



INPUT/OUTPUT CONFIGURATION PARAMETERS : PAGE 12

Parameters	Settings (Default Value)																											
Control Action [CACT]	[OnOff] On-Off [PULS] Pulse [PID] PID (Default : PID)																											
Control Logic [CTRL]	[rEv] Reverse (Default : Reverse) [dir] Direct																											
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] °C (Default : °C) [°F] °F																											
Signal Low [SLo]	<table border="1"> <thead> <tr> <th>Input Type</th> <th>Settings</th> <th>Default</th> </tr> </thead> <tbody> <tr><td>0 to 20 mA</td><td>0.00 to Signal High</td><td>0.00</td></tr> <tr><td>4 to 20 mA</td><td>4.00 to Signal High</td><td>4.00</td></tr> <tr><td>0 to 80 mV</td><td>0.00 to Signal High</td><td>0.00</td></tr> <tr><td>Reserved</td><td>0.0 to Signal High</td><td>0.0</td></tr> <tr><td>0 to 1.25 V</td><td>0.000 to Signal High</td><td>0.000</td></tr> <tr><td>0 to 5 V</td><td>0.000 to Signal High</td><td>0.000</td></tr> <tr><td>0 to 10 V</td><td>0.00 to Signal High</td><td>0.00</td></tr> <tr><td>1 to 5 V</td><td>1.000 to Signal High</td><td>1.000</td></tr> </tbody> </table>	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
Input Type	Settings	Default																										
0 to 20 mA	0.00 to Signal High	0.00																										
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Signal High [SHi]	<table border="1"> <thead> <tr> <th>Input Type</th> <th>Settings</th> <th>Default</th> </tr> </thead> <tbody> <tr><td>0 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr> <tr><td>4 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr> <tr><td>0 to 80 mV</td><td>Signal Low to 80.00</td><td>80.00</td></tr> <tr><td>Reserved</td><td>Signal Low to 80.00</td><td>80.00</td></tr> <tr><td>0 to 1.25 V</td><td>Signal Low to 1.250</td><td>1.250</td></tr> <tr><td>0 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr> <tr><td>0 to 10 V</td><td>Signal Low to 10.00</td><td>10.00</td></tr> <tr><td>1 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr> </tbody> </table>	Input Type	Settings	Default	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
Input Type	Settings	Default																										
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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 [dt]	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 [CCt]	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 [Ont]	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 [COnT]	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 (Default : No) [YES] Yes
Overshoot Inhibit [oS.h]	[dSbL] Disable (Default : Disable) [EnbL] Enable
Overshoot Inhibit Factor [O.hF]	1.0 to 2.0 (Default : 1.0)
SP Adjustment on Lower Readout [SP.Lr]	[dSbL] Disable (Default : Disable) [EnbL] Enable
SP Adjustment on Operator Page [SP.OP]	[dSbL] Disable (Default : Disable) [EnbL] Enable
Manual Mode [HRnd]	[dSbL] Disable (Default : Disable) [EnbL] Enable
Alarm SP Adjustment on Operator Page [AL.SP]	[dSbL] Disable (Default : Disable) [EnbL] Enable
Standby Mode [StbY]	[dSbL] Disable (Default : Disable) [EnbL] Enable
Profile Abort Command on Page - 1 [Abrt]	[dSbL] Disable (Default : Disable) [EnbL] Enable

Parameters	Settings (Default Value)
Baud Rate [bAUD]	[24] 2400 [48] 4800 [96] 9600 [192] 19200 [384] 38400 [576] 57600 (Default : 9.6)
Communication Parity [PARr]	[nonE] None [EuEn] Even (Default : Even) [Odd] Odd
Controller ID Number [id]	1 to 127 (Default : 1)
Communication Write Enable [ConE]	[no] No (Default : No) [YES] Yes

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 to 5 Volts [0-10] 0 to 10 Volts (Default : Relay)
Output-2 Function Selection [OP2F]	[nonE] None [ALrn] Alarm [EOP] End of Profile [CCOn] Cool Control (Default : None)
Alarm-1 Logic [AL1L]	[norñ] Normal (Default : Normal) [rEv] Reverse
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)
OP2 Event Status [O2ES]	[On] ON (Default : ON) [OFF] OFF
OP2 Event Time Units [O2Ut]	[SEC] Seconds [ñin] Minutes [Hour] Hours (Default : Seconds)
OP2 Event Time [O2Et]	0 to 9999 (Default : 0)

Parameters	Settings (Default Value)
Output-3 Function Selection [OP3F]	[nonE] None [AL2] Alarm-2 [EOP] End of Profile [rEC] Recorder (Default : Alarm)
Alarm-2 Logic [AL2L]	[norñ] Normal (Default : Normal) [rEv] Reverse
OP3 Event Status [O3ES]	[On] ON (Default : ON) [OFF] OFF
OP3 Event Time Units [O3Ut]	[SEC] Seconds [ñin] Minutes [Hour] Hours (Default : Seconds)
OP3 Event Time [O3Et]	0 to 9999 (Default : 0)
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)

ALARM AND RETRANSMISSION (RECORDER) PARAMETERS : PAGE 11

Parameters	Settings (Default Value)
Alarm-1 Type [AL1]	[nonE] None [P.Lo] Process Low [P.Hi] Process High [dE] Deviation Band [bRnd] Window Band (Default : None)
Alarm-1 Setpoint [AL1SP]	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Deviation Band [AL1dE]	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 [AL1bR]	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 [AL1HY]	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 [AL1h]	[no] No (Default : No) [YES] Yes
Alarm-2 Type [AL2]	[nonE] None [P.Lo] Process Low [P.Hi] Process High [dE] Deviation Band [bRnd] Window Band (Default : None)

Parameters	Settings (Default Value)
Alarm-2 Setpoint [AL2SP]	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Deviation Band [AL2dE]	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 [AL2bR]	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 [AL2HY]	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 [AL2h]	[no] No (Default : No) [YES] Yes
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 (Default : Disable) [EnbL] Enable
Number of Segments [nSEG]	1 to 16 (Default : 16)
Number of Repeats [nrPt]	1 to 9999 (Default : 1)
Common Holdback [CoHb]	[no] No (Default : No) [YES] Yes
Output Off [OPDF]	[no] No (Default : No) [YES] Yes
Power Fail Strategy [PrFL]	[Abrt] Abort (Default : Continue) [Cont] Continue

PROFILE SETTING PARAMETERS : PAGE 14

Parameters	Settings (Default Value)
Segment Number [SEGn]	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 [Hbty]	[nonE] None [UP] Up [dn] Down [both] Both (Default : None)
Holdback Value [HbVL]	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 (Default : No) [YES] Yes
Profile Start Command [Strt]	[no] No (Default : No) [YES] Yes
Profile Abort Command [Abrt]	[no] No (Default : No) [YES] Yes
Profile Pause Command [PAUS]	[no] No (Default : No) [YES] Yes
Segment Skip Command [SP IP]	[no] No (Default : No) [YES] Yes
Segment Time Interval [t.inE]	0 to 9999 Minutes
Segment Holdback Type [Hbty]	[nonE] None [UP] Up [dn] Down [both] Both
Segment Band Value [HbVL]	For DC mA/mV/V : 1 to 9999 counts For Thermocouples/RTD : 1 to 999 or 0.1 to 999.9
Profile Repeat Counter [brPt]	1 to 9999

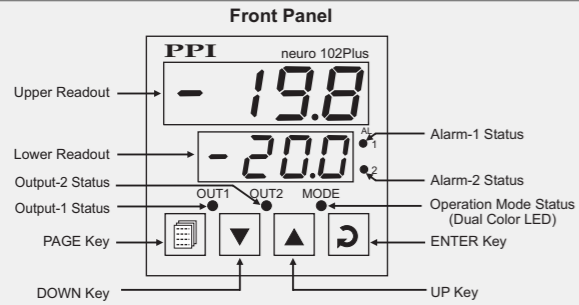
OPERATOR PAGE PARAMETERS : PAGE 0

Parameters	Settings (Default Value)
(De)Activate Standby Mode [StbY]	[no] No (Default : No) [YES] Yes
Control Setpoint [SP]	Setpoint Low Limit to Setpoint High Limit (Default : -1999)
Alarm-1 Setpoint [AL1SP]	Min. to Max. Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Deviation Band [AL1dE]	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 [AL1bR]	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 [AL2SP]	Same as that for Alarm-1 above but applied to Alarm-2.
Alarm-2 Deviation Band [AL2dE]	
Alarm-2 Window Band [AL2bR]	
Auxiliary Control Setpoint [AUSP]	Setpoint Low Limit to Setpoint High Limit (Default : -1999)

TABLE- 1

Option	Range (Min. to Max.)	Resolution
[tC-d] J Type T/C	0 to +960°C / +32 to +1760°F	Fixed 1°C / 1°F
[tC-P] K Type T/C	-200 to +1376°C / -328 to +2508°F	
[tC-t] T Type T/C	-200 to +385°C / -328 to +725°F	
[tC-r] R Type T/C	0 to +1770°C / +32 to +3218°F	
[tC-S] S Type T/C	0 to +1765°C / +32 to +3209°F	
[tC-b] B Type T/C	0 to +1825°C / +32 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] 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 / 0.1 / 0.01 / 0.001 units
[0-20]	0 to 20mA DC	
[4-20]	4 to 20mA DC	
[0080]	0 to 80mV DC	
[rESu] Reserved	-1999 to +9999 units	
[1.25]	0 to 1.25V DC	User settable 1 / 0.1 / 0.01 / 0.001 units
[5.0]	0 to 5.0V DC	
[100]	0 to 10.0V DC	
[1-5]	1 to 5.0V DC	

FRONT PANEL LAYOUT



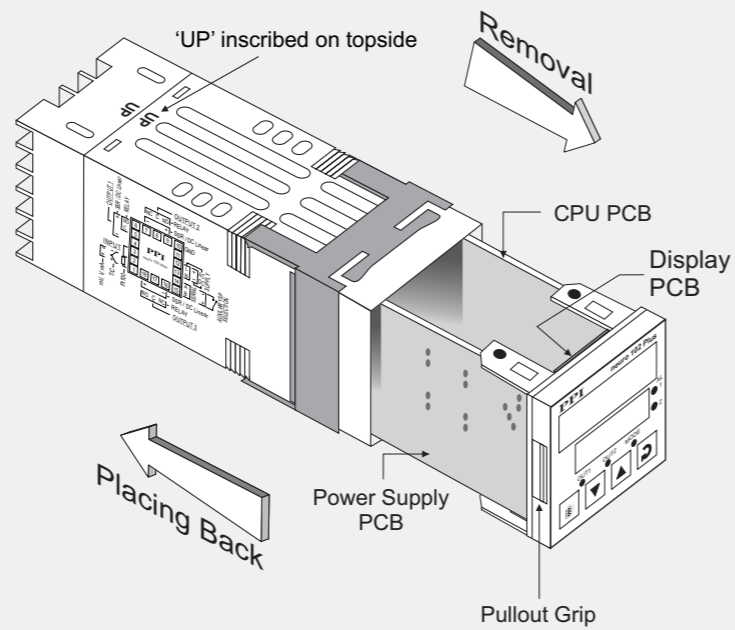
Keys Operation

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	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-1

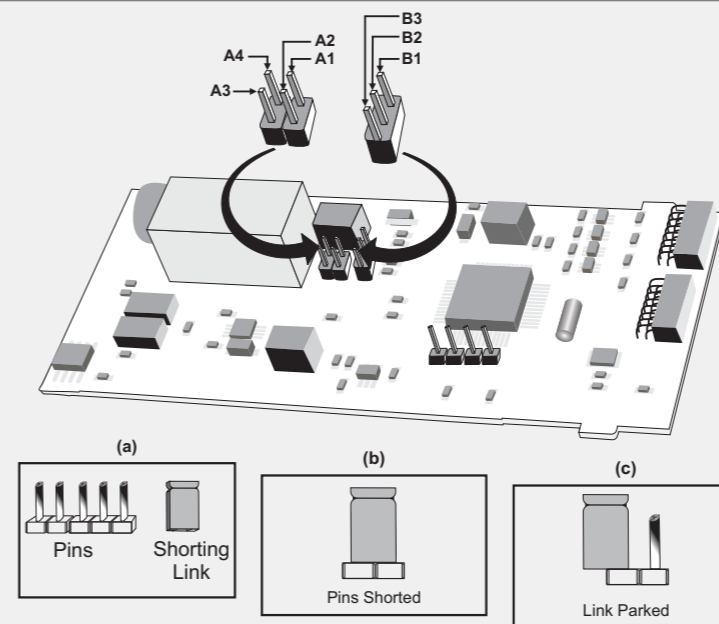
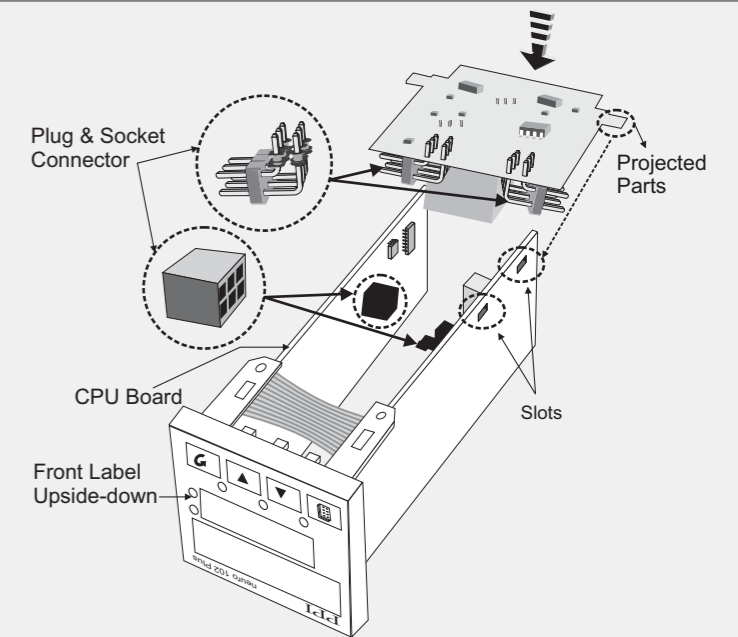


Table 1 : Output-1 Jumper Settings

Output Type	Jumper Settings
Relay	Shorting Link A : Short Pins A1 & A4 Shorting Link B : Park
SSR Drive	Shorting Link A : Short Pins A3 & A4 Shorting Link B : Short Pins B1 & B2
DC Linear Current (or Voltage)	Shorting Link A : Short Pins A2 & A3 Shorting Link B : Short Pins B2 & B3

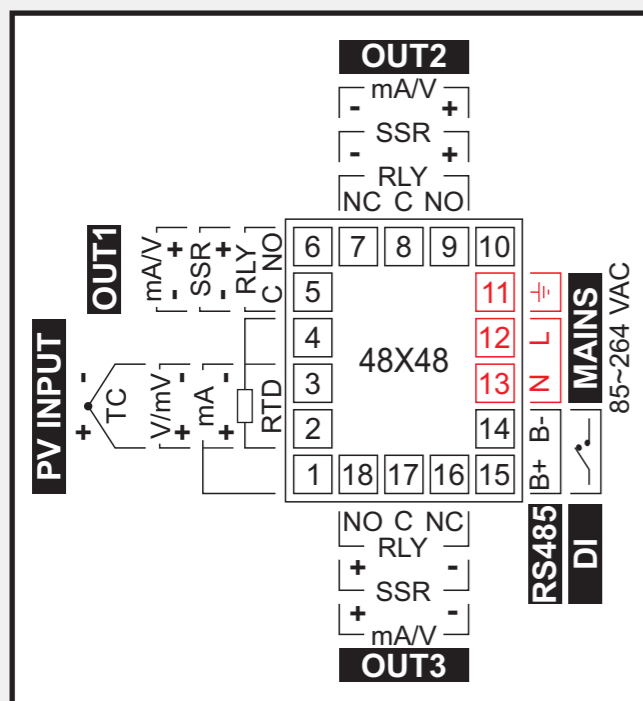
MOUNTING DETAILS

OUTPUT-2 MODULE

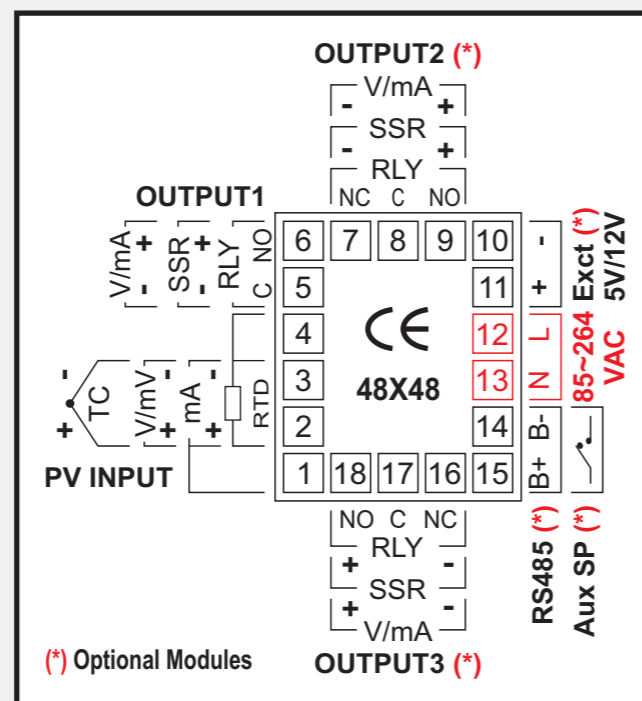


ELECTRICAL CONNECTIONS

Old Version

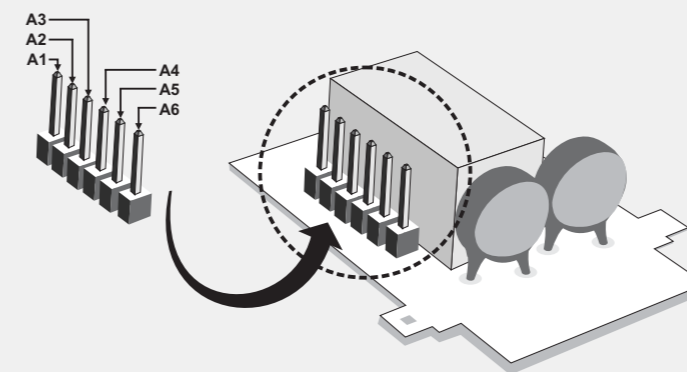


New Version



JUMPER SETTINGS

OUTPUT-2 & 3

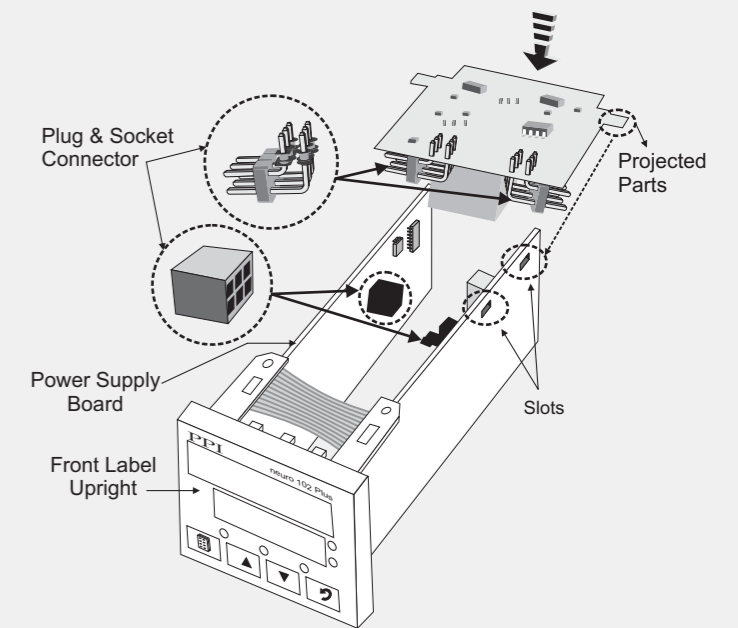


Relay / SSR Module
(Output-2 / Output-3)

Output Type	Jumper Setting (Used 2 Short Links)
Relay	Short pins A2 & A3 and Short pins A5 & A6
SSR	Short pins A1 & A2 and Short pins A4 & A5

MOUNTING DETAILS

OUTPUT-3 MODULE



MOUNTING DETAILS

SERIAL COMM. MODULE

