



Highlights

- Universal Inputs (RTD/mA/V for Temperature & %RH) with Selection for Dry/Wet Configuration
- Independent Self Tune PID or On-Off Control Loops for Temperature & %RH
- Compressor Control Output with Time Delay
- Programmable Alarms & Retransmission Outputs for Temperature & %RH

Features

- 24V or 12V or 5V DC Excitation Voltage for Transmitters
- Relay or SSR Drive Outputs for Heating, Humidification & Compressor Control
- Relay Output for Alarm
- DC Volts / Current Retransmission Outputs
- Standby Mode for Use as Indicator with Alarms
- Optional RS485 MODBUS/RTU Serial Communication Port
- Universal Supply Voltage : 85~264 VAC, 50/60 Hz
- DIN Standard Dimensions (mm) : 96(H) X 96(W) X 100(D)

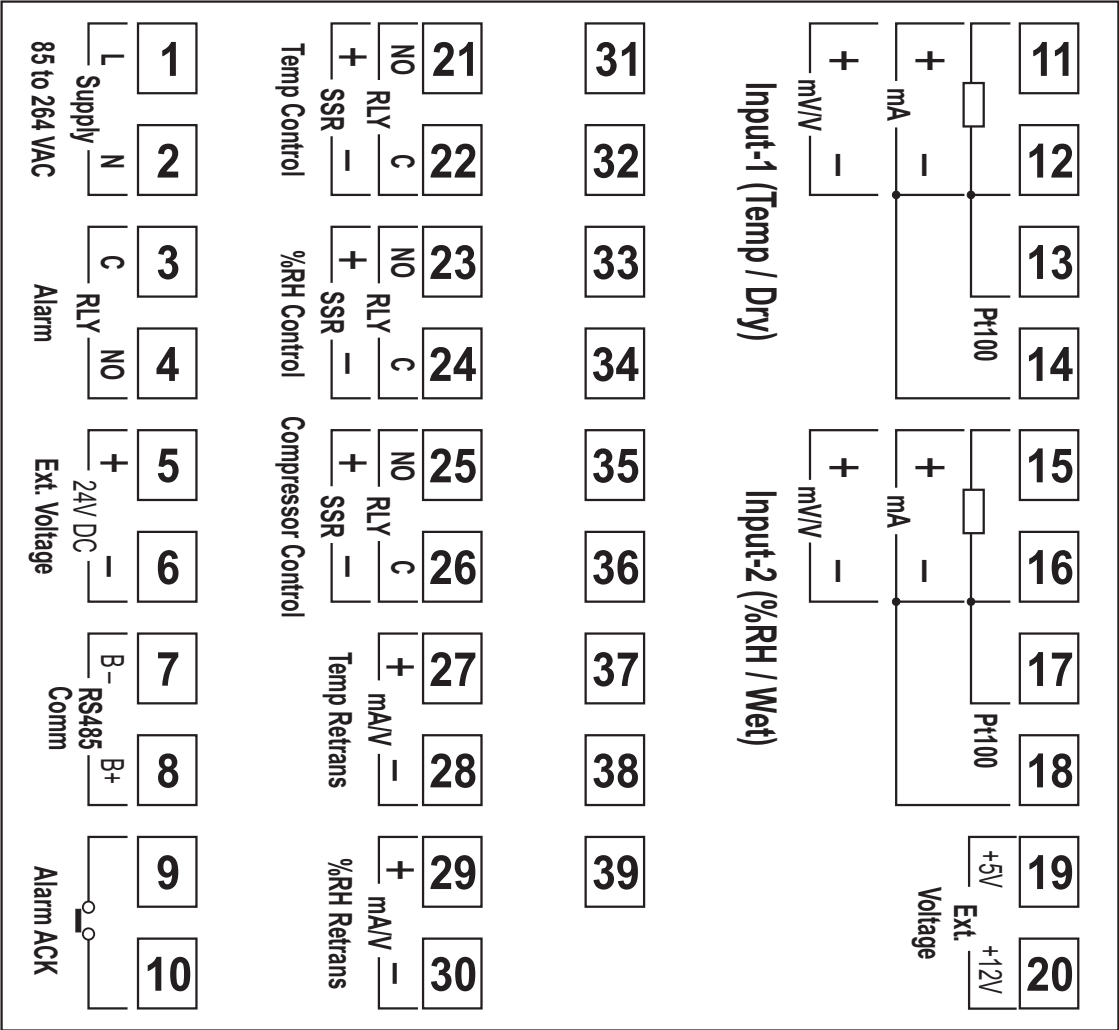
Specifications

| Display | |
|---|---|
| Digital Readouts | Upper Readout : 4 digits, 0.56" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.56" Luminous Green LED, 7 Segment |
| Status Indicators | 3 Red LEDs : Heating, Humidification & Compressor Output Status 4 Red LEDs : Temperature & %RH Alarm Status 1 Red LED : Tuning Status |
| Keys | |
| Type | 8 Tactile Switches |
| Functions | PAGE, DOWN, UP, ENTER Temperature SP, %RH SP, Standby Mode, View Mode |
| Sensor / Signal Input | |
| Type (User Programmable for Both Temperature & %RH Inputs) | RTD Pt100, 3 wire DC Linear : 0-20 mA, 4-20 mA 0-50 mV, 0-200 mV 0-1.25 V, 0-5 V, 0-10 V, 1-5 V |
| Accuracy | RTD Pt100 : $\pm 0.25\%$ of reading $\pm 1^\circ\text{C}$ DC Volts/Current : $\pm 0.25\%$ of reading ± 1 LSD |
| Display Range | RTD Pt100 Input : 0 to 600.0 $^\circ\text{C}$ DC Volts/Current : Adjustable from -199.9 to 999.9 Counts |
| Display Resolution | Temperature : 0.1 Fixed %RH : 0.1 Fixed |
| Zero Offset | User Adjustable over Full Range for Both Temperature & %RH |
| ADC | 16 Bit ($\pm 32,768$ Counts), Sigma-Delta ($\Sigma\Delta$) |
| Sampling Time | 500mS (2 Samples per Second) |
| Common Mode Rejection | > 100dB at 50/60 Hz |
| Signal Conditioning | L-C Analog Filter on Each Input |

| Alarms | |
|---------------------------------|--|
| Numbers | 4, Independent (2 Each for Temperature & %RH) |
| Programmable Parameters | Type : Process Low, Process High, Deviation, Window Logic : Normal, Reverse Hysteresis : 0.1 to 25.0 Unit Counts Inhibit : No, Yes |
| Output (Optional) | Relay Change-over Contacts (Can be programmed to activate on Temperature Alarm or %RH Alarm or Both Alarms) |
| Retransmission | |
| Numbers | 2 (1 Each for Temperature & %RH) |
| Parameter Type | Process Value (PV) |
| Parameter Value | User Settable through 'Range Low' & 'Range High' Parameters |
| Outputs (Optional) | DC Volts (0-5/10 V) or DC Current (0/4-20 mA) |
| Compressor Control | |
| Type | On-Off with Programmable Time Delay & Hysteresis |
| Control Strategy (Programmable) | 1. Can be Switched ON-OFF Manually. 2. Based on Programmable Temperature SP Threshold. Compressor is ON for Temperature SP Below Threshold & OFF Above. 3. Cool Control. Switches ON-OFF Based on Temperature PV & SP 4. De-humidification Control. Switches ON-OFF Based on %RH (Humidity) PV & SP |
| Output | Relay Change-over Contacts or SSR Drive Voltage |
| Heat Control | |
| Type | Self Tune PID or ON-OFF |
| Mode | Reverse Control |
| Control Parameters | PID : Proportional Band, Integral Time, Derivative Time, Cycle Time ON-OFF : Hysteresis |
| Output | Relay Change-over Contacts or SSR Drive Voltage |
| Humidity Control | |
| Type | Self Tune PID or ON-OFF |
| Mode | Reverse Control |
| Control Parameters | PID : Proportional Band, Integral Time, Derivative Time, Cycle Time ON-OFF : Hysteresis |
| Output | Relay Change-over Contacts or SSR Drive Voltage |
| Outputs | |
| Relay | Contact Type : Potential-free Change-over Contacts Contact Rating : 5A Resistive @ 120/240 Vac Contact Life : > 5,00,000 Operations at Rated Voltage / Current |
| SSR Drive | > 4.2 VDC into 1KOhm Minimum |
| DC Linear | Voltage : 0-5V, 0-10V (into 1KOhm Minimum) Current : 0-20mA, 4-20mA (into 400 Ohm Maximum) |

| Serial Communication | |
|-----------------------------|---|
| Port | RS485, 2-wire, Half Duplex, Start-Stop Synchronized |
| Protocol | Modbus RTU |
| Baud Rate | Settable : 4800, 9600, 19200, 38400, 57600 |
| Parity | Settable : None, Even, Odd |
| Max. Units per Loop | 31 |
| Max. Distance | 1200 Metres |
| Power Supply | |
| Type | Switch Mode (SMPS) |
| Line Voltage | 85~264 VAC, 50/60Hz |
| Consumption | 5VA Max |
| Physical | |
| Mounting | Plug-in with Panel Mounting Clamps |
| Overall Dimensions | 96(H) X 96(W) X 100(D), mm |
| Panel Cutout | 92(H) X 92(W), mm |
| Terminals | Screw Type |
| Weight | 400 gm, Appx. |
| Environmental | |
| Operating Ambient | 0~55°C & 5~90%RH Non-condensing |
| Storage Temperature | -10 to +70 °C |
| Panel Sealing | IP65, NEMA 4X |
| EMC Standards | EN50081-2 & EN 50082-2 Generic Stds for Industrial Environment |
| Safety Standards | Meets EN61010, Installation Catagory II |
| Atmospheres | Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution. |

Back Panel Terminations



Ordering Code

| Input-1* (Temp / Dry) | | Input-2* (%RH / Wet) | | Temp Control | | %RH Control | | Comp Control | | Alarm | |
|--------------------------|----------------|-------------------------|----------------|--------------|-----------------|-------------|-----------------|--------------|-----------------|-------|-------|
| PT | RTD Pt100 | PT | RTD Pt100 | 0 | SSR | 0 | SSR | 0 | SSR | 0 | None |
| LV | Linear Voltage | LV | Linear Voltage | 1 | Relay/ SSR** | 1 | Relay/ SSR** | 1 | Relay/ SSR** | 1 | Relay |
| LC | Linear Current | LC | Linear Current | | | | | | | | |

| Temp Retrans | | %RH Retrans | | Power Supply | | Excitation Supply | | Options | |
|--------------|-----------|-------------|-----------|--------------|------------|-------------------|----------------|---------|-------------|
| 0 | None | 0 | None | 0 | 85~264 VAC | 1200 | +12V DC Only | N | None |
| 3 | 0-5/10 V | 3 | 0-5/10 V | | | 1205 | +12V & +5V DC | S | Serial Port |
| 4 | 0/4-20 mA | 4 | 0/4-20 mA | | | 1224 | +12V & +24V DC | | |

Example Code **PT-LV-0-0-0-1-0-0-0-1224-S**

Temp Input Pt100, %RH Input Voltage, Temp Control SSR, %RH Control SSR, Compressor Control SSR, Temp Alarm Relay, Temp Retransmission None, %RH Retransmission None, 85~264 VAC Supply, +12V & +24V DC Excitation Voltage, Serial Port

* Input type is universal and requires appropriate parameter setting. The ordering code only implies the factory settings at the time of dispatch.

** Relay and SSR selection is jumper settable by user. The default factory setting is Relay.