



# PPI LabCon Recording + Printer Interface User Manual

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LabCon (Printer)  
Recording + Printer Interface  
Operation Manual

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## LabCon Recording + Printer Interface

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](http://www.ppiindia.net)

## OPERATOR PAGE PARAMETERS

| Parameters                                     | Settings (Default Value)                                                                                                 |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Select Print Option>>                          | None Print (New)<br>Re-Print (Old) Print Info Page<br>(Default : None)                                                   |
| Time Start Command >><br>Time Abort Command >> | Yes No<br>(Default: No)                                                                                                  |
| Time Interval (H:M) >>                         | 0.00 to 500.00 (HH:MM)<br>(Default: 0.10)                                                                                |
| Ctrl Set Value >>                              | Setpoint LO limit to Setpoint HI limit (Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default : 25.0) |
| Ctrl Lo Deviation >>                           | For RTD & DC Linear : 0.2 to 99.9 For Thermocouple: 2 to 99<br>(Default: 2.0)                                            |
| Ctrl Hi Deviation >>                           | For RTD & DC Linear: 0.2 to 99.9 For Thermocouple: 2 to 99<br>(Default: 2.0)                                             |
| Change Password >>                             | 1 to 100<br>(Default: 0)                                                                                                 |

## SUPERVISORY > SENSOR INPUT

| Parameters          | Settings (Default Value)                                                                     |
|---------------------|----------------------------------------------------------------------------------------------|
| Ctrl Zero Offset >> | -50 to 50<br>(Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default: 0.0) |

## SUPERVISORY > RECORDING

| Parameters                | Settings (Default Value)                           |
|---------------------------|----------------------------------------------------|
| Rec.<br>Interval (min) >> | 0 to 250 Min (Default : 5 Min)                     |
| Alarm<br>Toggle Record >> | Enable Disable<br>(Default: Enable)                |
| Del<br>Print Records >>   | Yes No<br>(Default: No)                            |
| Del<br>Display Record >>  | Yes No<br>(Default: No)                            |
| RTC Time >>               | 0 to 23 for Hour<br>0 to 59 for Min (Default : NA) |
| RTC Date >>               | 1 to 31<br>(Default: NA)                           |
| RTC Month >>              | 1 to 12 (Default: NA)                              |
| RTC Year >>               | 2000 to 2099<br>(Default: NA)                      |

## SUPERVISORY > CONTROL

| Parameters             | Settings (Default Value)                                                                                                                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Tune >>                | Yes No<br>(Default: No)                                                                                                                         |
| Setpoint LO Limit >>   | Min Range for the Selected Input Type to Setpoint HI Limit (Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default : 0.0)     |
| Setpoint HI Limit >>   | Setpoint LO Limit to Max Range for the Selected Input Type<br>(Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default: 600.0) |
| Compressor Setpoint >> | 0 to 100<br>(Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default: 45.0)                                                    |
| Compressor Hyst >>     | 0.1 to 99.9<br>(Default: 2.0)                                                                                                                   |
| Heat<br>Ctrl Action >> | ON-OFF PID<br>(Default: PID)                                                                                                                    |
| Heat Hyst >>           | 0.1 to 99.9<br>(Default: 0.2)                                                                                                                   |

| Heat Only Control                                         | Heat + Cool Control Zone: Single                          | Heat + Cool Control Zone: Dual                                                                      |
|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Proportional Band >><br>0.1 to 999.9<br>(Default: 50.0)   | Proportional Band >><br>0.1 to 999.9<br>(Default: 50.0)   | Cz Prop Band >> Proportional Band for Cool Pre-dominant zone 0.1 to 999.9<br>(Default: 50.0)        |
| Integral Time >> 0 to 3600 sec (Default: 100 sec)         | Integral Time >> 0 to 3600 sec (Default: 100 sec)         | Cz Integral Time >><br>Integral Time for Cool Pre-dominant zone 0 to 3600 sec<br>(Default: 100 sec) |
| Derivative Time >><br>0 to 600 sec (Default: 16 sec)      | Derivative Time >><br>0 to 600 sec (Default : 16 sec)     | Cz Derivative Time >> Derivative Time for Cool Pre-dominant zone 0 to 600 sec (Default : 16 sec)    |
| Cycle Time >><br>0.5 to 100.0 sec (Default: 10.0 sec)     | Cycle Time >><br>0.5 to 100.0 sec (Default: 10.0 sec)     | Hz Prop Band >> Proportional Band for Heat Pre-dominant zone 0.1 to 999.9<br>(Default: 50.0)        |
| Overshoot Inhibit >> Enable Disable<br>(Default: Disable) | Overshoot Inhibit >> Enable Disable<br>(Default: Disable) | Hz Integral Time >><br>Integral Time for Heat Pre-dominant zone 0 to 3600 sec<br>(Default: 100 sec) |
| Cutoff Factor >><br>1.0 to 2.0 sec (Default: 1.2 sec)     | Cutoff Factor >><br>1.0 to 2.0 sec (Default: 1.2 sec)     | Hz Derivative Time >> Derivative Time for Heat Pre-dominant zone 0 to 600 sec (Default: 16 sec)     |
|                                                           |                                                           | Cycle Time >><br>0.5 to 100.0 sec (Default: 10.0 sec)                                               |
|                                                           |                                                           | Overshoot Inhibit >> Enable Disable<br>(Default: Disable)                                           |
|                                                           |                                                           | Cutoff Factor >><br>1.0 to 2.0 sec (Default: 1.2 sec)                                               |

| Parameters         | Settings (Default Value)                        |
|--------------------|-------------------------------------------------|
| Line Per Page >>   | 25 to 100<br>(Default: 65)                      |
| Top Margine >>     | 1 to 5<br>(Default: 2)                          |
| Bottom Margine >>  | 1 to 5<br>(Default: 2)                          |
| Header & Footer >> | No<br>On First Page Every Page<br>(Default: No) |
| Enable >>          | Yes No<br>(Default: No)                         |

## SUPERVISORY > PRINT EVENT

| Parameters                                                                                                                   | Settings<br>(Default Value)  |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Alarm Toggle >><br>RTC Modify >><br>Interval Modify >><br>Power Up >><br>Door Open >><br>Mains Fail >><br>Setpoint Modify >> | Yes<br>No<br>(Default : Yes) |

## SUPERVISORY > PASSWORD

| Parameters            | Settings<br>(Default Value)    |
|-----------------------|--------------------------------|
| Change<br>Password >> | 1000 to 1999<br>(Default: 123) |

## SUPERVISORY > EXIT

| Parameters         | Settings<br>(Default Value) |
|--------------------|-----------------------------|
| Exit Setup Mode >> | Yes<br>No<br>(Default: )No  |

## FACTORY > CONTROL SENSOR INPUT

| Parameters    | Settings (Default Value)               |                      |         |
|---------------|----------------------------------------|----------------------|---------|
| Input Type >> | Refer Table 1 (Default : RTD Pt100)    |                      |         |
| Signal LO >>  | Input Type                             | Settings             | Default |
|               | 0 to 20mA                              | 0.00 to Signal High  | 0.00    |
|               | 4 to 20mA                              | 4.00 to Signal High  | 4.00    |
|               | 0 to 5V                                | 0.000 to Signal High | 0.000   |
|               | 0 to 10V                               | 0.00 to Signal High  | 0.00    |
|               | 1 to 5V                                | 1.000 to Signal High | 1.000   |
|               |                                        |                      |         |
| Signal HI >>  | Input Type                             | Settings             | Default |
|               | 0 to 20mA                              | Signal Low to 20.00  | 20.00   |
|               | 4 to 20mA                              | Signal Low to 20.00  | 20.00   |
|               | 0 to 5V                                | Signal Low to 5.000  | 5.000   |
|               | 0 to 10V                               | Signal Low to 10.00  | 10.00   |
|               | 1 to 5V                                | Signal Low to 5.000  | 5.000   |
|               |                                        |                      |         |
| Range LO >>   | -199.9 to RANGE HI<br>(Default : 0.0)  |                      |         |
| Range HI >>   | RANGE LO to 999.9<br>(Default : 100.0) |                      |         |

## FACTORY > ALARM PARAMETERS

| Parameters    | Settings (Default Value)       |
|---------------|--------------------------------|
| Hysteresis >> | 0.1 to 99.9<br>(Default : 0.2) |
| Inhibit >>    | Yes No<br>(Default : Yes)      |

## FACTORY > HEAT COOL SELECT

| Parameters                    | Settings (Default Value)                                    |
|-------------------------------|-------------------------------------------------------------|
| Control Strategy >>           | Heat Only Cool Only Heat + Cool<br>(Default : Heat + Cool)  |
| Control Strategy: Cool Only   |                                                             |
| Time Delay (sec) >>           | 0 to 1000 Sec (Default : 200 Sec)                           |
| Control Strategy: Heat + Cool |                                                             |
| Compressor Strategy >>        | CONT. OFF CONT. ON SP BASED PV BASED<br>(Default: CONT. ON) |

| CONT. ON                                                                | SP BASED                                                                                                                            | PV BASED                                                                |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Time Delay (sec) &gt;&gt;</b><br>0 to 1000 Sec<br>(Default: 200 Sec) | <b>Boundary Set Value &gt;&gt;</b><br>0 to 100<br>(Resolution 0.1°C for RTD / DC Linear & 1°C for Thermocouple)<br>(Default : 45.0) | <b>Time Delay (sec) &gt;&gt;</b><br>0 to 1000 Sec<br>(Default: 200 Sec) |
|                                                                         | <b>Control Zones &gt;&gt;</b><br>Single<br>Dual<br>(Default: Single)                                                                |                                                                         |
|                                                                         | <b>Time Delay (sec) &gt;&gt;</b><br>0 to 1000 Sec<br>(Default : 200 Sec)                                                            |                                                                         |

## FACTORY > SOAK TIMER PARAMETERS

| Parameters           | Settings (Default Value)                       |
|----------------------|------------------------------------------------|
| Enable >>            | No Yes<br>(Default: No)                        |
| Start Band >>        | 0 to 999.9<br>(Default: 0.5)                   |
| Holdback Strategy >> | None Up Down Both<br>(Default : None)          |
| Hold Band >>         | 0.1 to 999.9<br>(Default : 0.5)                |
| Heat Off >>          | No Yes<br>(Default : No)                       |
| Cool Off >>          | No Yes<br>(Default: No)                        |
| Power Recovery >>    | Abort Restart Continuous<br>(Default: Restart) |

## FACTORY > DOOR OPEN

| Parameters                | Settings (Default Value)                                        |
|---------------------------|-----------------------------------------------------------------|
| Enable >>                 | Yes No<br>(Default : No)                                        |
| Switch Logic >>           | Close: Door Open Open: Door Open<br>(Default: Close: Door Open) |
| Door<br>Alrm Dly (sec) >> | 0 to 1000 Sec<br>(Default : 60 Sec)                             |

#### FACTORY > MAINS FAILURE

| Parameters      | Settings (Default Value)                                           |
|-----------------|--------------------------------------------------------------------|
| Enable >>       | Yes No<br>(Default: No)                                            |
| Switch Logic >> | Close: Mains Fail Open: Mains Fail<br>(Default: Close: Mains Fail) |

#### FACTORY > PASSWORD

| Parameters         | Settings (Default Value)       |
|--------------------|--------------------------------|
| Change Password >> | 2000 to 2999<br>(Default: 321) |

#### FACTORY > FACTORY DEFAULT

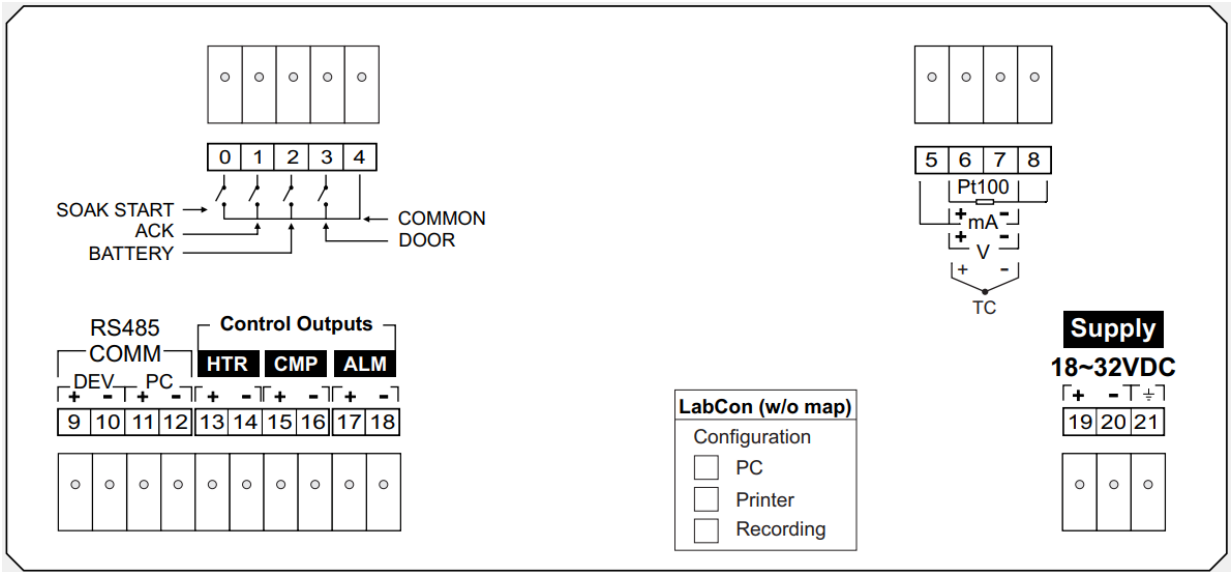
| Parameters        | Settings (Default Value) |
|-------------------|--------------------------|
| Set To Default >> | Yes No<br>(Default: No)  |

#### FACTORY > EXIT

| Parameters         | Settings (Default Value) |
|--------------------|--------------------------|
| Exit Setup Mode >> | Yes No<br>(Default: No)  |

| TABLE 1               |                                                                                                                                                                        |                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| What it means         | Range (Min. to Max.)                                                                                                                                                   | Resolution     |
| Type J Thermocouple   | 0 to +960°C                                                                                                                                                            | Fixed 1°C      |
| Type K Thermocouple   | -200 to +1376°C                                                                                                                                                        |                |
| Type T Thermocouple   | -200 to +385°C                                                                                                                                                         |                |
| Type R Thermocouple   | 0 to +1770°C                                                                                                                                                           |                |
| Type S Thermocouple   | 0 to +1765°C                                                                                                                                                           |                |
| Type B Thermocouple   | 0 to +1825°C                                                                                                                                                           |                |
| Type N Thermocouple   | 0 to +1300°C                                                                                                                                                           |                |
| Reserve               | Reserved for customer specific Thermocouple type not listed above. The type shall be specified in accordance with the ordered (optional on request) Thermocouple type. |                |
| 3-wire, RTD Pt100     | -199.9 to 600.0°C                                                                                                                                                      | Fixed 0.1°C    |
| 0 to 20mA DC current  | -199.9 to 999.9 units                                                                                                                                                  | Fixed 0.1 unit |
| 4 to 20mA DC current  |                                                                                                                                                                        |                |
| 0 to 5.0V DC voltage  |                                                                                                                                                                        |                |
| 0 to 10.0V DC voltage |                                                                                                                                                                        |                |
| 1 to 5.0V DC voltage  |                                                                                                                                                                        |                |

ELECTRICAL CONNECTIONS



PV ERROR INDICATIONS

| Message     | Error Type  | Cause                                  |
|-------------|-------------|----------------------------------------|
| <b>OPEN</b> | Sensor Open | Sensor (RTD Pt100) Broken / Open       |
| <b>OVR</b>  | Over-range  | Temperature above Max. Specified Range |
| <b>UNR</b>  | Under-range | Temperature below Min. Specified Range |

## FRONT PANEL KEYS

| Symbol                                                                              | Key               | Function                                                                                                                     |
|-------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------|
|    | Scroll            | Press to scroll through various Process Information Screens in Normal Operation Mode.                                        |
|    | Alarm Acknowledge | Press to acknowledge and mute (if active) alarm output.                                                                      |
|   | 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. |
|  | SET-UP            | Press to enter or exit set-up mode.                                                                                          |
|  | ENTER             | Press to store the set parameter value and to scroll to the next parameter.                                                  |

# PPI

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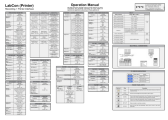
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LabCon Recording Printer Interface, LabCon, Recording Printer Interface, Printer Interface, Interface

## References

- [Factory Automation Products India | Automation Solutions in India](#)