RS232
CONTROLLER / MONITOR
Model : PRS-2321

Your purchase of this RS232 CONTROLLER, MONITOR marks a step forward for you into the field of precision measurement. Although this RS232 CONTROLLER MONITOR is a complex and delicate instrument, its durable structure developed. Please read the following instructions carefully and always keep this manual within easy reach.

OPERATION MANUAL

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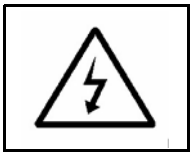
Caution Symbol



Caution :

* Risk of electric shock !

Caution :

* Do not use fingers or any tool to touch the Wire Terminals.
* Do not apply the relay contact load current > 0.5 Amp.
* The instrument contains no user serviceable parts and should not be opened by the user.
* Repair or after service should be done by a qualified technician only.
* Power supply should apply the correct ACV power voltage
* Cleaning - Only use the dry cloth to clean the plastic case !

*** Equipment protectted throughout by Double Insulation or Reinforced Insulation.**

Environmental Condition

* Comply with EN61010.
  Transient overvoltage at Mains Supply 2500V.
* Pollution Degree 2.
* Altitude up to 2000 meters.
* Indoor use.
* Relative humidity 80% max.

TABLE OF CONTENTS

1. FEATURES

* RS232 input, can cooperate full line LUTRON instruments (build RS232 output) be used as a professional controller/monitor.
* It can control max. two reading value (Unit 1, Unit 2 value) if the LUTRON RS232 meter build two displays.
* It can show max. three reading value (Unit 1, Unit 2, Unit 3 value) if the LUTRON RS232 meter build in three displays.
* Professional monitor and controller.
* Build in Unit 1 control relay and the Unit 2 control relay.
* Relay will be make action (On/Off) when the reading value reach high limit or low limit value.
* Offset value setting.
* Hysteresis value setting for high and low alarm.
* Large red LED display, high brightness and easy to read.
* Microprocessor circuit ensures high accuracy and provides special functions and features.
* Standard 96 X 48 mm DIN case.

2. SPECIFICATIONS

Application	RS232 data input, it can cooperate full line LUTRON instruments (build RS232 output) be used as a professional controller/monitor.	
Display	4 digits red LED, digit size : 14 mm.	
Unit	Unit 1	Controller and monitor.
	Unit 2	Controller and monitor.
	Unit 3	Monitor only.
Circuit	Custom chip of microprocessor LSI circuit.	

Sampling Time	Approx. 1 second.	
Relay outputs	Number	2 relays
	Function	*Relay 1 :* Unit 1 control relay. *Relay 2 :* Unit 2 control relay.
	Max load 	0.5 ACA/250 ACV 0.5 DCA/24 DCV **** Do not apply the relay contact load current > 0.5 A, other wise the relay may be damaged permanently without warranty.***
Setting value	High limit value setting. Low limit value setting. Hysteresis value setting. Offset value setting. ** Setting for Unit 1 and Unit 2 value.*	
External Power Supply	DC 12 V, 50 mA max.	
Data Input	RS 232 PC serial interface.	
Operating Temperature	0 to 50 ℃.	
Operating Humidity	Less than 80% R.H.	
Power Supply	90 to 260 ACV, 50/60 Hz.	
Power Consumption	Approx. 4.7 VA/AC 110V. Approx. 5.3 VA/AC 220V.	
Weight	384 g/ 0.84 LB. ** Including probe.*	
Dimension	DIN size : 96 x 48 mm. Depth : 110 mm.	
Accessories Included	* Instruction manual.....1 PC * Double earphone cable, UPCB-03 (refer page 5) 1 PC * Case holder with screw.....2 PCs	

3. FRONT PANEL DESCRIPTION

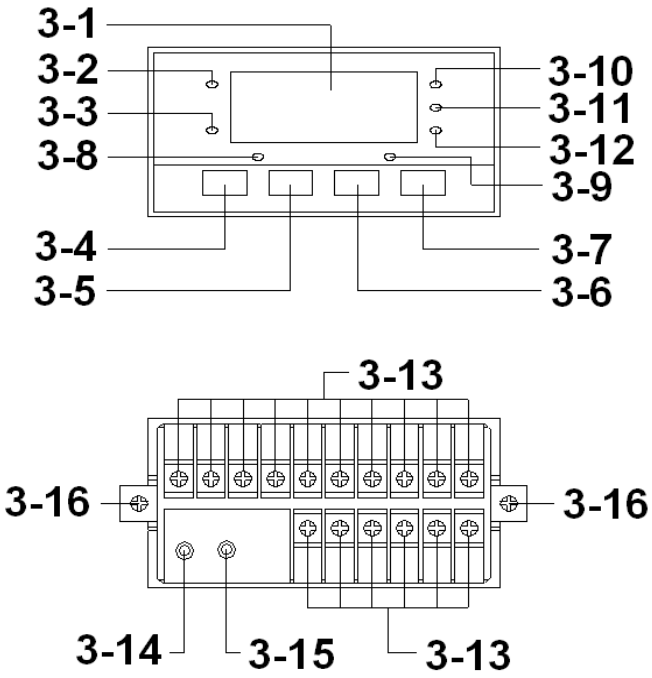
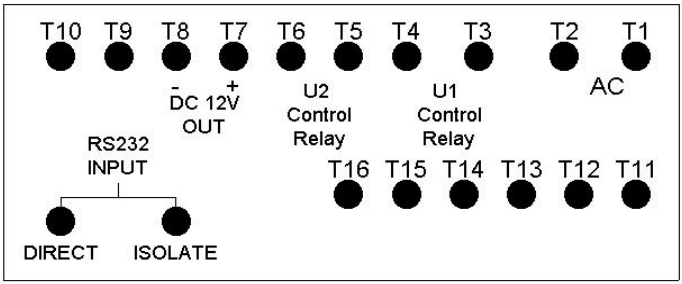


Fig. 1

3-1 Display
3-2 PV (process value) indicator
3-3 SV (set value) indicator
3-4 Set Button
3-5 ▼ Button
3-6 ▲ Button
3-7 Function Button
3-8 U1 control relay indicator
3-9 U2 control relay indicator
3-10 U1 indicator
3-11 U2 indicator
3-12 U3 indicator
3-13 Wire terminals
3-14 RS232 input terminal (DIRECT)
3-15 RS232 input terminal (ISOLATE)
3-16 Case holder

4. MEASURING PROCEDURE



Terminal layout Fig. 2

4-1 Terminal connection

1) Input the ACV power (90 to 260 ACV) to T1, T2.

Do not input the over voltage to the AC input terminals.

2) Connect the " Unit 1 Relay " output from T3, T4.
Connect the " Unit 2 Relay " output from T5, T6.

Do not apply the relay contact load current > 0.5 A, other wise the relay may be damaged permanently without warranty.

4-2 Connection (RS232 meter to PRS-2321)

1) Prepare the interface cable (Double earphone cable, UPCB-03 standard accessory). Connect the UPCB-03 cable to the RS232 meter and the PRS-2321 (refer Fig. 3).

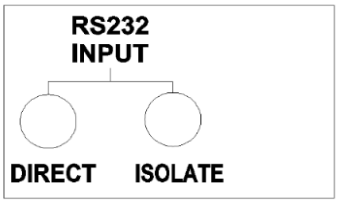


Fig. 3

Note :

a. According the meter's RS 232 type, plug the UPCB-03 to " DIRECT " terminal or " ISOLATE " terminal of PRS-2321.

b. If you do not know what the RS232 type of your meter, then just try, either these input two terminals (DIRECT or ISOLATE) should have one input terminal can accept the RS 232 signal input exactly.

2) Power on the RS232 meter and the PRS-2321, the RS 232 data string will send into the PRS-2321, the " Display " (3-1, Fig. 1) will show the same measuring value that measured from RS232 meter if you already plug the UPCB-03 plug to the right input terminal (ISOLATE or DIRECT terminal) exactly.

3) If the RS232 meter exist several display reading, then press the " Function Button " (3-7, Fig. 1) once, the " Display " (3-1, Fig. 1) will show the meter reading 1, meter reading 2, meter reading 3... in sequence, in the same time the " U1 indicator (3-10, Fig. 1) or " U2 indicator " (3-11, Fig. 1) or " U3 indicator " (3-12, Fig. 1) will lit.

4-3 1st layer setting procedures

LoLt	**Low Limit**
HILt	**High Limit**

Low Limit Value Setting

1) Press the " Set Button " (3-4, Fig. 1) once, the " Display " will show " LoLt ", now the meter is ready for the Unit 1 " Low Limit " value setting.

   Press the " Function Button " (3-7, Fig. 1) once, the " U2 Indicator " (3-11, Fig. 1) will light, now the meter is ready for the Unit 2 " Low Limit " value setting.

   Re Under " Display " show " LoLt ", if " U1 indicator "
   **** (3-10, Fig. 1) is lit, meter is ready for " Unit 1 " value setting.***
   Under " Display " show " LoLt ", if " U2 indicator "
   **** (3-11, Fig. 1) is lit, meter is ready for " Unit 2 " value setting.***
   The function of " Low Limit value " setting, refer to
   **** page 9, Fig. 3.***
   If " U3 indicator " (3-13, Fig 1) lit, it just ready for
   **** showing the measurement value of " Unit 3 ", however the Unit 3 reading value can not make the control setting.***

2) Use the " ▼ Button " (3-5, Fig. 1) and the " ▲ Button " (3-6, Fig. 1) to adjust the desiring " Low Li
   When adjust the value, the " SV indicator " (3-3, Fig. 1)
   ** will light.*

High Limit Value Setting

1) After set the " Low Limit " value, press the " Set Button " (3-4, Fig. 1) twice, the " Display " will show " HILt ", now the meter is ready for the Unit 1 " High Limit " value setting.

   Press the " Function Button " (3-7, Fig. 1) once, the " U2 indicator " (3-11, Fig. 1) will light, now the meter is ready for the Unit 2 " High Limit " value setting.

   Remark :

   - ***Under " Display " show " HILt ", if " U1 indicator " (3-10, Fig. 1) is lit , meter is ready for " Unit 1 High Limit value " setting.***
   - ***Under " Display " show " HILt ", if " U2 indicator " (3-11, Fig. 1) is lit, meter is ready for " Unit 2 High Limit value " setting.***
   - ***The function of " High Limit value " setting, refer to page 9, Fig. 2.***

2) Use the " ▼ Button " (3-5, Fig. 1) and the " ▲ Button " (3-6, Fig. 1) to adjust the desiring " High Li

   ** When adjust the value, the " SV indicator " (3-3, Fig. 1) will light.*

   After adjust the " High Limit " value, press the " Set Button " (3-4, Fig. 1) twice, " Display " will return to the normal measuring screen.

4-4 2nd layer setting procedures

HySt	**Hysteresis setting**
oFSt	**Offset setting**

Hysteresis value setting

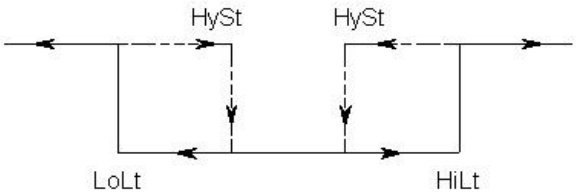
1) Press the " Set Button " (3-4, Fig. 1) continuously at least two seconds, the " Display " will show " HySt ", now the meter is ready for the Hysteresis setting.
2) Use the " ▼ Button " (3-5, Fig. 1) and the " ▲ Button " (3-6, Fig. 1) to adjust the desiring Hysteresis setting value.

When adjust the Hysteresis value, the " SV indicator " (3-3, Fig. 1) will light.

Press the " Function Button " (3-7, Fig. 1) once, the " U2 indicator " (3-11, Fig. 1) will light, the meter is ready for the Unit 2 " Hysteresis " value setting.

Remark :

- ***Under " Display " show " HySt ", if " U1 indicator " (3-10, Fig. 1) is lit, meter is ready for " Unit 1 Hysteresis value " setting.***
- ***Under " Display " show " HySt ", if " U2 ndicator " (3-11, Fig. 1) is lit, meter is ready for " Unit 2 Hysteresis value " setting.***
- ***The function of " Hysteresis value " setting, refer to page 9, Fig. 3.***



High limit value : 100 Fig. 3
Low limit value : 20
Hysteresis value : 5

* **The control relay will On when measuring value up to 100. The control relay will Off again when measuring value down to 95.**
* **The control relay will On when measuring value down to 20. The control relay will Off when measuring value up to 25.**

Offset value setting

1) After finish the Hysteresis setting, press the " Set Button " (3-4, Fig. 1) twice, the " Display " will show " oFSt ", now the meter is ready for the the offset value setting.
2) Use the " ▼ Button " (3-5, Fig. 1) and the " ▲ Button " (3-6, Fig. 1) to adjust the desiring offset value.

** When adjust the Offset value, the " SV indicator " (3-3, Fig. 1) will light.*

Press the " Function Button " (3-7, Fig. 1) once, the " U2 indicator " (3-11, Fig. 1) will light, now the meter is ready for the Temperature " Offset " value setting.

Remark :

- ***Under " Display " show " oFSt ", if " U1 indicator " (3-10, Fig. 1) is lit, meter is ready for " Unit 1 Offset value " setting.***
- ***Under " Display " show " oFSt ", if " U2 indicator " (3-11, Fig. 1) is lit, meter is ready for " Unit 2 Offset value " setting.***
- ***For example of " Offset value setting " :***

  The reading value is 102.
  The offset value is 5.

  The new display value will be 107 (102 + 5).

5. SYSTEM RESET

Power on the meter, use the two fingers to press " Set Button " (3-4, Fig. 1) and " Function Button " (3-7, Fig. 1) continuously more than 5 seconds until the Display show the text " rSt ", release the buttons. After " rSt " text flashing 2 times will return to the normal screen. The meter system will be reset, all the calibration data will be cleared, the meter's internal function will return the default value.

6. THE ADDRESS OF AFTER SERVICE6 CENTER