neuro 105 48X48

Programmable Profile Controller

CE

Operation Manual

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

PPI

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Jan 2022

INPUT / OUTPUT PARAMETERS : PAGE 12

Parameters	Settings (Default Value)
Hand (manual) made Enable/ Disable HAnd	EnbL Enable dSbL Disable (Default : Disable)
Quick Adjustment of Setpoint Enable/Disable SP	EnbL Enable dSbL Disable (Default : Enable)
Control Output Type C_OP	rLY Relay SSr SSR 0-20 0-20mA 4-20 4-20mA (Default : Relay)
Sensor Input Type inPt	tC_J Type J tC_P Type K tC_t Type T tC_r Type R tC_S Type S tC_b Type B tC_n Type N rESv Reserved rtd RTD Pt100 0-20 0-20mA 4-20 4-20mA 0.050 0 to 50mV 0.200 0 to 200mV 1.25 0 to 1.25mV 5.0 0 to 5.0mV 10.0 0 to 10.0mV (Default : Type K)
Resolution For PV rSLn	Refer Table 1 for the available max / min Ranges & Resolution for each input type. (Default : 1)
Range Low For PV rLo	Same as above (Default : 0)
Range High For PV rHi	Same as above (Default : 1000)
Setpoint Low SPLo	Same as above (Default : -200)
Setpoint High SPHi	Same as above (Default : 1300)
Offset for PV OFSt	-1999 to 9999 (Default : 0)
Digital Filter For PV FiLt	0.5 to 25.0 (Default : 1.0)

CONTROL PARAMETERS : PAGE 10

Parameters	Settings (Default Value)
Control Setpoint SP	Setpoint Low to Setpoint High (Default : 0)
Proportional Band Pb	0 to 999 Units (Default : 50 units)
Hysteresis HYSt	1 to 250 (Default : 2)
Integral Time It	0 to 1000 Seconds (Default : 100 Sec.)
Derivative Time dt	0 to 250 Seconds (Default : 25 Sec.)
Cycle Time Ct	0.5 to 120.0 (Default : 20.0)
Relative cool Gain rELG	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time C.Ct	0.5 to 120.0 (Default : 20.0)
Power Low Limit PL	0 to less than Power High (Default : 0)
Power High Limit PH	Greater than Power Low to 100 (Default : 100)

OP2 & OP3 FUNCTION PARAMETERS : PAGE 14

Parameters	Settings (Default Value)
Output-2 Function Selection OP2F	ALrn Alarm CCon Cool control PFEv Profile Event (Default : Alarm)
Output-2 Type OP2t	rLY Relay SSr SSR 0-20 0-20mA 4-20 4-20mA (Default : Relay)
Output-3 Function Selection OP3F	ALrn Alarm rEC Recorder PFEv Profile Event (Default : Alarm)
Recorder Output Type rECo	0-20 0-20mA 4-20 4-20mA (Default : 0-20mA)
Recorder Low rECL	Range Low to Range High (Default : 0)
Recorder High rECH	Range Low to Range High (Default : 0)

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 bAnd Window Band EOP End of Profile (Default : None)
Alarm-1 Setpoint A1SP	Throughout the range for the selected input type (Default : 0)
Alarm-1 Deviation Band A1dE	-999 to 999 (Default : 0)
Alarm-1 Window Band A1bA	3 to 999 (Default : 3)
Alarm-1 Hysteresis A1HY	1 to 999 (Default : 2)
Alarm-1 Logic A1L	dir Direct rEv Reverse (Default : Direct)
Alarm-1 Inhibit A1, h	no No YES Yes (Default : No)
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)
Alarm-2 Setpoint A2SP	Throughout the range for the selected input type (Default : 0)
Alarm-2 Deviation Band A2dE	-999 to 999 (Default : 0)
Alarm-2 Window Band A2bA	3 to 999 (Default : 3)
Alarm-2 Hysteresis A2HY	1 to 999 (Default : 2)
Alarm-2 Logic A2L	dir Direct rEv Reverse (Default : Direct)
Alarm-2 Inhibit A2, h	no No YES Yes (Default : No)

PROFILE : SEGMENT PARAMETERS : PAGE 15

Parameters	Settings (Default Value)
Select Profile Number PrFn	1 to Max. configured
Select Set Number SEtn	1 to Max. configured
Ramp Rate rAtE	0.00 to 99.99 (Default : 0.00)
Target Setpoint tSP	Range Low to Range High (Default : 0)
Soak Time SOAK	0 to 9999 (Default : 0)

PROFILE : CONFIGURATION PARAMETERS : PAGE 18

Parameters	Settings (Default Value)
Profile Enable/Disable PrOF	EnbL Enable dSbL Disable (Default : Enable)
Output(S) Off OP.OF	no No YES Yes (Default : No)
Numbers of Profile nPrF	1 to 2
Select Profile Number PrFn	1 to Max. configured
Numbers of Sets for the Selected Profile nSEt	1 to 8
Number of Programs nPrG	1 to 16
Reset Programs Set-UP rStP	no No YES Yes (Default : No)

PROFILE : BAND / EVENT PARAMETERS : PAGE 16

Parameters	Settings (Default Value)
Select Profile Number PrFn	1 to Max. configured
Ramp Hold Band rbnd	0 to 250 (Default : 0)
Soak Hold Band Sbnd	0 to 250 (Default : 0)
Select Segment Number SEGn	1 to twice the Max. configured Sets
Output-2 Event Time O2Et	0 to 9999 (Default : 0)
Output-2 Event Status O2ES	ON, OFF (Default : ON)
Output-3 Event Time O3Et	0 to 9999 (Default : 0)
Output-3 Event Status O3ES	ON, OFF (Default : ON)

UTILITY PARAMETERS : PAGE 13

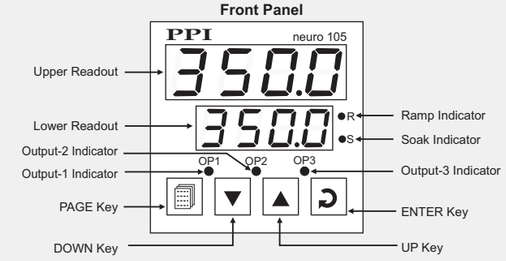
Parameters	Settings (Default Value)
Self Tune Commands tUnE	no No YES Yes (Default : No)
Overshoot Inhibit oS, h	EnbL Enable dSbL Disable (Default : Disable)
Baud Rate bAUd	1200, 2400, 4800, 9600 (Default : 9600)
Controller ID Number id	1 to 31 (Default : 1)
Communication Write Enable ConE	no No YES Yes (Default : No)

TABLE- 1

Option	Range (Min. to Max.)	Resolution
tC_J 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 +1770°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	
tC_n N Type T/C	0 to +1300°C / +32 to +2372°F	
rESv	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

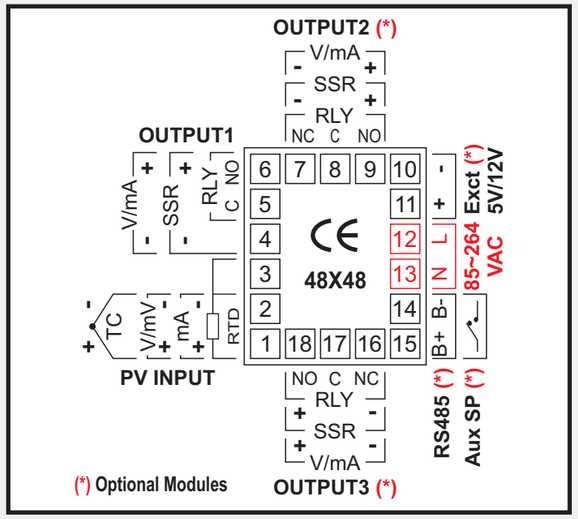
Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
▼	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
▲	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed 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)

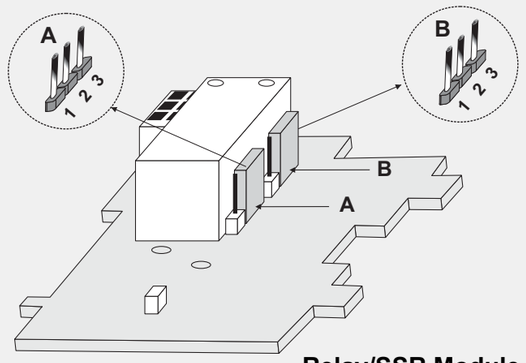
NOTE : For Page 17 Kindly Refer the Detailed Manual on www.ppiindia.net

ELECTRICAL CONNECTIONS



JUMPER SETTINGS

OUTPUT-2 & OUTPUT-3

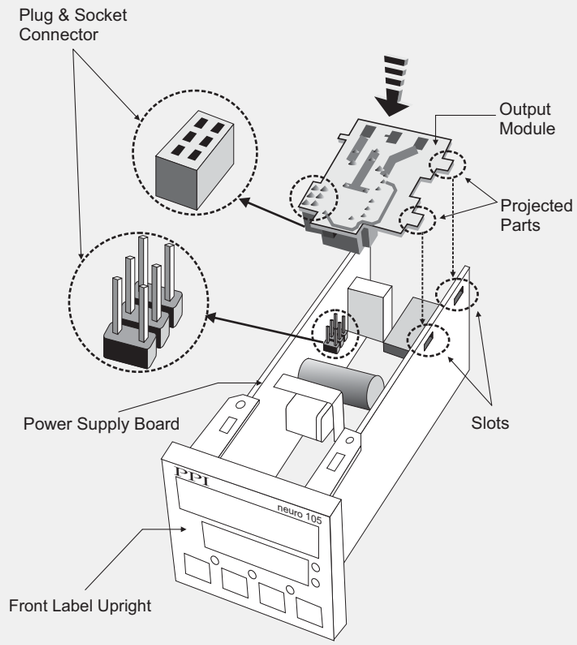


Relay/SSR Module

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

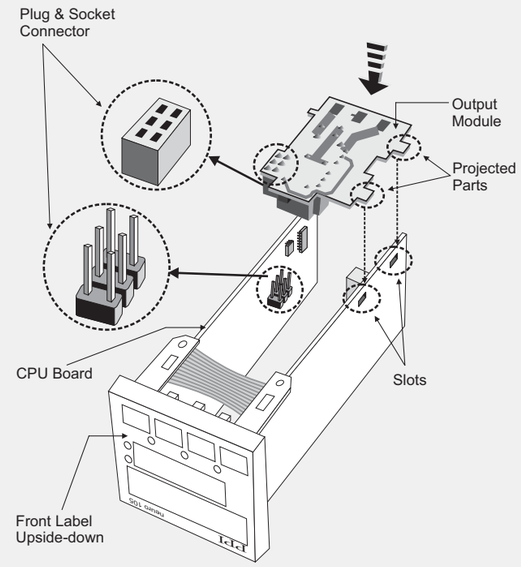
MOUNTING DETAILS

OUTPUT-2 MODULE

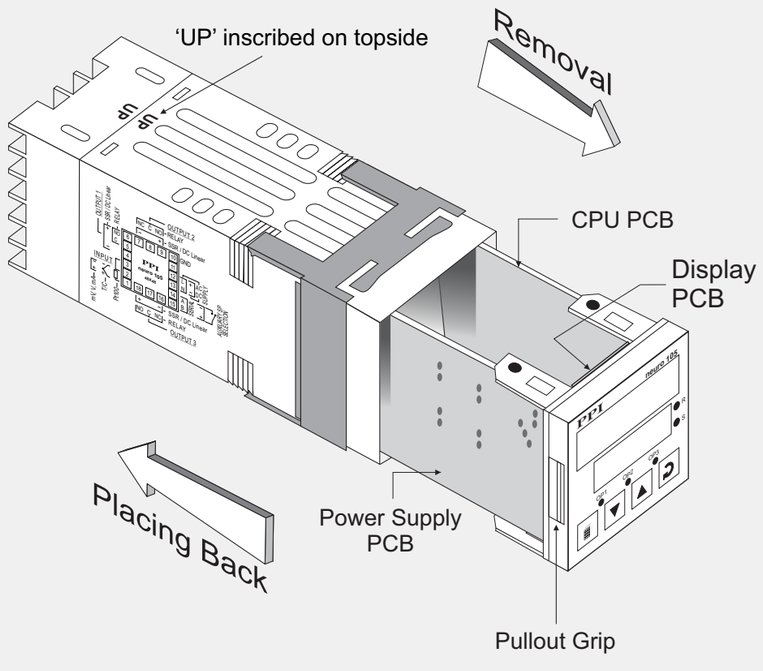


MOUNTING DETAILS

OUTPUT-3 MODULE

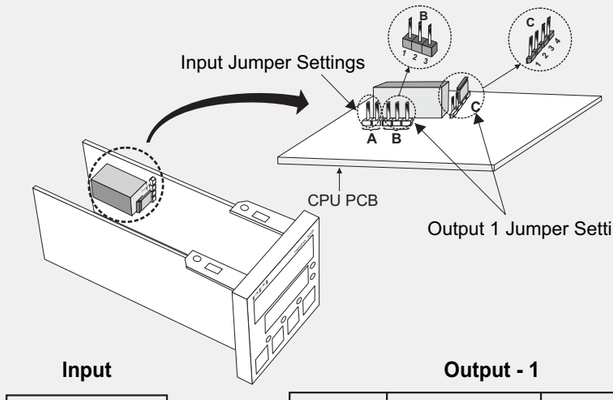


ENCLOSURE ASSEMBLY

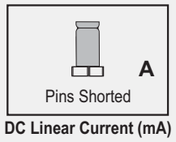


JUMPER SETTINGS

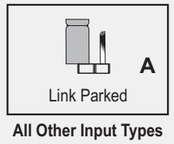
INPUT & OUTPUT-1



Input



DC Linear Current (mA)

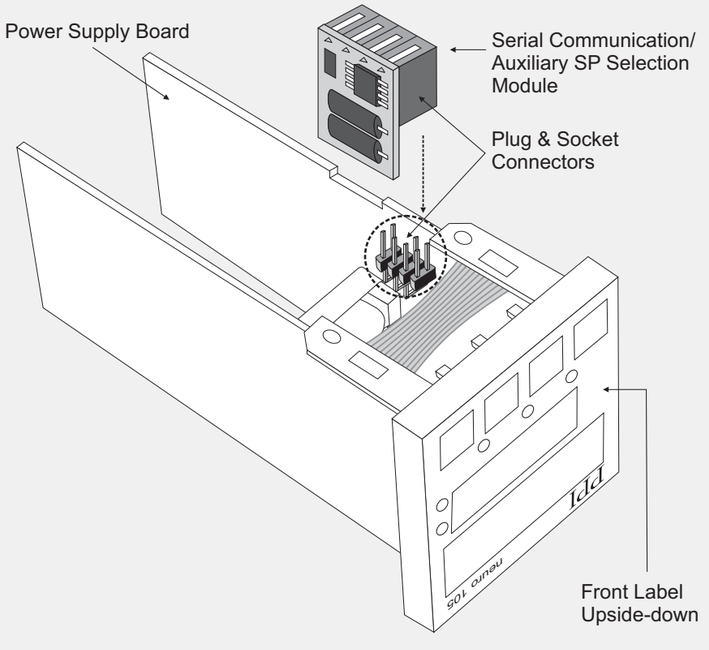


All Other Input Types

Output - 1

Output Type	Jumper Setting - B	Jumper Setting - C
Relay	3 2 1	1 2 3 4
SSR Drive	3 2 1	1 2 3 4
DC Linear Current (or Voltage)	3 2 1	1 2 3 4

MOUNTING DETAILS



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Programmable Profile Controller

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Operation Manual

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Jan 2022

INPUT / OUTPUT PARAMETERS : PAGE 12

Parameters	Settings (Default Value)
Hand (manual) made Enable/ Disable HAnd	EnbL Enable dSbL Disable (Default : Disable)
Quick Adjustment of Setpoint Enable/Disable SP	EnbL Enable dSbL Disable (Default : Enable)
Control Output Type C_OP	rLY Relay SSr SSR 0-20 0-20mA 4-20 4-20mA (Default : Relay)
Sensor Input Type inPt	tC_J Type J tC_P Type K tC_t Type T tC_r Type R tC_S Type S tC_b Type B tC_n Type N rESu Reserved rtd RTD Pt100 0-20 0-20mA 4-20 4-20mA 0.050 0 to 50mV 0.200 0 to 200mV 1.25 0 to 1.25mV 5.0 0 to 5.0mV 10.0 0 to 10.0mV (Default : Type K)
Resolution For PV rSLn	Refer Table 1 for the available max / min Ranges & Resolution for each input type. (Default : 1)
Range Low For PV rLo	Same as above (Default : 0)
Range High For PV rHi	Same as above (Default : 1000)
Setpoint Low SPLo	Same as above (Default : -200)
Setpoint High SPHi	Same as above (Default : 1300)
Offset for PV OFSt	-1999 to 9999 (Default : 0)
Digital Filter For PV FiLt	0.5 to 25.0 (Default : 1.0)

CONTROL PARAMETERS : PAGE 10

Parameters	Settings (Default Value)
Control Setpoint SP	Setpoint Low to Setpoint High (Default : 0)
Proportional Band Pb	0 to 999 Units (Default : 50 units)
Hysteresis HYSt	1 to 250 (Default : 2)
Integral Time It	0 to 1000 Seconds (Default : 100 Sec.)
Derivative Time dt	0 to 250 Seconds (Default : 25 Sec.)
Cycle Time Ct	0.5 to 120.0 (Default : 20.0)
Relative cool Gain rELG	0.1 to 10.0 (Default : 1.0)
Cool Cycle Time C.Ct	0.5 to 120.0 (Default : 20.0)
Power Low Limit PL	0 to less than Power High (Default : 0)
Power High Limit PH	Greater than Power Low to 100 (Default : 100)

OP2 & OP3 FUNCTION PARAMETERS : PAGE 14

Parameters	Settings (Default Value)
Output-2 Function Selection OP2F	ALrn Alarm CCon Cool control PFEu Profile Event (Default : Alarm)
Output-2 Type OP2t	rLY Relay SSr SSR 0-20 0-20mA 4-20 4-20mA (Default : Relay)
Output-3 Function Selection OP3F	ALrn Alarm rEC Recorder PFEu Profile Event (Default : Alarm)
Recorder Output Type rECo	0-20 0-20mA 4-20 4-20mA (Default : 0-20mA)
Recorder Low rECL	Range Low to Range High (Default : 0)
Recorder High rECH	Range Low to Range High (Default : 0)

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 bAnd Window Band EOP End of Profile (Default : None)
Alarm-1 Setpoint A1SP	Throughout the range for the selected input type (Default : 0)
Alarm-1 Deviation Band A1dE	-999 to 999 (Default : 0)
Alarm-1 Window 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 A1.h	no No YES Yes (Default : No)
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)
Alarm-2 Setpoint A2SP	Throughout the range for the selected input type (Default : 0)
Alarm-2 Deviation Band A2dE	-999 to 999 (Default : 0)
Alarm-2 Window 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 A2.h	no No YES Yes (Default : No)

PROFILE : SEGMENT PARAMETERS : PAGE 15

Parameters	Settings (Default Value)
Select Profile Number PrFn	1 to Max. configured
Select Set Number SEtn	1 to Max. configured
Ramp Rate rAtE	0.00 to 99.99 (Default : 0.00)
Target Setpoint tSP	Range Low to Range High (Default : 0)
Soak Time SOAK	0 to 9999 (Default : 0)

PROFILE : CONFIGURATION PARAMETERS : PAGE 18

Parameters	Settings (Default Value)
Profile Enable/Disable PrOF	EnbL Enable dSbL Disable (Default : Enable)
Output(S) Off OP.OF	no No YES Yes (Default : No)
Numbers of Profile nPrF	1 to 2
Select Profile Number PrF.n	1 to Max. configured
Numbers of Sets for the Selected Profile nSEt	1 to 8
Number of Programs nPrG	1 to 16
Reset Programs Set-UP rStP	no No YES Yes (Default : No)

PROFILE : BAND / EVENT PARAMETERS : PAGE 16

Parameters	Settings (Default Value)
Select Profile Number PrFn	1 to Max. configured
Ramp Hold Band r.bnd	0 to 250 (Default : 0)
Soak Hold Band S.bnd	0 to 250 (Default : 0)
Select Segment Number SEG.n	1 to twice the Max. configured Sets
Output-2 Event Time O2Et	0 to 9999 (Default : 0)
Output-2 Event Status O2ES	ON, OFF (Default : ON)
Output-3 Event Time O3Et	0 to 9999 (Default : 0)
Output-3 Event Status O3ES	ON, OFF (Default : ON)

UTILITY PARAMETERS : PAGE 13

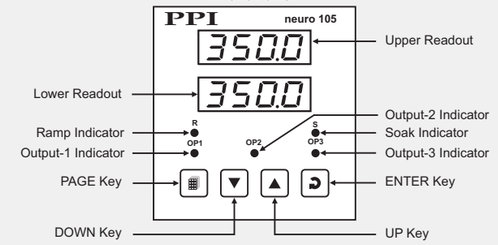
Parameters	Settings (Default Value)
Self Tune Commands tUnE	no No YES Yes (Default : No)
Overshoot Inhibit oS.h	EnbL Enable dSbL Disable (Default : Disable)
Baud Rate bAUd	1200, 2400, 4800, 9600 (Default : 9600)
Controller ID Number Id	1 to 31 (Default : 1)
Communication Write Enable ConE	no No YES Yes (Default : No)

TABLE- 1

Option	Range (Min. to Max.)	Resolution
tC_J 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 +1770°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	
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°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

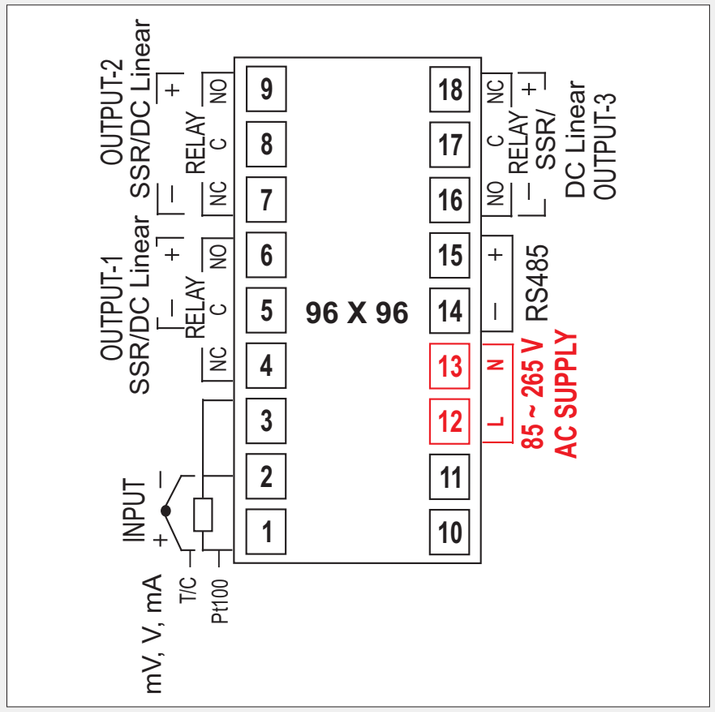
Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
▼	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
▲	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed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

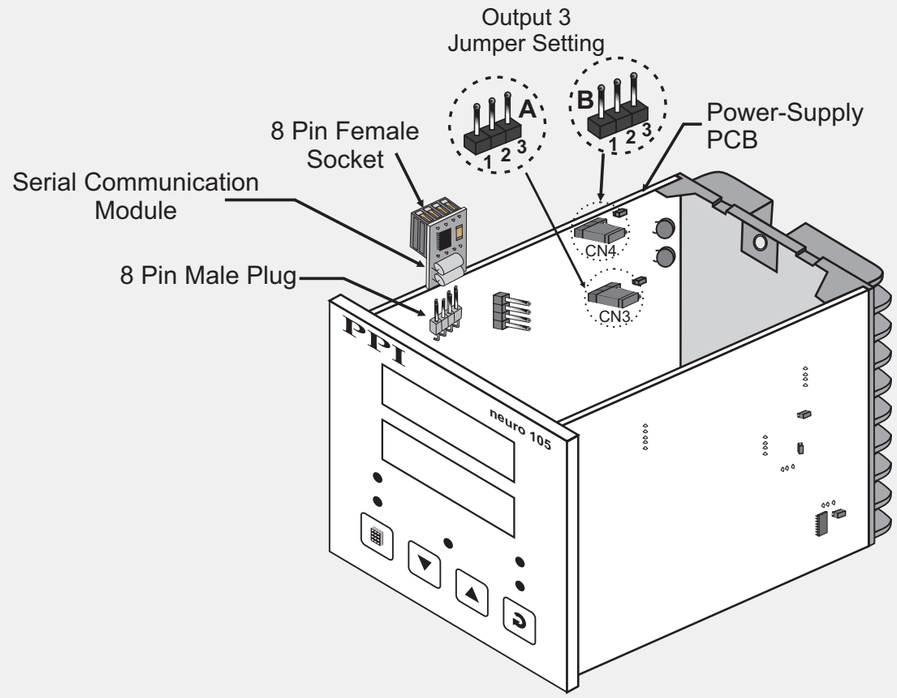
Message	PV Error Type
Or	Over-range (**PV** above Max. Range)
Ur	Under-range (**PV** below Min. Range)
OPEn	Open (Sensor open / broken)

NOTE : For Page 17 Kindly Refer the Detailed Manual on www.ppiindia.net

ELECTRICAL CONNECTIONS



SERIAL COMMUNICATION MODULE



INPUT & OUTPUT HARDWARE JUMPER SETTINGS

Input

Input Type	Jumper 'A' Setting
Thermocouple, RTD Pt100, mV & V	1 2 3
DC Linear Current (mA)	1 2 3

Output-1

Output Type	Jumper Setting - B	Jumper Setting - C
Relay	1 2 3 4	1 2 3
SSR Drive	1 2 3 4	1 2 3
DC Linear Current (or Voltage)	1 2 3 4	1 2 3

Output-2

Output Type	Jumper Setting - D	Jumper Setting - E
Relay	1 2 3	1 2 3
SSR	1 2 3	1 2 3

Output-3

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