

neuro 100 48X48

Programmable Universal Process Indicator



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



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Jan 2022

OPERATOR PAGE AND PARAMETERS : PAGE 0	
Parameters	Settings (Default Value)
Alarm Acknowledge ACP	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Maximum PV Hi	View Only (Default : NA)
Minimum PV Lo	View Only (Default : NA)
Reset Command rSt	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Reset Password Code	0 to 250 (Default : 0)
Alarm-1 Setpoint R1SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Setpoint R2SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)

ALARM PARAMETERS : PAGE 10	
Parameters	Settings (Default Value)
Alarm-1 Type AL_1	<input checked="" type="checkbox"/> None <input type="checkbox"/> Process Low <input type="checkbox"/> Process High (Default : None)
Alarm-1 Setpoint R1SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Hysteresis R1HY	1 to 999 or 0.1 to 999.9 (Default : 2.0)
Alarm-1 Inhibit AL_1h	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes)
Alarm-1 Logic R1LG	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Reverse (Default : Normal)
Alarm Latch AL_L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Alarm-2 Type AL_2	<input checked="" type="checkbox"/> None <input type="checkbox"/> Process Low <input type="checkbox"/> Process High (Default : None)
Alarm-2 Setpoint R2SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Hysteresis R2HY	1 to 999 or 0.1 to 999.9 (Default : 2.0)
Alarm-2 Inhibit R2.h	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes)

Parameters	Settings (Default Value)
Alarm-2 Logic R2LG	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Reverse (Default : Normal)
Alarm Latch AL_L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)

RETRANSMISSION PARAMETERS : PAGE 11	
Parameters	Settings (Default Value)
Recorder Output Type rELO	<input checked="" type="checkbox"/> 0 to 20mA <input type="checkbox"/> 4 to 20mA <input type="checkbox"/> 0 to 5 Volts <input type="checkbox"/> 0 to 10 Volts (Default : 0 to 20mA)
Recorder Low rELL	Min. to Max. Range specified for the selected Input Type (Default : -200)
Recorder High rECH	Min. to Max. Range specified for the selected Input Type (Default : 1376)

INPUT CONFIGURATION PARAMETERS : PAGE 12	
Parameters	Settings (Default Value)
Input Type inPt	Refer Table 2 (Default : Type K)
Resolution rSLn	Refer Table 2 (Default : 1)
Units Unit	Refer Table 1 (Default : °C)
DC Range Low rLo	-1999 to 9999 (Default : 0.0)
DC Range High rHi	-1999 to 9999 (Default : 100.0)
Offset OFSt	-1999 to 9999 or -199.9 to 999.9 (Default : 0)
Filter FiLt	0.5 to 60.0 Seconds (in steps of 0.5 Seconds) (Default : 2.0 sec.)

SUPERVISORY PARAMETERS : PAGE 13	
Parameters	Settings (Default Value)
Alarm SP Adjustment on Operator Page ALSP	<input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable)
Process Value High-Low Monitoring HiLo	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Password for Resetting PV High-Low Code	0 to 250 (Default : 0)
Utility Option Selection OPTn	<input checked="" type="checkbox"/> None <input type="checkbox"/> Serial Comm. <input type="checkbox"/> Remote Alarm Ack (Default : Serial Comm.)

Parameters	Settings (Default Value)
Baud Rate BAUD	<input checked="" type="checkbox"/> 4800 <input type="checkbox"/> 9600 <input type="checkbox"/> 19200 <input type="checkbox"/> 38400 <input type="checkbox"/> 57600 (Default : 9.6)
Parity PAR_1	<input checked="" type="checkbox"/> None <input type="checkbox"/> Even <input type="checkbox"/> Odd (Default : Even)
Serial ID Number Id	1 to 127 (Default : 1)
Serial Write Permission CoNE	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)

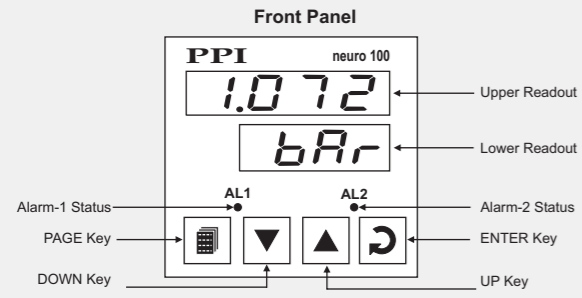
USER LINEARISATION PARAMETERS : PAGE 33	
Parameters	Settings (Default Value)
User Linearization Setting Code Code	0 to 9999 (Default : 0)
User Linearization UL_in	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Total Break Points PntS	2 to 32 (Default : 2)
Break Point Number Coor	1 to 32 (Default : 1)
Actual Value for Break Point (X co-ord) APnt	-1999 to 9999 (Default : Undefined)
Derived Value for Break Point (Y co-ord) dPnt	-1999 to 9999 (Default : Undefined)

TABLE- 1	
Lower Readout	Units
°C	°C
°F	°F
°K	Kelvin
EU	Engineering Units
PERC	Percentage
PAS	Pascals
nPAS	Mpascals
KPAS	Kpascals
BAR	Bar
nBAR	Milli bar
PSI	PSI
PGcm	kg/sq cm

TABLE- 1	
Lower Readout	Units
mmWG	mm water gauge
inWG	Inches water gauge
mmHG	mm mercury
Torr	Torr
L-H	Litres per hour
L-n	Litres per minute
Prh	% Relative Humidity
PO2	% O2
PCO2	% CO2
PCP	% Carbon Potential
volt	volts
AMP	Amps
nA	Milli amps
nV	Milli Volts
Ohm	Ohms
PPm	Parts per million
rPm	Revolutions per minute
n-S	Milli seconds
SEC	Seconds
n-n	Minutes
hrS	Hours
PH	PH
PPH	%PH
nPH	Miles per hour
nG	Milli grams
GrAm	Grams
KG	Kilo grams
mmtr	mm (Millimeter)
cmtr	cm (Centimeter)
nter	Meter
Knter	Kilometer
Foot	Foot
inch	Inch
nILE	Mile

TABLE- 2			
Option	Range (Min. to Max.)	Resolution	
TC-U 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 +3218°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			
0050 0 to 50mV DC			
0200 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			
1-5 1 to 5.0V DC			

FRONT PANEL LAYOUT



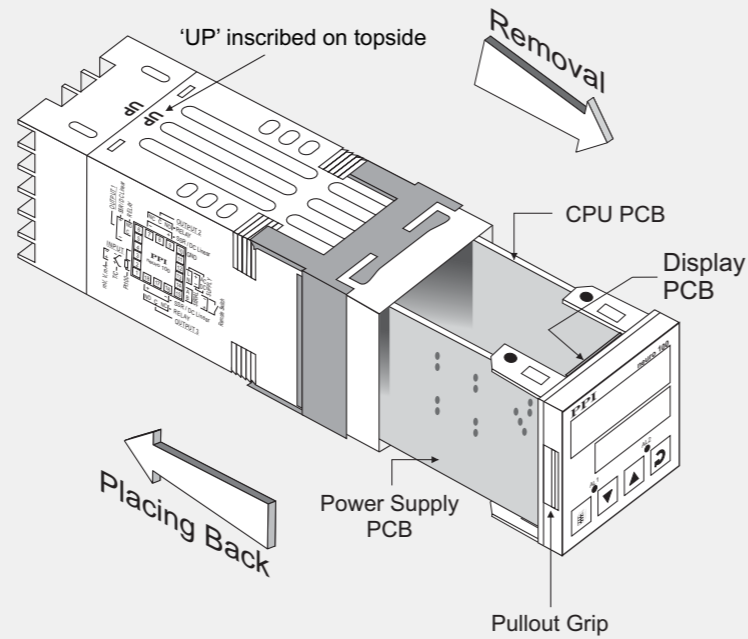
Keys Operation

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

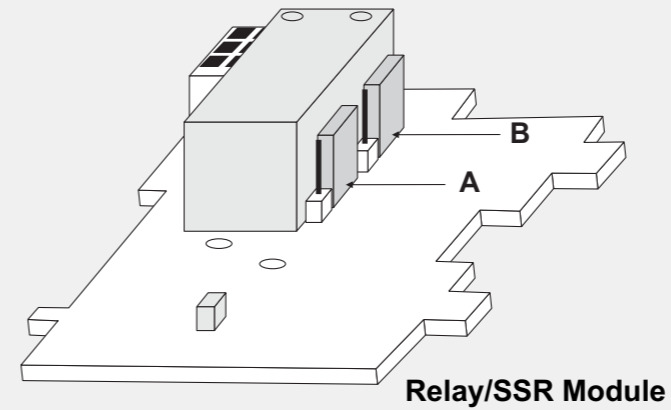
Message	PV Error Type
	Over-range (PV above Max. Range)
	Under-range (PV below Min. Range)
	Open (Sensor open / broken)

ENCLOSURE ASSEMBLY



JUMPER SETTINGS

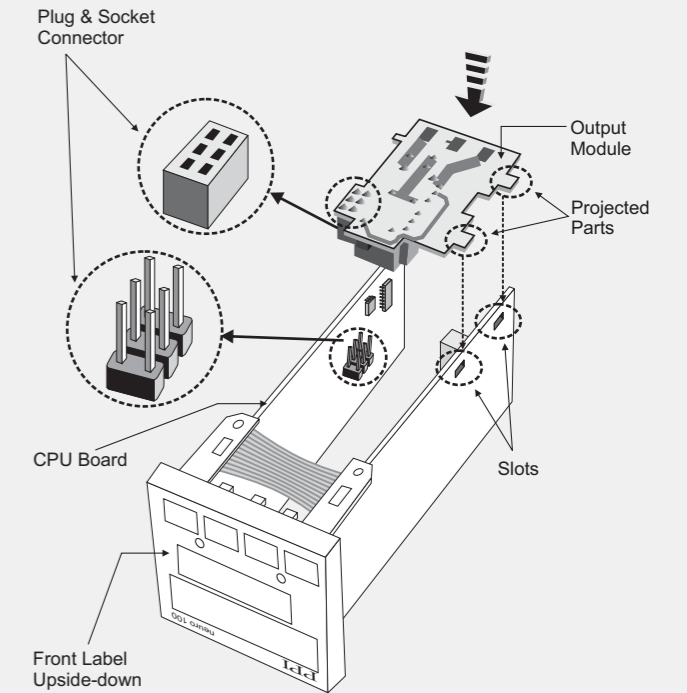
OUTPUT-2 & OUTPUT-3



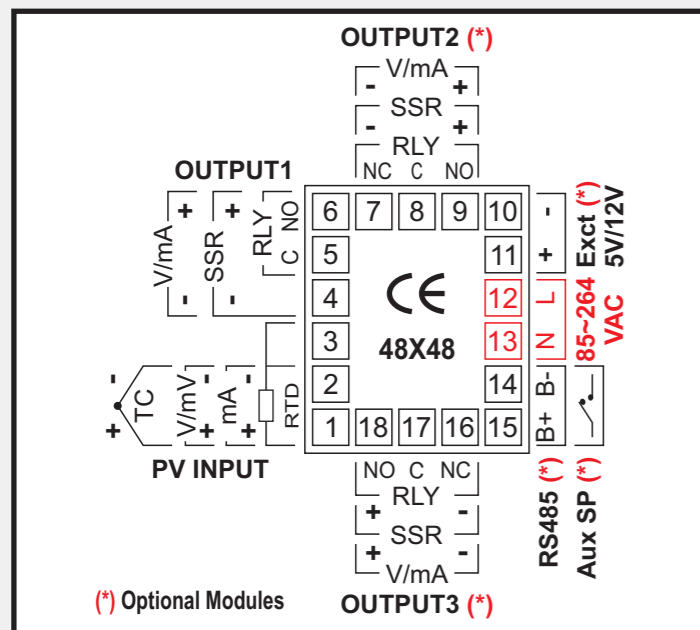
Output Type	Jumper Setting - A	Jumper Setting - B
Relay		
SSR		

MOUNTING DETAILS

OUTPUT-3 MODULE

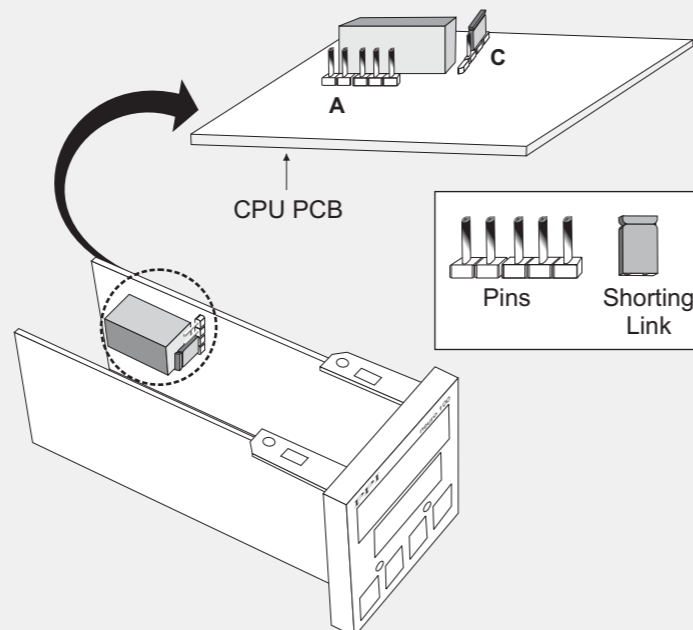


ELECTRICAL CONNECTIONS



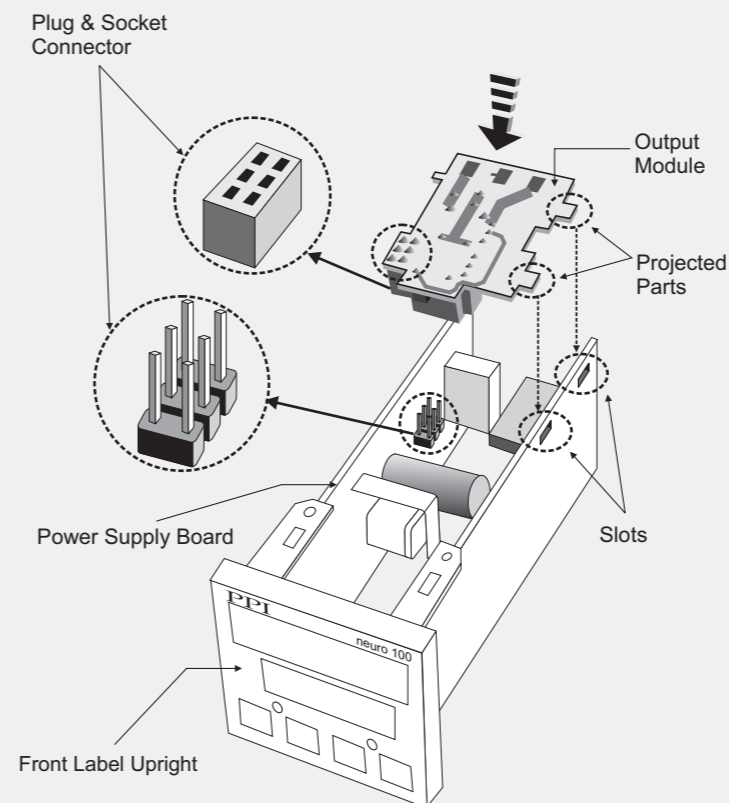
JUMPER SETTINGS

INPUT



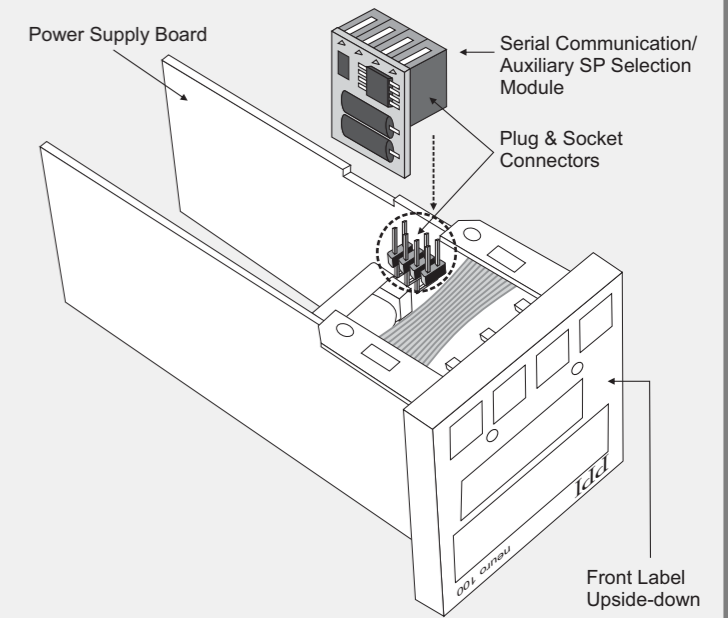
MOUNTING DETAILS

OUTPUT-2 MODULE



MOUNTING DETAILS

SERIAL COMM. MODULE





OPERATOR PAGE AND PARAMETERS : PAGE 0	
Parameters	Settings (Default Value)
Alarm Acknowledge ACP	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Maximum PV H_i	View Only (Default : NA)
Minimum PV L_o	View Only (Default : NA)
Reset Command rSt	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Reset Password Code	0 to 250 (Default : 0)
Alarm-1 Setpoint R1SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Setpoint R2SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)

ALARM PARAMETERS : PAGE 10	
Parameters	Settings (Default Value)
Alarm-1 Type AL-1	<input checked="" type="checkbox"/> None <input type="checkbox"/> P _{Lo} Process Low <input type="checkbox"/> P _{Hi} Process High (Default : None)
Alarm-1 Setpoint R1SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-1 Hysteresis R1HY	1 to 999 or 0.1 to 999.9 (Default : 2.0)
Alarm-1 Inhibit ALH	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes)
Alarm-1 Logic ALG	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> rEu Reverse (Default : Normal)
Alarm Latch ALL	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Alarm-2 Type AL-2	<input checked="" type="checkbox"/> None <input type="checkbox"/> P _{Lo} Process Low <input type="checkbox"/> P _{Hi} Process High (Default : None)
Alarm-2 Setpoint R2SP	Min to max Range specified for the selected Input Type (Default : Min or Max Range)
Alarm-2 Hysteresis R2HY	1 to 999 or 0.1 to 999.9 (Default : 2.0)
Alarm-2 Inhibit R2H	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes)

Parameters	Settings (Default Value)
Alarm-2 Logic R2LG	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> rEu Reverse (Default : Normal)
Alarm Latch ALL	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)

RETRANSMISSION PARAMETERS : PAGE 11	
Parameters	Settings (Default Value)
Recorder Output Type rECo	<input checked="" type="checkbox"/> 0-20 0 to 20mA <input type="checkbox"/> 4-20 4 to 20mA <input type="checkbox"/> 0-5 0 to 5 Volts <input type="checkbox"/> 0-10 0 to 10 Volts (Default : 0 to 20mA)
Recorder Low rECL	Min. to Max. Range specified for the selected Input Type (Default : -200)
Recorder High rECH	Min. to Max. Range specified for the selected Input Type (Default : 1376)

INPUT CONFIGURATION PARAMETERS : PAGE 12	
Parameters	Settings (Default Value)
Input Type inPt	Refer Table 2 (Default : Type K)
Resolution rSLn	Refer Table 2 (Default : 1)
Units Unit	Refer Table 1 (Default : °C)
DC Range Low rLo	-1999 to 9999 (Default : 0.0)
DC Range High rHi	-1999 to 9999 (Default : 100.0)
Offset OFSt	-1999 to 9999 or -199.9 to 999.9 (Default : 0)
Filter FiLl	0.5 to 60.0 Seconds (in steps of 0.5 Seconds) (Default : 2.0 sec.)

SUPERVISORY PARAMETERS : PAGE 13	
Parameters	Settings (Default Value)
Alarm SP Adjustment on Operator Page ALSP	<input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable)
Process Value High-Low Monitoring H_iL_o	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Password for Resetting PV High-Low Code	0 to 250 (Default : 0)
Utility Option Selection OPtn	<input checked="" type="checkbox"/> None <input type="checkbox"/> SrLc Serial Comm. <input type="checkbox"/> rntA Remote Alarm Ack (Default : Serial Comm.)

Parameters	Settings (Default Value)
Baud Rate bAUd	<input checked="" type="checkbox"/> 4800 <input type="checkbox"/> 9600 <input type="checkbox"/> 19200 <input type="checkbox"/> 38400 <input type="checkbox"/> 57600 (Default : 9.6)
Parity PRr	<input checked="" type="checkbox"/> None <input type="checkbox"/> EvEn Even <input type="checkbox"/> Odd Odd (Default : Even)
Serial ID Number Id	1 to 127 (Default : 1)
Serial Write Permission ConE	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)

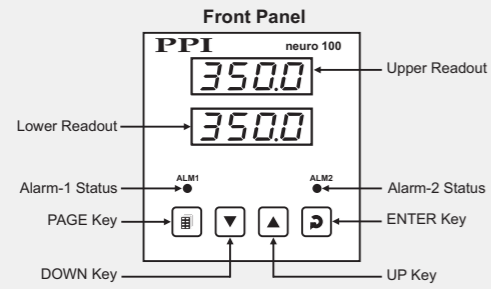
USER LINEARISATION PARAMETERS : PAGE 33	
Parameters	Settings (Default Value)
User Linearization Setting Code Code	0 to 9999 (Default : 0)
User Linearization UL in	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No)
Total Break Points PntS	2 to 32 (Default : 2)
Break Point Number Coor	1 to 32 (Default : 1)
Actual Value for Break Point (X co-ord) APnt	-1999 to 9999 (Default : Undefined)
Derived Value for Break Point (Y co-ord) dPnt	-1999 to 9999 (Default : Undefined)

TABLE-1		
Lower Readout	Units	
oC	°C	Temperature
oF	°F	
oK	Kelvin	
EU	Engineering Units	
PERc	Percentage	
PARS	Pascals	Pressure
nPARS	Mpascals	
PPARS	Kpascals	
bARr	Bar	
nBARr	Milli bar	
PSI	PSI	
KGcn	kg/sq cm	

TABLE-1		
Lower Readout	Units	
nnyG	mm water gauge	Pressure
inyG	Inches water gauge	
nnhG	mm mercury	
torr	Torr	
L-H	Litres per hour	Flow
L-n	Litres per minute	
P.rh	% Relative Humidity	
PO2	% O2	
PCO2	% CO2	
PCP	% Carbon Potential	
volt	volts	Electricity
ANP	Amps	
nA	Milli amps	
nV	Milli Volts	
Ohn	Ohms	
PPn	Parts per million	
rPn	Revolutions per pinute	
n-S	Milli seconds	Time
SEC	Seconds	
n n	Minutes	
hrS	Hours	
PH	PH	
PPH	%PH	
nPH	Miles per hour	
nG	Milli grams	Weight
GrAn	Grams	
KG	Kilo grams	
nnter	mm (Millimeter)	Length / Height / Distance
cnter	cm (Centimeter)	
nter	Meter	
Knter	Kilometer	
Foot	Foot	
inch	Inch	
nILE	Mile	

TABLE-2		
Option	Range (Min. to Max.)	Resolution
EC-J J Type T/C	0 to +960°C / +32 to +1760°F	Fixed 1°C / 1°F
EC-K K Type T/C	-200 to +1376°C / -328 to +2508°F	
EC-T T Type T/C	-200 to +385°C / -328 to +725°F	
EC-R R Type T/C	0 to +1770°C / +32 to +3218°F	
EC-S S Type T/C	0 to +1765°C / +32 to +3209°F	
EC-B B Type T/C	0 to +1825°C / +32 to +3218°F	
EC-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		
0050 0 to 50mV DC		
0200 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		
1-5 1 to 5.0V DC		

FRONT PANEL LAYOUT



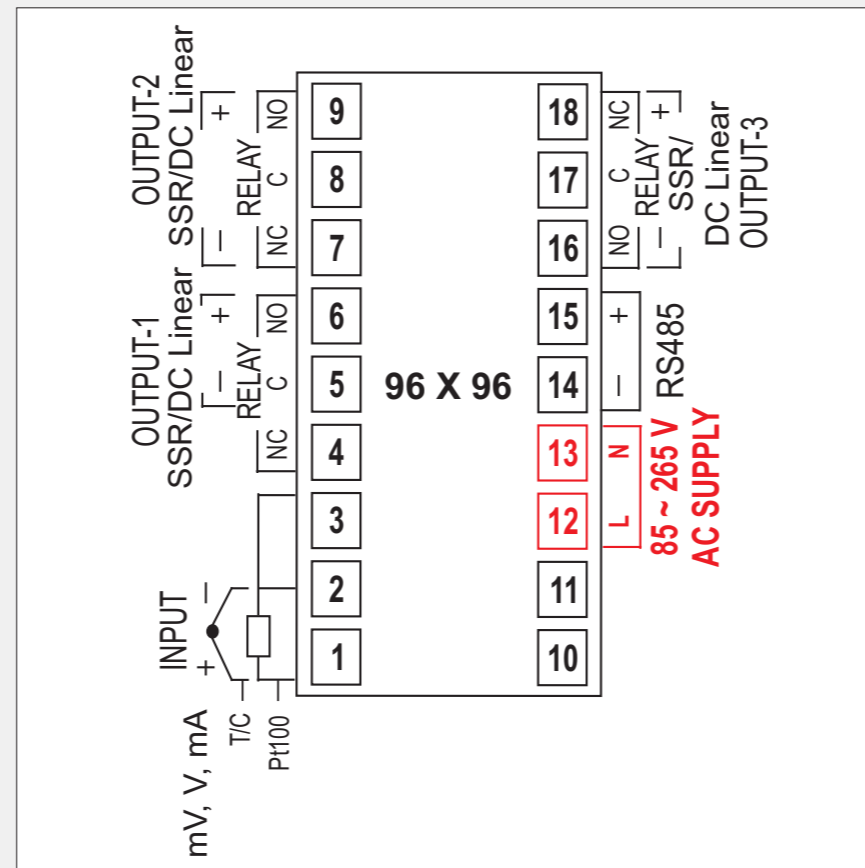
Keys Operation

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.

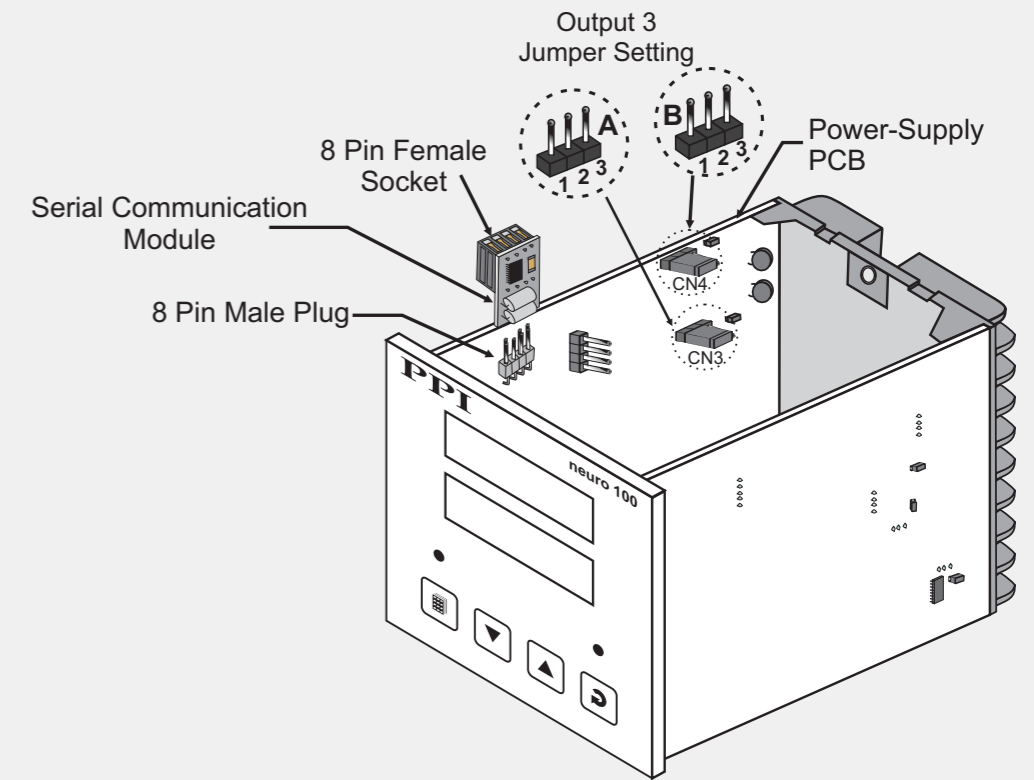
PV Error Indications

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

ELECTRICAL CONNECTIONS



SERIAL COMMUNICATION MODULE



INPUT & OUTPUT HARDWARE JUMPER SETTINGS

Input

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

Output-1

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

Output-2

Output Type	Jumper Setting - D	Jumper Setting - E
Relay		
SSR		

Output-3

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

