

PPI Neuro 102 Plus Advanced Universal Single Loop Process Controller User Manual

[Home](#) » [PPI](#) » PPI Neuro 102 Plus Advanced Universal Single Loop Process Controller User Manual 



Contents

- [1 PPI Neuro 102 Plus Advanced Universal Single Loop Process Controller User Manual](#)
- [2 FRONT PANEL LAYOUT](#)
- [3 ENCLOSURE ASSEMBLY](#)
- [4 ELECTRICAL CONNECTIONS](#)
- [5 JUMPER SETTINGS](#)
- [6 MOUNTING DETAILS](#)
- [7 Documents / Resources](#)
 - [7.1 References](#)
- [8 Related Posts](#)

PPI Neuro 102 Plus Advanced Universal Single Loop Process Controller User Manual

INPUT/OUTPUT CONFIGURATION PARAMETERS : PAGE 12

Parameters	Settings (Default Value)
Control Action CAct	OnOff On-Off PULS Pulse PId PID (Default : PID)
Control Logic CtL	rEu Reverse dIr Direct (Default : Reverse)
Setpoint Low Limit SPLo	Min. Range to Setpoint High for the selected Input Type (Default : -199)
Setpoint High Limit SPHi	Setpoint Low to Max. Range for the selected Input Type (Default : 1376)
Sensor Break Output Power % SbOP	0 to 100 (Default : 0)
Input Type InPt	Refer Table 1 (Default : Type K)

PV Units Unit		°C °F (Default : °C)	
Signal Low SLo	Input Type	Settings	Default
	0 to 20 mA	0.00 to Signal High	0.00
	4 to 20 mA	4.00 to Signal High	4.00
	0 to 80 mV	0.00 to Signal High	0.00
	Reserved	0.0 to Signal High	0.0
	0 to 1.25 V	0.000 to Signal High	0.000
	0 to 5 V	0.000 to Signal High	0.000
	0 to 10 V	0.00 to Signal High	0.00
	1 to 5 V	1.000 to Signal High	1.000
	Signal High SHI	Input Type	Settings
0 to 20 mA		Signal Low to 20.00	20.00
4 to 20 mA		Signal Low to 20.00	20.00
0 to 80 mV		Signal Low to 80.00	80.00
Reserved		Signal Low to 80.00	80.00
0 to 1.25 V		Signal Low to 1.250	1.250
0 to 5 V		Signal Low to 5.000	5.000
0 to 10 V		Signal Low to 10.00	10.00
1 to 5 V		Signal Low to 5.000	5.000
PV Resolution rSLn		Refer Table 1 (Default : 1)	

PV Range Low rLo	-1999 to 9999 (Default : 0)
PV Range High rHi	-1999 to 9999 (Default : 1000)
Offset for PV OFSt	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9 (Default : 0)
Digital Filter Time Constant Filt	0.5 to 60.0 Seconds (in steps of 0.5 Seconds) (Default : 2.0 Sec.)

CONTROL PARAMETERS : PAGE 10	
Parameters	Settings (Default Value)
Proportional Band Pb	1 to 9999 counts (Default : 500)
Integral Time It	0 to 3600 Seconds (Default : 100 Sec.)
Derivative Time dIt	0 to 600 Seconds (Default : 16 Sec.)
Cycle Time Ct	0.5 to 100.0 Seconds (in steps of 0.5 secs.) (Default : 10.0 Sec.)

Parameters	Settings (Default Value)
Relative Cool Gain rELC	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time CCLt	0.5 to 100.0 Seconds (in steps of 0.5 secs.) (Default : 10.0 sec.)
Hysteresis HYSt	1 to 9999 counts (Default : 2)
Pulse Time PLt	Pulse ON Time to 120.0 Seconds (Default : 2.0 sec.)
Pulse On Time On.t	0.1 to Value set for Pulse Time (Default : 1.0)
Cool Hysteresis CHYS	1 to 9999 counts (Default : 2)
Cool Pulse Time CPLt	Cool ON Time to 120.0 Seconds (Default : 2.0)
Cool Pulse ON Time COn.t	0.1 to Value set for Cool Pulse Time (Default : 1.0)

Heat Power Low PL	0 to Heat Power High (Default : 0)
Heat Power High PH	Heat Power Low to 100 (Default : 100)
Cool Power Low CPL	0 to Cool Power High (Default : 0)
Cool Power High CPH	Cool 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 o5. h	d5bL Disable EnbL Enable (Default : Disable)

Overshoot Inhibit Factor 0.1HF	1.0 to 2.0 (Default : 1.0)
SP Adjustment on Lower Readout SP.Lr	dSbL Disable EnbL Enable (Default : Enable)
SP Adjustment on Operator Page SP.OP	dSbL Disable EnbL Enable (Default : Enable)
Manual Mode HRnd	dSbL Disable EnbL Enable (Default : Disable)
Alarm SP Adjustment on Operator Page AL.SP	dSbL Disable EnbL Enable (Default : Disable)
Standby Mode Stby	dSbL Disable EnbL Enable (Default : Disable)
Profile Abort Command on Page - 1 Abt	dSbL Disable EnbL Enable (Default : Disable)

Parameters	Settings (Default Value)
Baud Rate baud	24 2400 48 4800 96 9600 192 19200 384 38400 576 57600 (Default : 9.6)
Communication Parity PAR.	none None Even Even Odd Odd (Default : Even)
Controller ID Number id	1 to 127 (Default : 1)
Communication Write Enable Con.E	no No YES Yes (Default : No)

OP1, OP2 & OP3 FUNCTION PARAMETERS : PAGE 15

Parameters	Settings (Default Value)
Output-1 Type OP1t	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-2 Function Selection OP2F	nonE None ALrñ Alarm EOP End of Profile C.Con Cool Control (Default : None)
Alarm-1 Logic AILG	norñ Normal rEu Reverse (Default : Normal)

Output-2 Type OP2.t	RLY Relay SSR SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
OP2 Event Status 02.E.S.	On ON OFF OFF (Default : ON)
OP2 Event Time Units 02.Ut	SEC Seconds min Minutes Hour Hours (Default : Seconds)
OP2 Event Time 02.E.t.	0 to 9999 (Default : 0)

Parameters	Settings (Default Value)
Output-3 Function Selection OP3.F	none None AL_2 Alarm-2 EOP End of Profile rec Recorder (Default : Alarm)
Alarm-2 Logic A2.LG	norm Normal rev Reverse (Default : Normal)
OP3 Event Status OP3.E.S.	On ON OFF OFF (Default : ON)
OP3 Event Time Units OP3.UT	SEC Seconds min Minutes Hour Hours (Default : Seconds)
OP3 Event Time OP3.E.T.	0 to 9999 (Default : 0)

Recorder Output Type REC.O	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)	

ALARM AND RETRANSMISSION (RECORDER) 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 bAnd Window Band (Default : None)
Alarm-1 Setpoint RISP	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Deviation Band RIdE	For DC mA/mV/V : -1999 to 9999 counts For Thermocouples/RTD : -999 to 999 or -1.999 to 999.9 (Default : 5)

Alarm-1 Window Band ALB	For DC mA/mV/V : 3 to 9999 counts For Thermocouples/RTD : 3 to 999 or 0.3 to 999.9 (Default : 5)
Alarm-1 Hysteresis ALH	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9 (Default : 2)
Alarm-1 Inhibit ALI	no No YES Yes (Default : No)
Alarm-2 Type AL2	none None P_Lo Process Low P_Hi Process High dE Deviation Band bAnd Window Band (Default : None)

Parameters	Settings (Default Value)
Alarm-2 Setpoint A2SP	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Deviation Band A2dE	For DC mA/mV/V : -1999 to 9999 counts For Thermocouples/RTD : -999 to 999 or -1.999 to 999.9 (Default : 5)
Alarm-2 Window Band A2bA	For DC mA/mV/V : 3 to 9999 counts For Thermocouples/RTD : 3 to 999 or 0.3 to 999.9 (Default : 5)
Alarm-2 Hysteresis A2HY	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9 (Default : 2)
Alarm-2 Inhibit A2, I	no No YES Yes (Default : No)
PV/SP Selection For Retransmission trns	PV Process Value SP Setpoint (Default : Process Value)

Recorder (Retransmission) Low rECL	Min. to Max. Range Specified for the Selected Input Type (Default : -199)
Recorder (Retransmission) High rECH	Min. to Max. Range Specified for the Selected Input Type (Default : 1376)

PROFILE CONFIGURATION PARAMETERS : PAGE 16

Parameters	Settings (Default Value)
Profile mode Enable PrOF	dSbL Disable EnbL Enable (Default : Disable)
Number of Segments n.SEG	1 to 16 (Default : 16)
Number of Repeats n.rPt	1 to 9999 (Default : 1)
Common Holdback Co.Hb	no No YES Yes (Default : Yes)

Output Off OP.OF	no No YES Yes (Default : No)
Power Fail Strategy Pr.FL	Abrt Abort Cont Continue (Default : Continue)

PROFILE SETTING PARAMETERS : PAGE 14	
Parameters	Settings (Default Value)
Segment Number SEG.n	1 to 16 (Default : 1)
Target Setpoint t.SP	Min. to Max. Range specified for the selected Input Type (Default : -199)
Time Interval t.inE	0 to 9999 Minutes (Default : 0)
Holdback Type Hb.tY	none None UP Up dn Down both Both (Default : None)
Holdback Value Hb.vL	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9 (Default : 1)

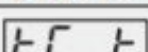
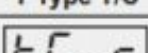
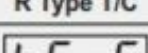
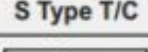
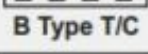
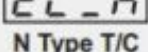
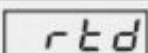
ON-LINE ALTERATIONS : PAGE 1

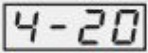
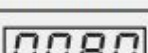
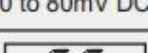
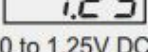
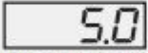
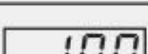
Parameters	Settings (Default Value)
End of Profile Acknowledge EOP.A	no No YES Yes (Default : No)
Profile Start Command Start	no No YES Yes (Default : No)
Profile Abort Command Abort	
Profile Pause Command PAUS	no No YES Yes (Default : No)
Segment Skip Command SKIP	no No YES Yes (Default : No)
Segment Time Interval 1.0E	0 to 9999 Minutes

Segment Holdback Type Hb.tY	none None UP Up dn Down both Both
Segment Band Value Hb.uL	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9
Profile Repeat Counter b.rPt	1 to 9999

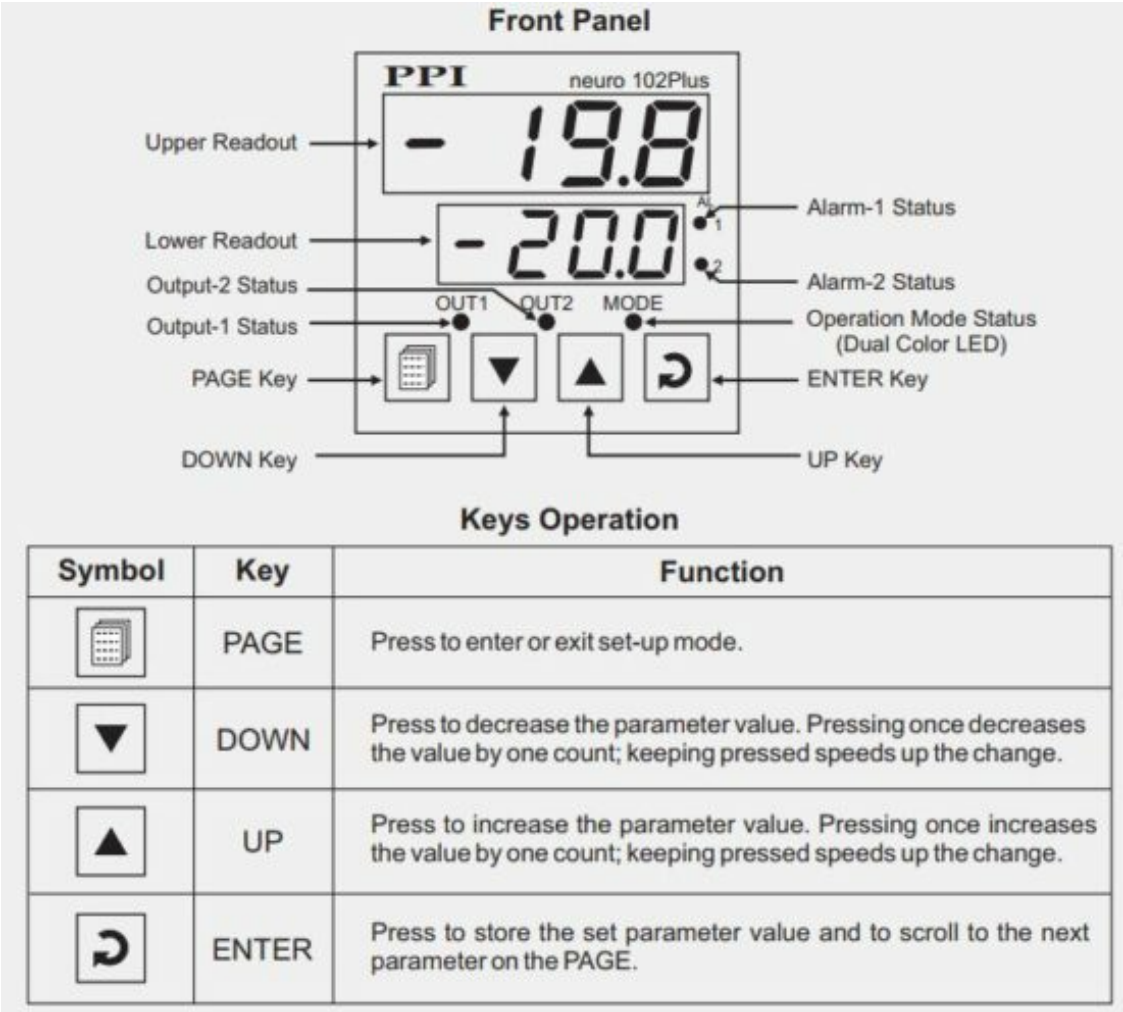
OPERATOR PAGE PARAMETERS : PAGE 0	
Parameters	Settings (Default Value)
(De)Activate Standby Mode Stby	no No YES Yes (Default : No)
Control Setpoint SP	Setpoint Low Limit to Setpoint High Limit (Default : -1999)
Alarm-1 Setpoint AlSP	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)

Alarm-1 Deviation Band 	For DC mA/mV/V: -1999 to 9999 counts For Thermocouples/RTD: -999 to 999 or -1.999 to 999.9 (Default : 0)
Alarm-1 Window Band 	For DC mA/mV/V: 3 to 9999 counts For Thermocouples/RTD: 3 to 999 or 0.3 to 999.9 (Default : 0)
Alarm-2 Setpoint 	Same as that for Alarm-1 above but applied to Alarm-2.
Alarm-2 Deviation Band 	
Alarm-2 Window Band 	
Auxiliary Control Setpoint 	Setpoint Low Limit to Setpoint High Limit (Default : -1999)

TABLE- 1		
Option	Range (Min. to Max.)	Resolution
 J Type T/C	0 to +960°C / +32 to +1760°F	Fixed 1°C / 1°F
 K Type T/C	-200 to +1376°C / -328 to +2508°F	
 T Type T/C	-200 to +385°C / -328 to +725°F	
 R Type T/C	0 to +1770°C / +32 to +3218°F	
 S Type T/C	0 to +1765°C / +32 to +3209°F	
 B Type T/C	0 to +1825°C / +32 to +3092°F	
 N Type T/C	0 to +1300°C / +32 to +2372°F	
 Reserved for customer specific Thermocouple type not listed above.		
 3-wire, 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
 0 to 20mA DC		

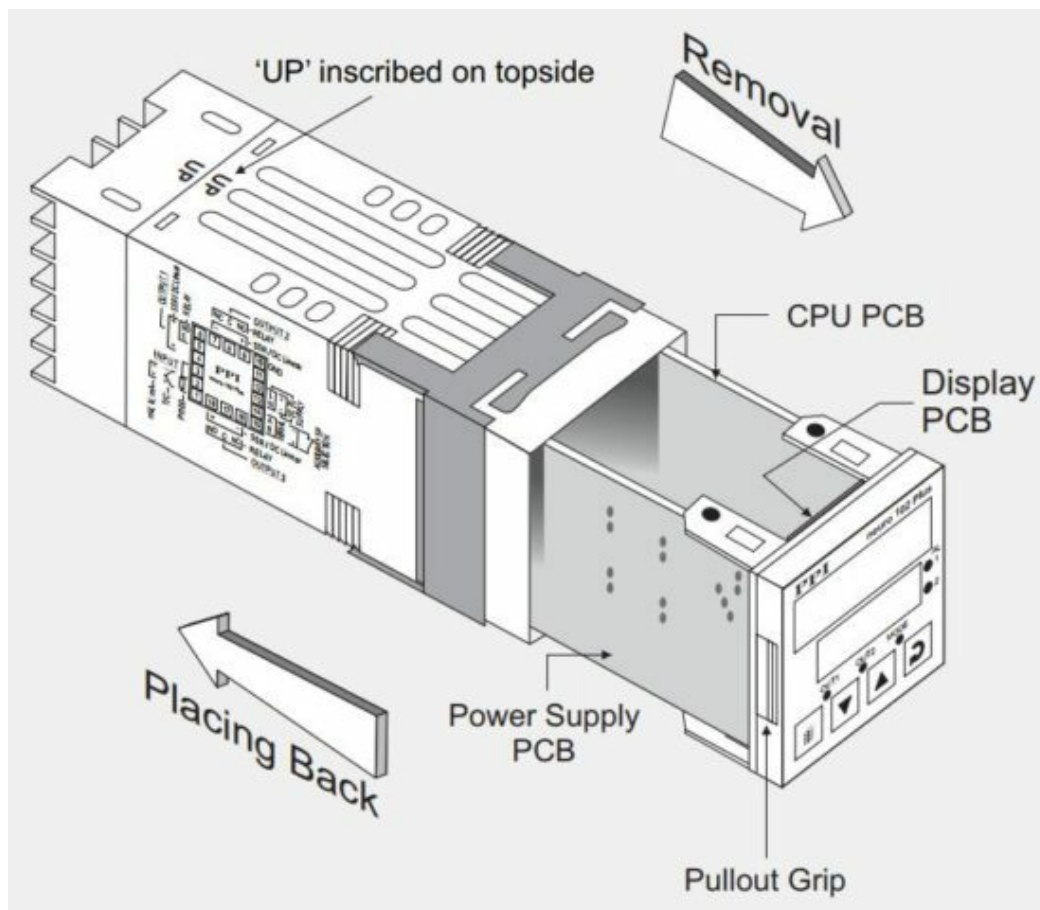
 4 to 20mA DC	-1999 to +9999 units	User settable 1 / 0.1 / 0.01/ 0.001 units
 0 to 80mV DC		
 Reserved		
 0 to 1.25V DC		
 0 to 5.0V DC		
 0 to 10.0V DC		
 1 to 5.0V DC		

FRONT PANEL LAYOUT

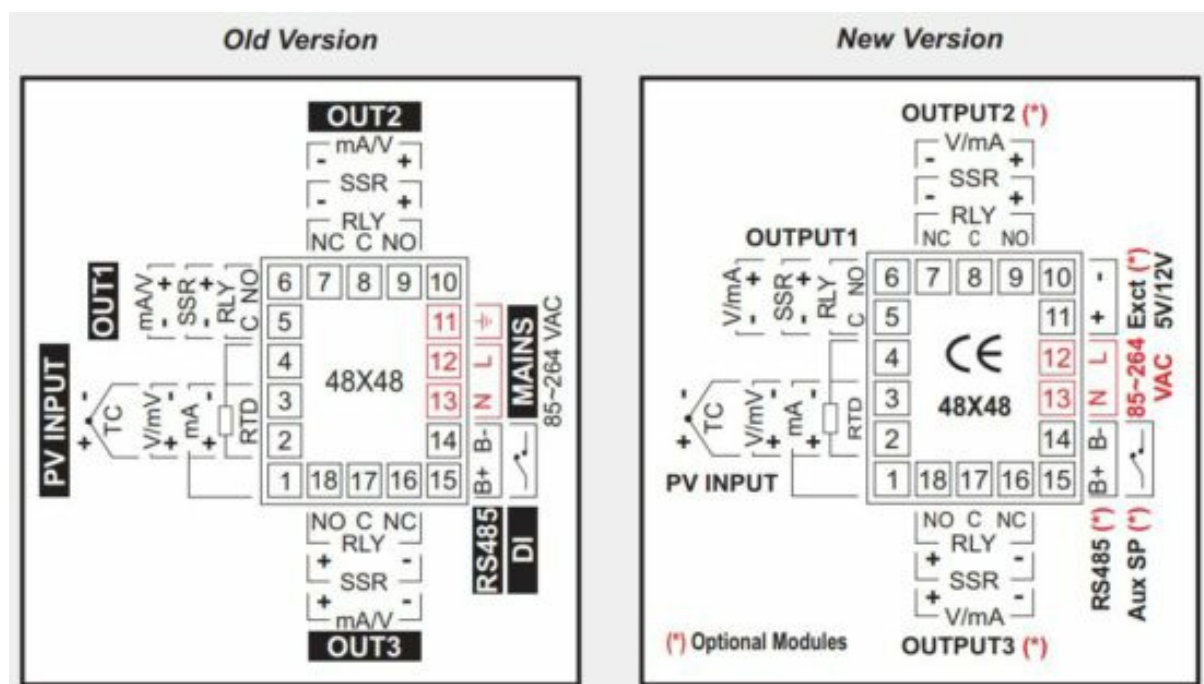


PV Error Indications	
Message	PV Error Type
Or	Over-range (PV above Max. Range)
Ur	Under-range (PV below Min. Range)
OPEN	Open (Sensor open / broken)

ENCLOSURE ASSEMBLY

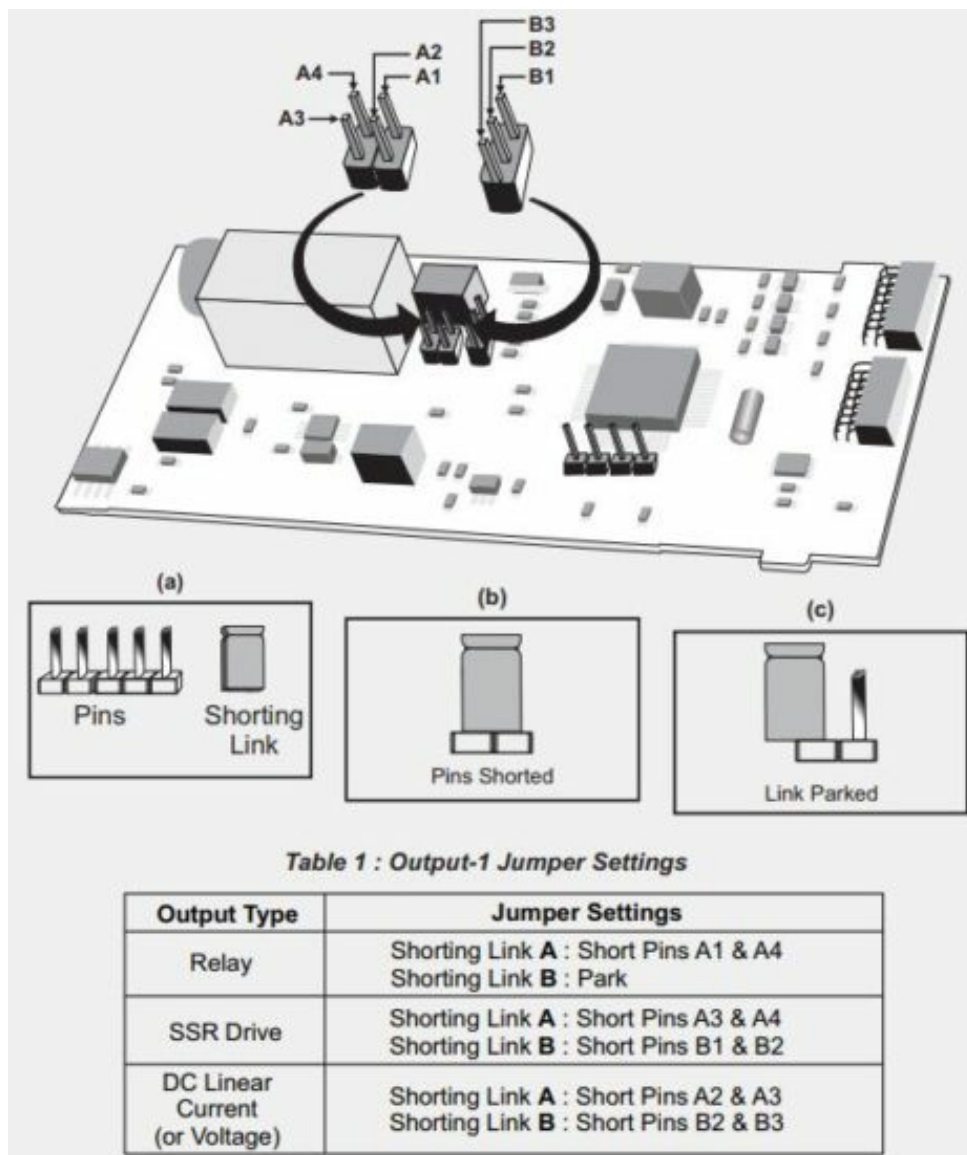


ELECTRICAL CONNECTIONS

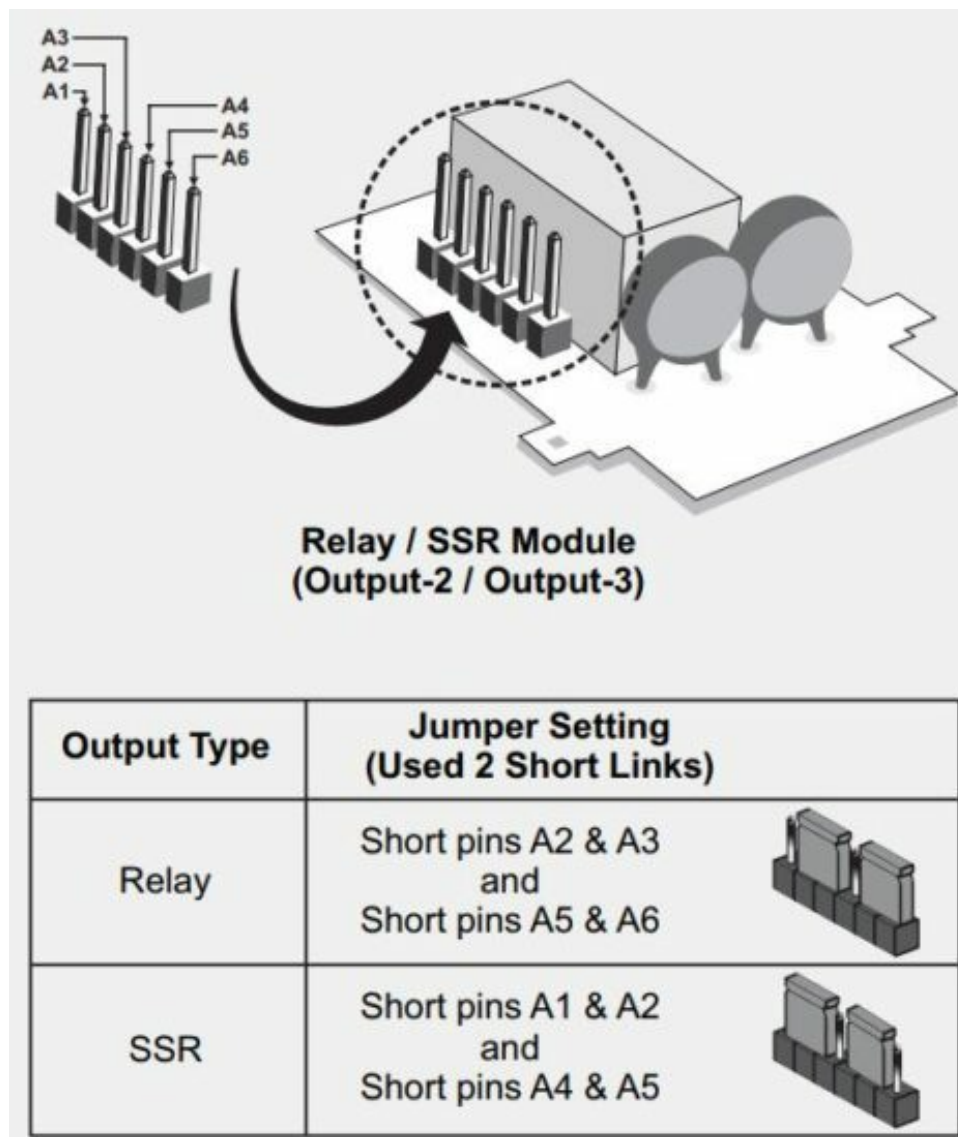


JUMPER SETTINGS

OUTPUT-1

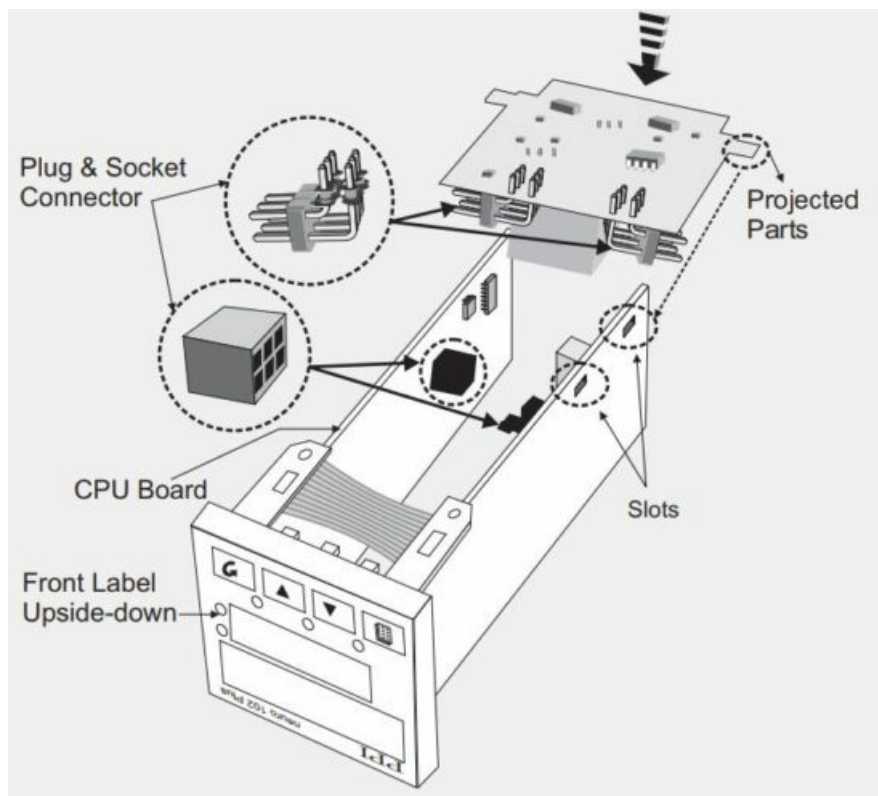


JUMPER SETTINGS OUTPUT-2 & 3

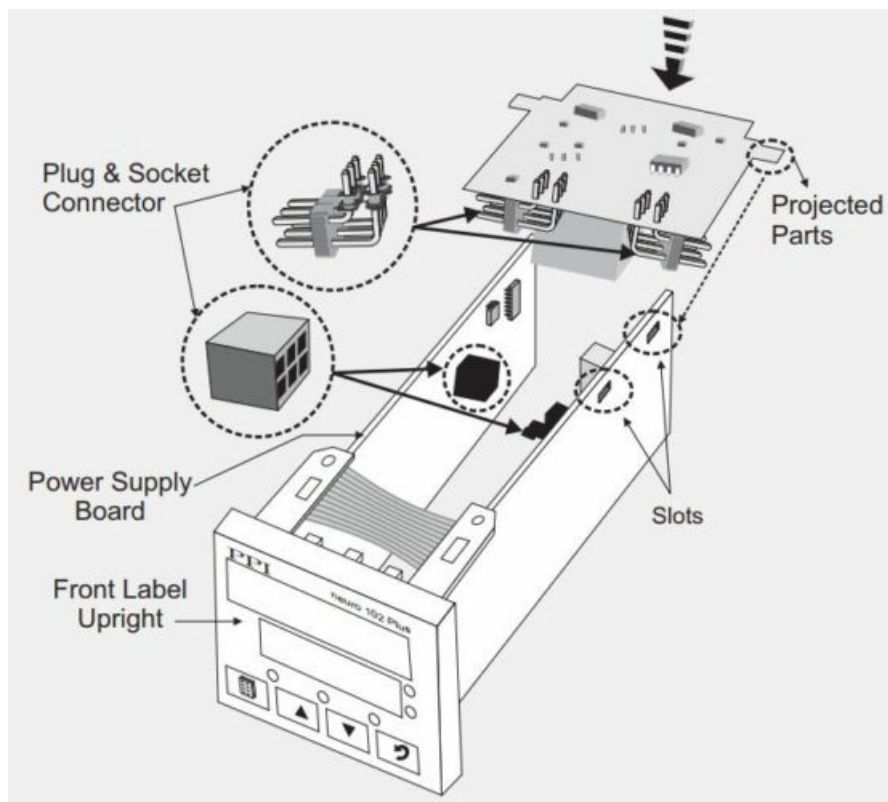


MOUNTING DETAILS

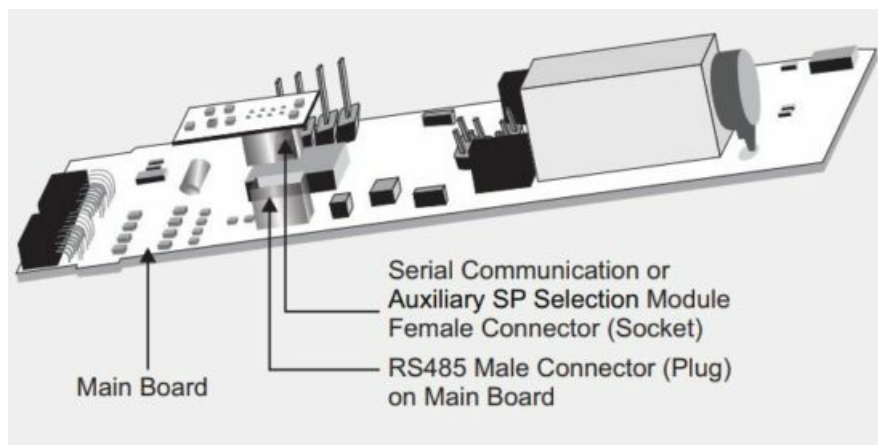
OUTPUT-2 MODULE



MOUNTING DETAILS OUTPUT-3 MODULE

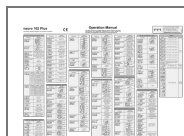


MOUNTING DETAILS SERIAL COMM. MODULE



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References

- [Factory Automation Products India | Automation Solutions in India](#)