PPI Neuro 102 48×48 Universal Single Loop Process Controller User Manual

Contents

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This brief manual is primarily meant for quick reference to wiring connections and parameter searching. For more details on operation and application; please log on to **www.ppiindia.net**

PARAMETERS

CONFIGURATION PARAMETERS

Parameters	Settings (Default Value)
Control Output Type C_OP	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 °F (Default : °C)
Resolution for PV rSLn	Refer Table 1 (Default : 1)
PV Range Low r.Lo	-1999 to 9999 (Default : 0)
PV Range High r.Hi	-1999 to 9999 (Default : 1000)
Setpoint Low Limit SP.Lo	Min. Range for the selected Input Type to Setpoint High Limit (Default : -200)

Setpoint High Limit SP.Hi	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 Fi Lt	0.5 to 25.0 Seconds (in steps of 0.5 Seconds) (Default : 1.0 Sec.)
Sensor Break (Open) Strategy Sb.rP	Sb.OP Sensor Break Output Power HOLd Hold (Default : Sensor Break Output Power)
Sensor Break Output Power Sb.OP	-100.0 to 100.0 (Default : 0.0)

CONTROL PARAMETERS

Parameters	Settings (Default Value)
Proportional Band Pb	0 to 9999 (Default : 50)
Hysteresis HYSt	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 rEL.C	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time C.Ct	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 C.PL	0 to Power High (Default : 0)
Cool Power High C.PH	Power Low to 100 (Default : 100)

SUPERVISORY PARAMETERS

Parameters	Settings (Default Value)
Self-Tune Command tUnE	no No YES Yes (Default : No)
Overshoot Inhibit oS.i h	dSbL Disable EnbL Enable (Default : Disable)
Overshoot Inhibit Factor Oi h.F	1.0 to 2.0 (Default : 1.2)
Set-up Mode (SP Adjustment on Lower Readout) SP.Lr	EnbL Enable dSbL Disable (Default : Enable)

SP Adjustment on Operator Page SP.OP	EnbL Enable dSbL Disable (Default : Enable)
Manual (Hand) Mode HAnd	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 Operator Page AbrT	dSbL Disable EnbL Enable (Default : Disable)
Auxiliary Setpoint or Serial Comm. Option Selection OPtn	nonE None SrL.C Serial Comm. AU.SP Auxiliary Setpoint (Default : None)
Baud Rate bAUd	1.2 1200 2.4 2400 4.8 4800 9.6 9600 (Default : 9.6)
Controller ID Number Id	1 to 127 (Default : 1)
Communication Write Enable Con.E	no No YES Yes (Default : No)

OP2 & OP3 FUNCTION PARAMETERS

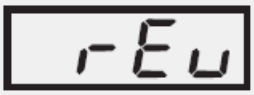
Parameters	Settings (Default Value)
Output-2 Function Selection OP2.F	ALrn Alarm C.Con Cool Control (Default : Alarm)
Output-2 Type OP2.t	rLY Relay SSr SSR 0-20 0 - 20mA 4-20 4 - 20mA 0-5 0 - 5 V 0-10 0 - 10 V (Default : Relay)
Output-3 Function Selection OP3.F	ALrn Alarm rEC Recorder Output (Default : Alarm)

Recorder Output Transmission trnS	Pv Process Value SP Setpoint (Default : Process Value)
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)
Recorder Low rEC.L	Min. to Max. Range Specified for the Selected Input Type (Default : -200)
Recorder High rEC.H	Min. to Max. Range Specified for the Selected Input Type (Default : 1300)

ALARM PARAMETERS

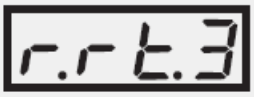
Parameters	Settings (Default Value)
Alarm-1 Type AL_1	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bAnd Window Band EOP End of Profile (Default : None)
Alarm-1 Setpoint A1.SP	Min. to Max.Range specified for the selected Input Type (Default : For Process Low: -200 For Process High: 1300)
Alarm-1 Deviation Band A1.dE	-999 to 999 (Default : 3)
Alarm-1 Band A1.bA	3 to 999 (Default : 3)

Alarm-1 Logic A 1.L	dir Direct rEu Reverse (Default : Direct)
Alarm-1 Inhibit A 1.i h	YES Yes no No (Default : Yes)
Alarm-2 Type AL_2	nonE None P_Lo Process Low P_Hi Process High dE Deviation Band bAnd Window Band EOP End of Profile (Default : None)

Parameters	Settings (Default Value)
Alarm-2 Setpoint 	Min. to Max. Range specified for the selected Input Type (Default : For Process Low: -200 For Process High: 1300)
Alarm-2 Deviation 	-999 to 999 (Default : 3)
Alarm-2 Band 	3 to 999 (Default : 3)
Alarm-2 Hysteresis 	1 to 999 (Default : 2)
Alarm-2 Logic 	 Direct  Reverse (Default : Direct)

PROFILE PARAMETERS

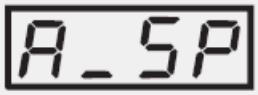
Parameters	Settings (Default Value)
Profile mode selection PrOF	dSbL Disable EnbL Enable (Default : Disable)
Ramp Hold Band r.bnd	0 to 250 (Default : 0)
Soak Hold Band S.bnd	0 to 250 (Default : 0)
Ramp Rate-1 r.rt.1	0.00 to 99.99 (Default : 0.00)
Target Sepoint-1 tSP.1	Min. to Max. Range Specified For the Selected Input Type (Default : -200)

Soak Time-1 	0 to 9999 (Default : 0)
Ramp Rate-2 	0.00 to 99.99 (Default : 0.00)
Target Sepoint-2 	Min. to Max. Range Specified For the Selected Input Type (Default : -200)
Soak Time-2 	0 to 9999 (Default : 0)
Ramp Rate-3 	0.00 to 99.99 (Default : 0.00)
Target Sepoint-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.rt.4	0.00 to 99.99 (Default : 0.00)
Target Sepoint-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 OP.OF	no No YES Yes (Default : No)

OPERATOR PAGE PARAMETERS

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)

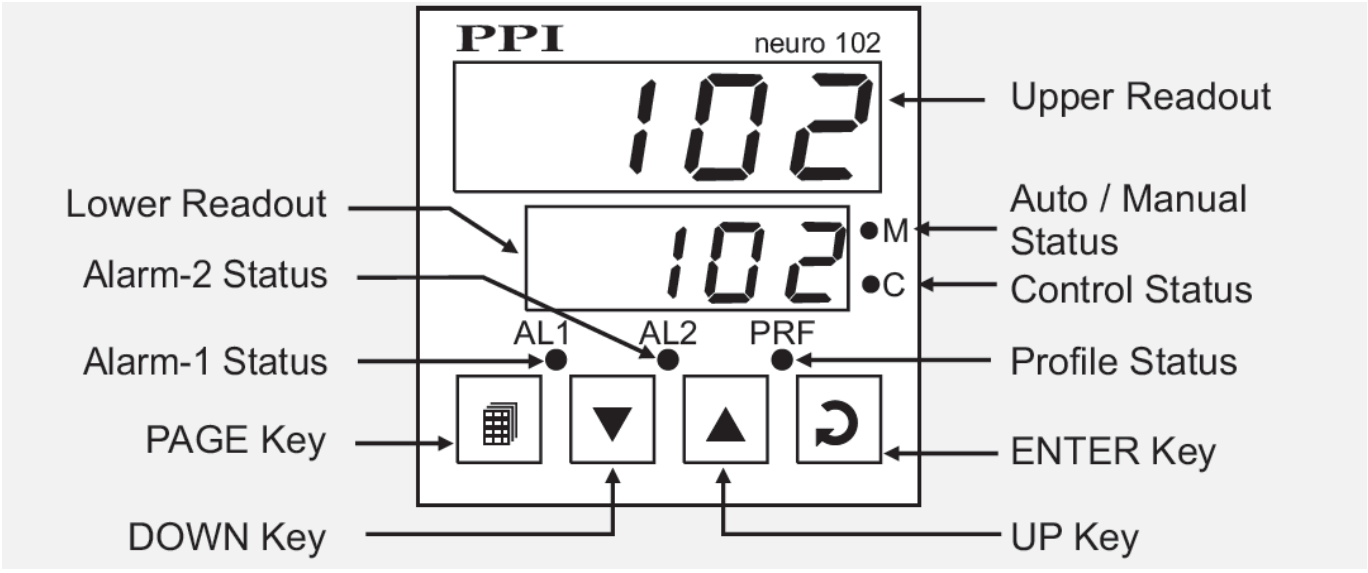
Auxiliary Setpoint 	Setpoint Low to Setpoint High (Default : -200)
Alarm-1 Setpoint 	Throughout the range for the selected Input Type (Default : For Process Low : -200 For Process High : 1300
Alarm-1 Deviation 	-999 to 999 (Default : 3)
Alarm-1 Band 	3 to 999 (Default : 3)
Alarm-2 Setpoint 	Throughout the range for the selected Input Type (Default : For Process Low : -200 For Process High : 1300)
Alarm-2 Deviation 	-999 to 999 (Default : 3)
Alarm-2 Band 	3 to 999 (Default : 3)

Option	Range (Min. to Max.)	Resolution
 J Type T/C	0 to +760°C / +32 to +1400°F	Fixed 1°C / 1°F
 K Type T/C	-200 to +1300°C / -328 to +2372°F	
 T Type T/C	-200 to +350°C / -328 to +662°F	
 R Type T/C	0 to +1700°C / +32 to +3092°F	
 S Type T/C	0 to +1700°C / +32 to +3092°F	
 B Type T/C	+200 to +1700°C / +392 to +3092°F	
 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°C / 1°F or 0.1°C / 0.1°F
0-20 0 to 20mA DC	-1999 to +9999 units	User settable 1 / 0.1 / 0.01/ 0.001 units
4-20 4 to 20mA DC		
0.050 0 to 50mV DC		
0.200 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

Front Panel



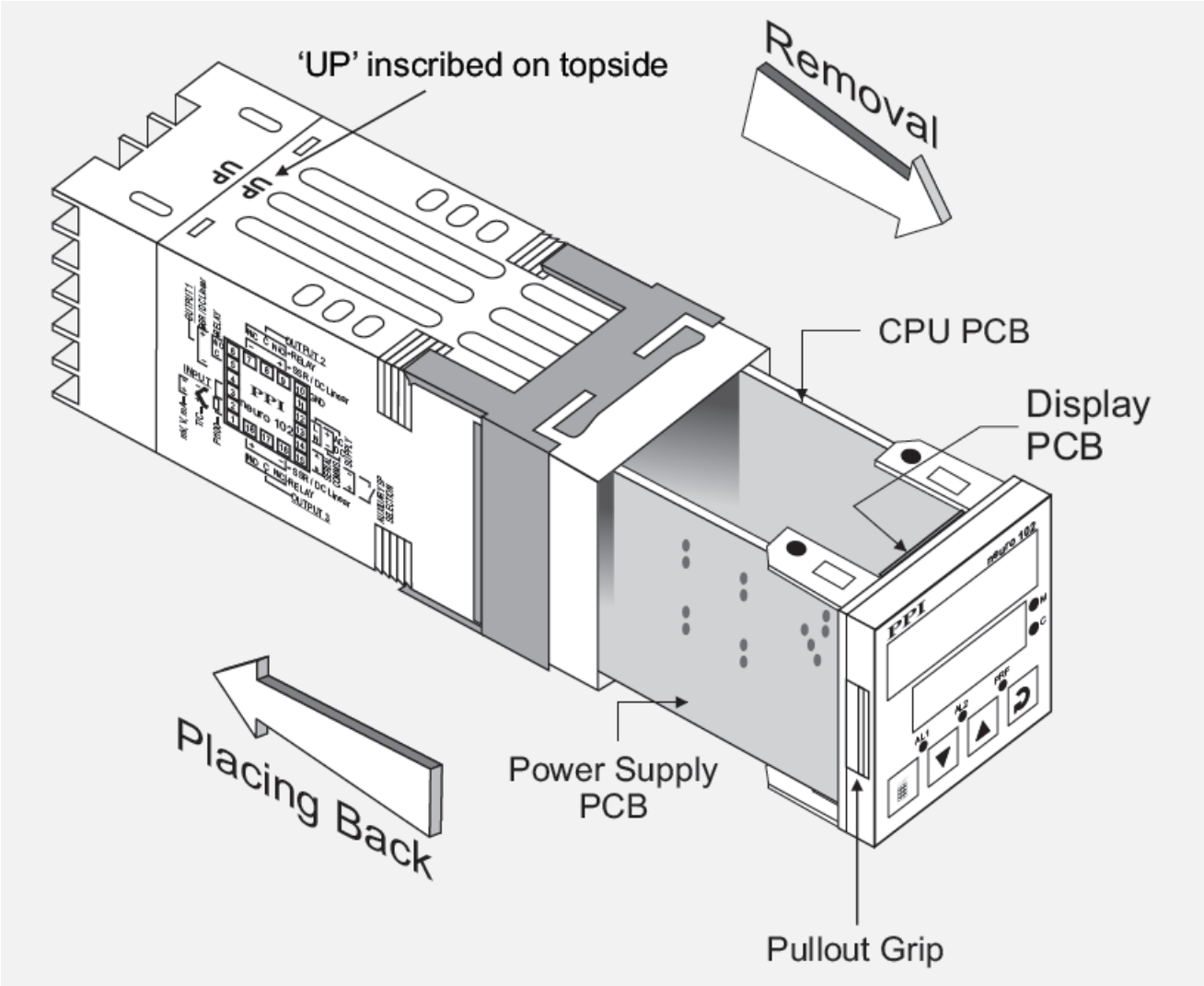
Keys Operation

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

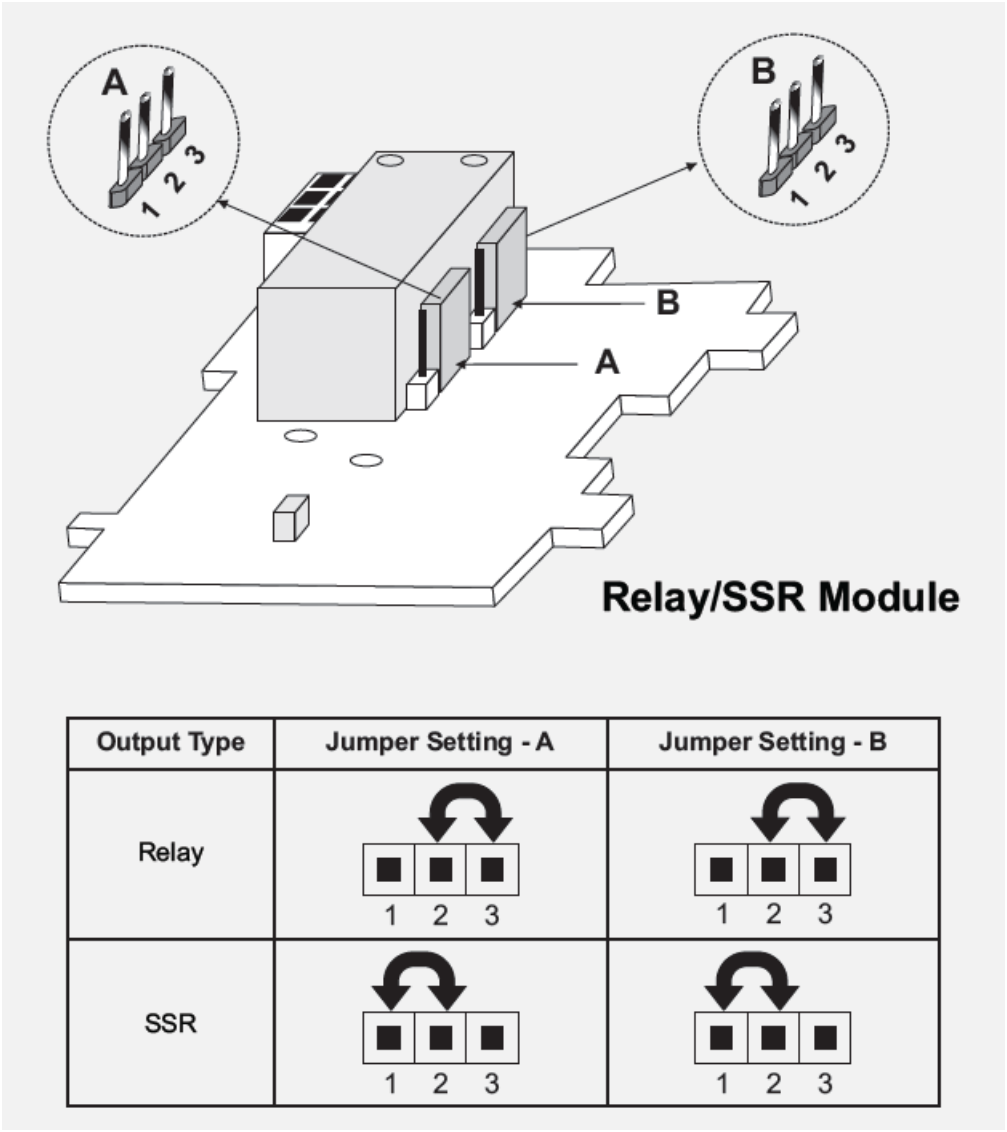
Message	PV Error Type
Or	Over-range (**PV** above Max. Range)
Ur	Under-range (**PV** below Min. Range)
OPEn	Open (Sensor open / broken)

ENCLOSURE ASSEMBLY



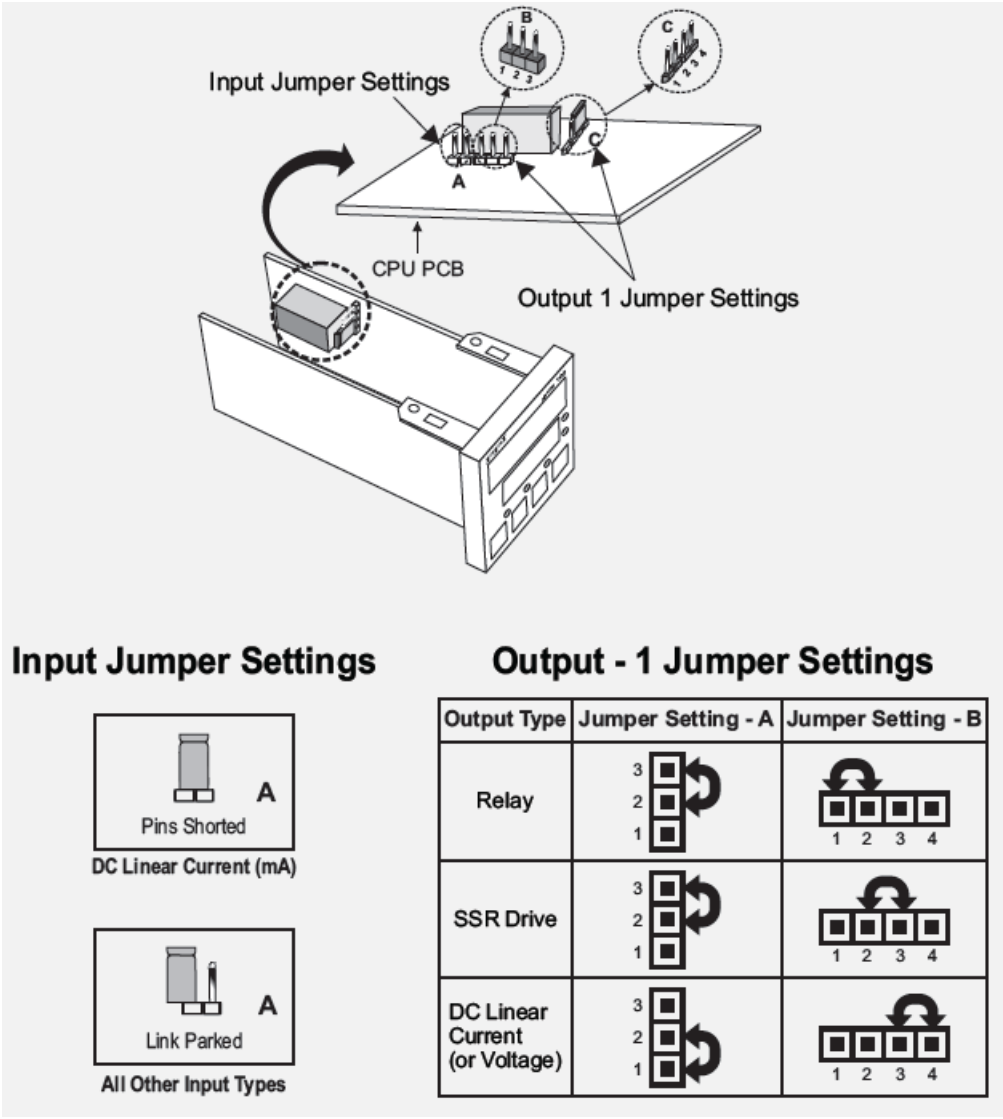
JUMPER SETTINGS

OUTPUT-2 & OUTPUT-3



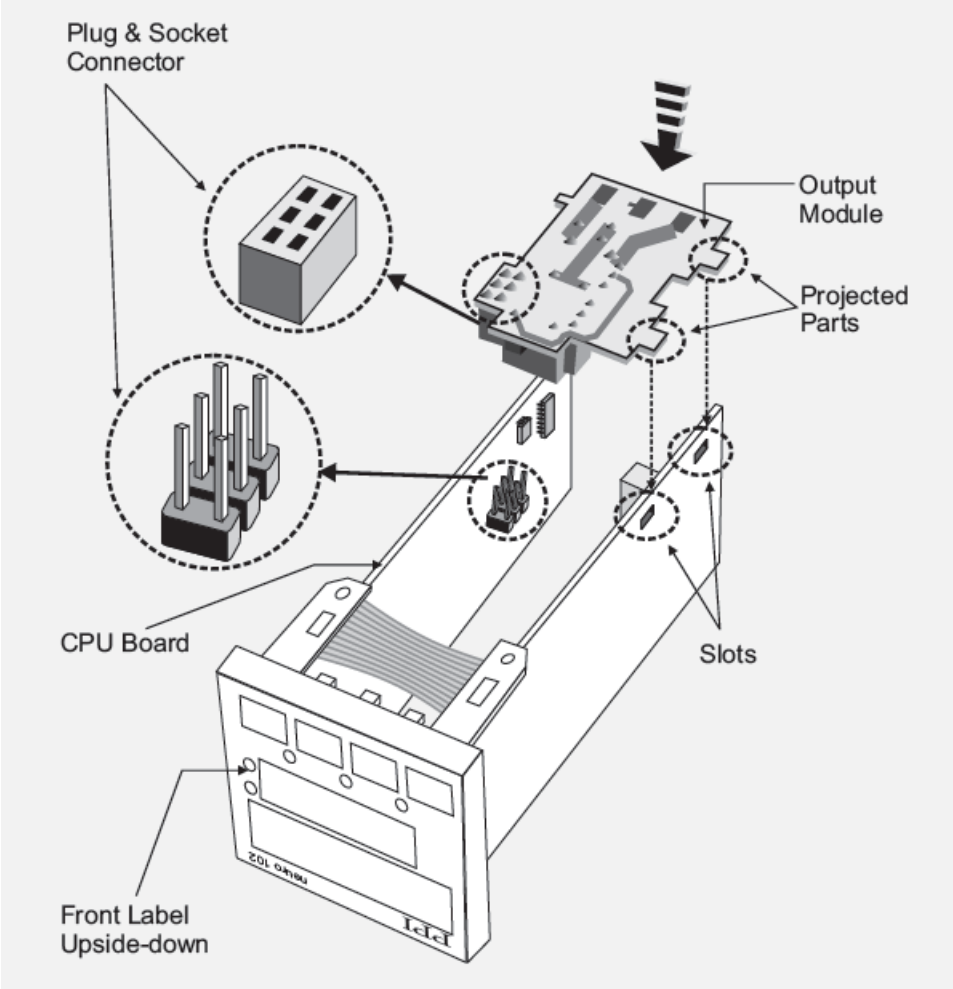
Output Type	Jumper Setting - A	Jumper Setting - B
Relay	1 2 3	1 2 3
SSR	1 2 3	1 2 3

INPUT & OUTPUT-1

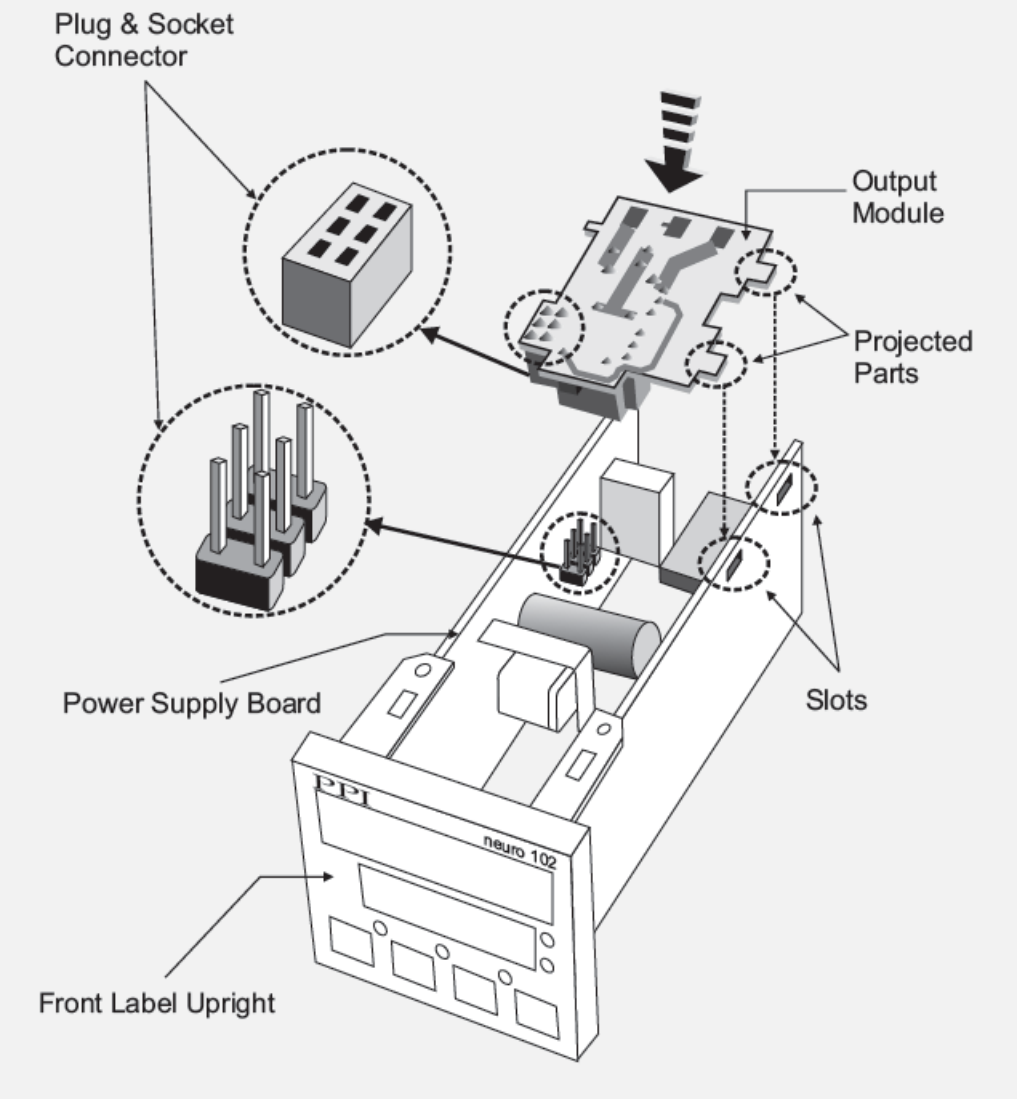


MOUNTING DETAILS

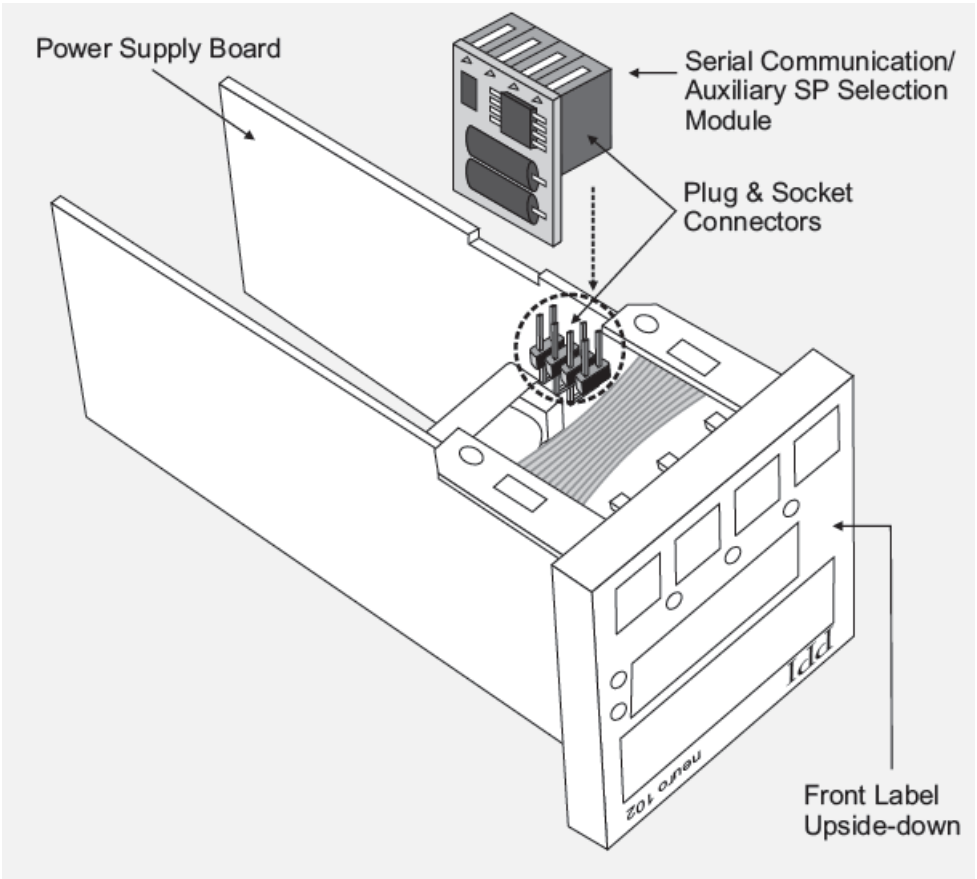
OUTPUT-3 MODULE



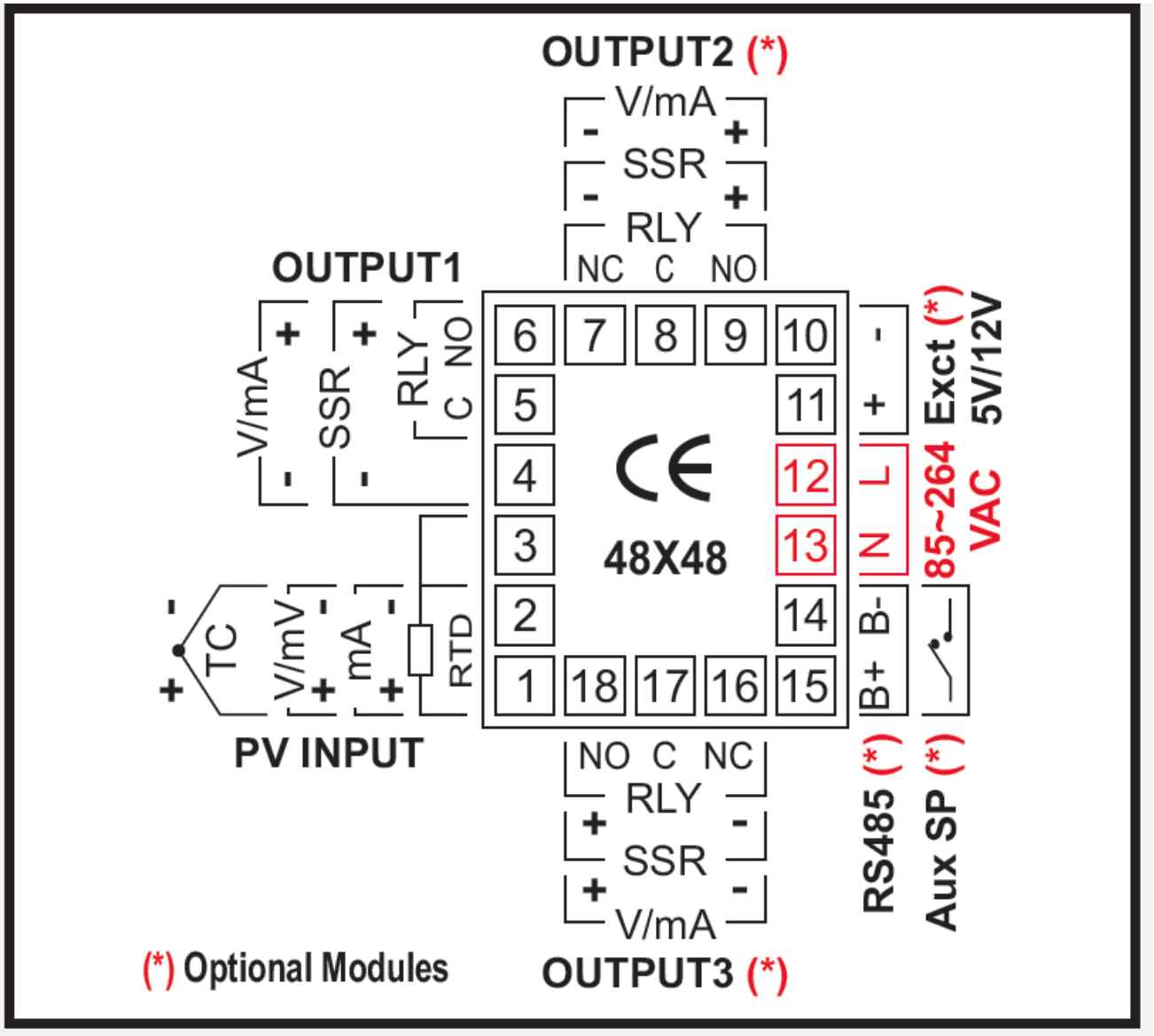
OUTPUT-2 MODULE



SERIAL COMM. MODULE



ELECTRICAL CONNECTIONS



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Documents / Resources

	PPI Neuro 102 48x48 Universal Single Loop Process Controller [pdf] User Manual Neuro 102 48x48 Universal Single Loop Process Controller, Neuro 102 48x48, Universal Single Loop Process Controller, Single Loop Process Controller, Loop Process Controller, Process Co ntroller, Controller

References

- Factory Automation Products India | Automation Solutions in India