b>	0.5 to 100.0 Seconds (in steps of 0.5 secs.) (Default : 10.0 sec.)
Hysteresis <b>HYS</b>	1 to 999 or 0.1 to 999.9 (Default : 0.2)

Parameters	Settings (Default Value)
Pulse Time <b>PLt</b>	Pulse ON Time to 120.0 Seconds (Default : 2.0 sec.)
ON Time <b>Ont</b>	0.1 to Value set for Pulse Time (Default : 1.0)
Cool Hysteresis <b>CHYS</b>	1 to 999 or 0.1 to 999.9 (Default : 2)
Cool Pulse Time <b>CPLt</b>	Cool ON Time to 120.0 Seconds (Default : 2.0)
Cool ON Time <b>COnt</b>	0.1 to Value set for Cool Pulse Time (Default : 1.0)
Heat Power Low <b>PL</b>	0 to Power High (Default : 0)
Heat Power High <b>PH</b>	Power Low to 100% (Default : 100.0)
Cool Power Low <b>CPL</b>	0 to Cool Power High (Default : 0)
Cool Power High <b>CPH</b>	Cool Power Low to 100% (Default : 100)

SUPERVISORY PARAMETERS : PAGE 13	
Parameters	Settings (Default Value)
Self-Tune Command <b>tUNE</b>	<b>no</b> No <b>YES</b> Yes (Default : No)
Overshoot Inhibit <b>OSH</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Overshoot Inhibit Factor <b>OHF</b>	1.0 to 2.0 (Default : 1.0)
Auxiliary Setpoint <b>AUSP</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Recorder (Retransmission) Output <b>rEC</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
SP Adjustment on Lower Readout <b>SPLr</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Enable)
SP Adjustment on Operator Page <b>SPOP</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Enable)
Manual Mode <b>HRnd</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Alarm SP Adjustment on Operator Page <b>ALSP</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Standby Mode <b>Stby</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Profile Abort Command on Operator Page <b>Abrt</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)

Parameters	Settings (Default Value)
Baud Rate <b>BAUD</b>	<b>48</b> 4800 <b>96</b> 9600 <b>192</b> 19200 <b>384</b> 38400 <b>576</b> 57600 (Default : 9.6)
Communication Parity <b>PARr</b>	<b>nonE</b> None <b>EuEn</b> Even <b>Odd</b> Odd (Default : Even)
Controller ID Number <b>Id</b>	1 to 127 (Default : 1)
Communication Write Enable <b>ConE</b>	<b>no</b> No <b>YES</b> Yes (Default : No)

OP2 & OP3, OP4, OP5 FUNCTION PARAMETERS : PAGE 15	
Parameters	Settings (Default Value)
Output-2 Function Selection <b>OP2F</b>	<b>nonE</b> None <b>EOP</b> End Of Profile <b>CCon</b> Cool Control (Default : None)
Output-2 Type <b>OP2t</b>	<b>rLY</b> Relay <b>SSR</b> SSR <b>0-20</b> 0 - 20mA <b>4-20</b> 4 - 20mA <b>0-5</b> 0 - 5 V <b>0-10</b> 0 - 10 V (Default : Relay)
OP2 Event Status <b>OP2ES</b>	<b>On</b> ON <b>OFF</b> OFF (Default : ON)
OP2 Event Time <b>OP2Et</b>	0 to 9999 (Default : 0)
OP2 Event Time Units <b>OP2Ut</b>	<b>SEC</b> Seconds <b>min</b> Minutes <b>Hour</b> Hours (Default : Seconds)
Output-3 Function Selection <b>OP3F</b>	<b>nonE</b> None <b>ALrñ</b> Alarm <b>EOP</b> End of Profile (Default : Alarm)
Alarm-1 Logic <b>AL1G</b>	<b>norm</b> Normal <b>rEv</b> Reverse (Default : Normal)
OP3 Event Status <b>OP3ES</b>	<b>On</b> ON <b>OFF</b> OFF (Default : ON)
OP3 Event Time <b>OP3Et</b>	0 to 9999 (Default : 0)
OP3 Event Time Units <b>OP3Ut</b>	<b>SEC</b> Seconds <b>min</b> Minutes <b>Hour</b> Hours (Default : Seconds)

Parameters	Settings (Default Value)
Alarm-2 Logic <b>AL2G</b>	<b>norm</b> Normal <b>rEv</b> Reverse (Default : Normal)
Recorder Transmission Type <b>TRnS</b>	<b>PV</b> Process Value <b>SP</b> Setpoint (Default : Process Value)
Recorder Output Type <b>RECO</b>	<b>0-20</b> 0 to 20mA <b>4-20</b> 4 to 20mA <b>0-5</b> 0 to 5 Volts <b>0-10</b> 0 to 10 Volts (Default : 0 to 20mA)
Recorder Low <b>RECL</b>	Min. to Max. Range Specified for the Selected Input Type (Default : -199)
Recorder High <b>RECH</b>	Min. to Max. Range Specified for the Selected Input Type (Default : 1376)

ALARM PARAMETERS : PAGE 11	
Parameters	Settings (Default Value)
Alarm-1 Type <b>AL-1</b>	<b>nonE</b> None <b>P_Lo</b> Process Low <b>P_Hi</b> Process High <b>dE</b> Deviation Band <b>bRnd</b> Window Band (Default : None)
Alarm-1 Setpoint <b>AL1SP</b>	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Deviation Band <b>AL1dE</b>	-999 to 999 or -999.9 to 999.9 (Default : 5.0)
Alarm-1 Window Band <b>AL1bR</b>	3 to 999 or 0.3 to 999.9 (Default : 5.0)
Alarm-1 Hysteresis <b>AL1HY</b>	1 to 999 or 0.1 to 999.9 (Default : 2)
Alarm-1 Inhibit <b>AL1h</b>	<b>no</b> No <b>YES</b> Yes (Default : Yes)
Alarm-2 Type <b>AL-2</b>	<b>nonE</b> None <b>P_Lo</b> Process Low <b>P_Hi</b> Process High <b>dE</b> Deviation Band <b>bRnd</b> Window Band (Default : None)
Alarm-2 Setpoint <b>AL2SP</b>	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Deviation Band <b>AL2dE</b>	-999 to 999 or -999.9 to 999.9 (Default : 5.0)
Alarm-2 Window Band <b>AL2bR</b>	3 to 999 or 0.3 to 999.9 (Default : 5.0)
Alarm-2 Hysteresis <b>AL2HY</b>	1 to 999 or 0.1 to 999.9 (Default : 2.0)
Alarm-2 Inhibit <b>AL2h</b>	<b>no</b> No <b>YES</b> Yes (Default : Yes)

PROFILE CONFIGURATION PARAMETERS : PAGE 16	
Parameters	Settings (Default Value)
Profile mode selection <b>PROF</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Number of Segments <b>nSEG</b>	1 to 16 (Default : 16)
Number of Repeats <b>nrPt</b>	1 to 9999 (Default : 1)
Common Holdback <b>CoHb</b>	<b>no</b> No <b>YES</b> Yes (Default : Yes)
Output Off <b>OPDF</b>	<b>no</b> No <b>YES</b> Yes (Default : No)
Power Fail Strategy <b>P.r.FL</b>	<b>Abrt</b> Abort <b>Cont</b> Continue (Default : Continue)

PROFILE SETTING PARAMETERS : PAGE 14	
Parameters	Settings (Default Value)
Segment Number <b>SEGN</b>	1 to 16 (Default : 1)
Target Setpoint <b>t.SP</b>	Min. to Max. Range specified for the selected Input Type (Default : -199)
Time Interval <b>t.inE</b>	0 to 9999 Minutes (Default : 0)
Holdback Type <b>Hbty</b>	<b>nonE</b> None <b>UP</b> Up <b>dn</b> Down <b>both</b> Both (Default : None)
Holdback Value <b>HbUL</b>	1 to 999 (Default : 1)

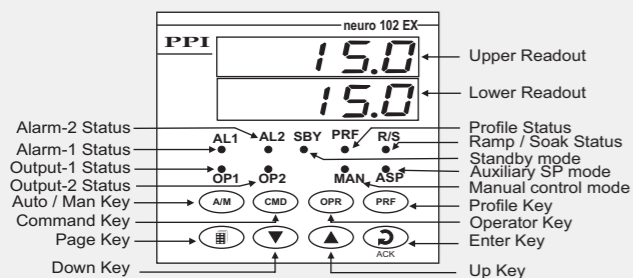
PROFILE STATUS INFORMATION : PAGE 1	
Lower Readout Prompt	Upper Readout Information
<b>ASEG</b>	Active Segment Number
<b>StYP</b>	Segment Type <b>rARñ</b> <b>SORP</b>
<b>t.SP</b>	Target Setpoint
<b>r.SP</b>	Ramping Setpoint
<b>b.t.in</b>	Balance Time
<b>b.rPt</b>	Balance Repeats

ON-LINE ALTERATION PARAMETERS : PAGE 2	
Parameters	Effect on the running segment
Time Interval <b>t.inE</b>	<b>RAMP</b> - Altering the time interval shall immediately affect the 'Ramp Rate' for the current segment. <b>SOAK</b> - Elapsed time so far is ignored and the soak timer starts counting down to 0 from the altered time interval value.
Holdback Type <b>Hbty</b>	The modified Holdback Band Type is applied immediately on the current segment.
Holdback Value <b>HbUL</b>	The modified Holdback Band Value is applied immediately on the current segment.

USER LINEARISATION PARAMETERS : PAGE 33	
Parameters	Effect on the running segment
Code <b>CODE</b>	0 to 9999 (Default : 0)
User Linearisation <b>ULin</b>	<b>dSbL</b> Disable <b>EnbL</b> Enable (Default : Disable)
Total Break Points <b>PntS</b>	1 to 32 (Default : 2)
Break Point Number <b>Coor</b>	1 to 32 (Default : 1)
Actual Value for Break Point (X co-ord) <b>APnt</b>	-1999 to 9999 (Default : Undefined)
Derived Value for Break Point (Y co-ord) <b>dPnt</b>	-1999 to 9999 (Default : Undefined)

TABLE- 1			
Option	Range (Min. to Max.)	Resolution	
<b>tC-U</b> J Type T/C	0 to +960°C / +32 to +1760°F	Fixed 1°C / 1°F	
<b>tC-H</b> K Type T/C	-200 to +1376°C / -328 to +2508°F		
<b>tC-t</b> T Type T/C	-200 to +385°C / -328 to +725°F		
<b>tC-r</b> R Type T/C	0 to +1770°C / +32 to +3218°F		
<b>tC-S</b> S Type T/C	0 to +1765°C / +32 to +3209°F		
<b>tC-b</b> B Type T/C	0 to +1825°C / +32 to +3218°F		
<b>tC-n</b> N Type T/C	0 to +1300°C / +32 to +2372°F		
<b>rESu</b>	Reserved for customer specific Thermocouple type not listed above.		
<b>rtd</b> 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°C / 1°F or 0.1°C / 0.1°F
<b>0-20</b> 0 to 20mA DC	-1999 to +9999 units		User settable 1 / 0.1 / 0.01 / 0.001 units
<b>4-20</b> 4 to 20mA DC			
<b>0050</b> 0 to 50mV DC			
<b>0200</b> 0 to 200mV DC			
<b>1.25</b> 0 to 1.25V DC			
<b>5.0</b> 0 to 5.0V DC			
<b>10.0</b> 0 to 10.0V DC			
<b>1-5</b> 1 to 5.0V DC			

## FRONT PANEL LAYOUT



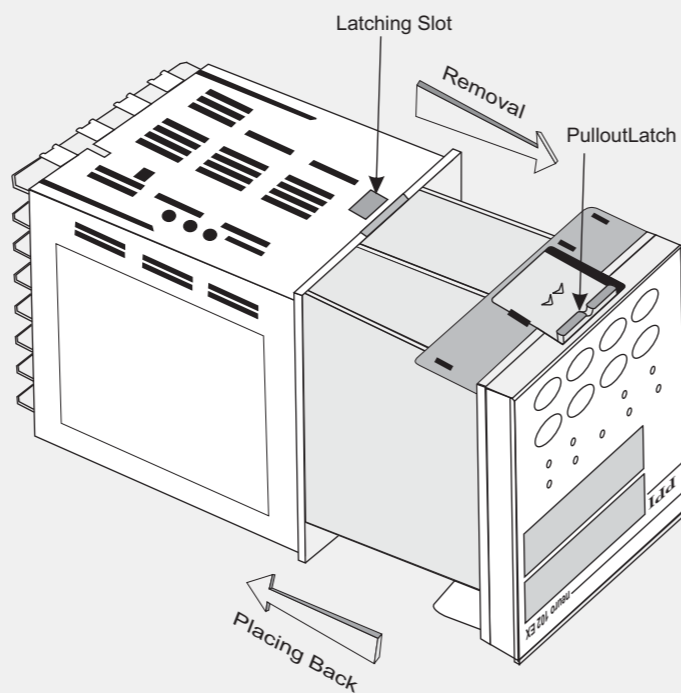
### Keys Operation

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 OR ALARM ACKNOWLEDGE	Set up Mode : Press to store the set parameter value and to scroll to the next parameter on the PAGE. Run Mode : Press to acknowledge any pending Alarm(s). This also turns off the Alarm relay.
	AUTO MANUAL	Press to toggle between Auto or Manual Control Mode.
	(1) COMMAND	Press to access parameters that are used as Commands.
	(1) OPERATOR	Press to access 'Operator-Page' parameters.
	(2) PROFILE	Press to access 'Profile Run-Time Variables'.

### PV Error Indications

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

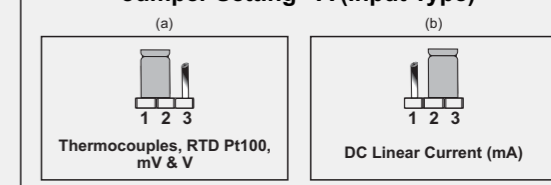
## ENCLOSURE ASSEMBLY



## JUMPER SETTINGS

### INPUT TYPE & OUTPUT-1

#### Jumper Setting - A (Input Type)



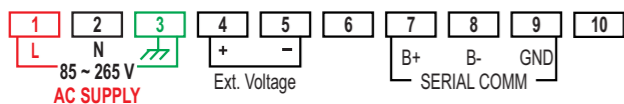
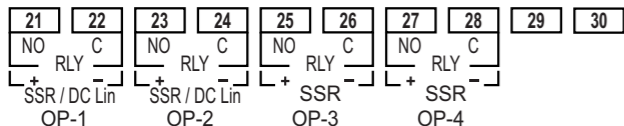
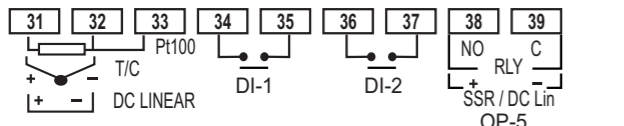
Output Type	Jumper Setting - B	Jumper Setting - C
Relay		
SSR Drive		
DC Linear Current (or Voltage)		

## ELECTRICAL CONNECTIONS

### PPI neuro 102EX

#### BACK PANEL CONNECTIONS

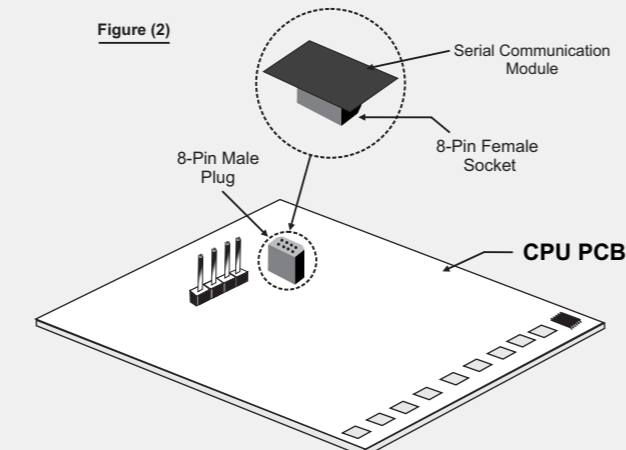
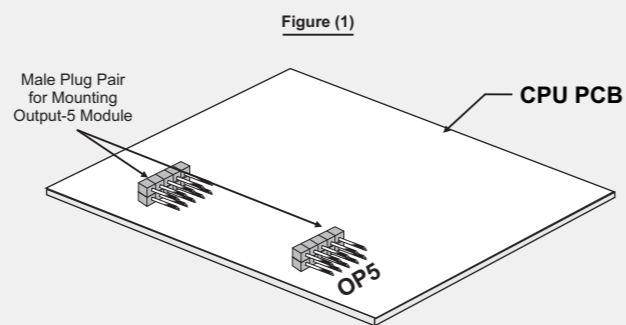
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## MOUNTING DETAILS

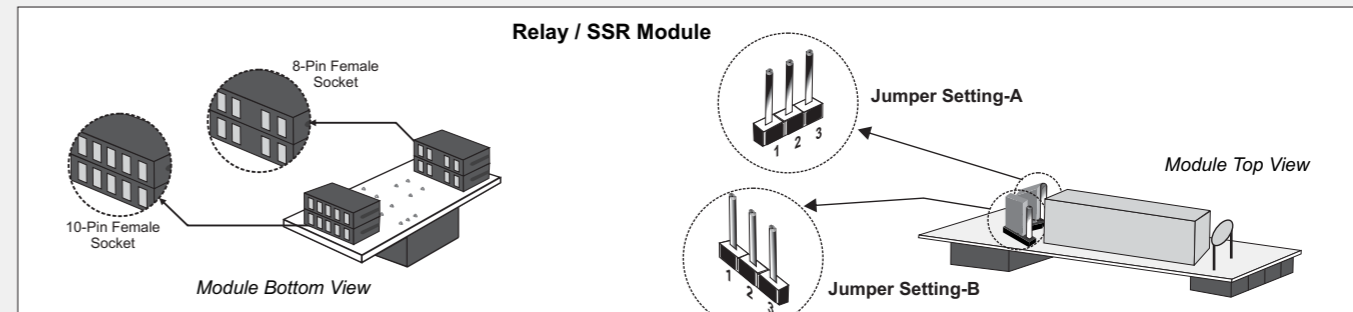
### OUTPUT-5 & SERIAL COMM. MODULE

Note  
The Output-5 Module & Serial Communication Module are mounted on either side of CPU PCB as shown in figures (1) & (2) below.



## JUMPER SETTINGS & MOUNTING DETAILS

### OUTPUT-2,3 & 4 MODULE



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

#### DC Voltage/Current Module

