CLEANROOM MONITOR

CR3B Series

The CR3B Series Cleanroom Monitor was developed specifically to allow for monitoring of confined spaces with accuracy and reliability It features a flush fitting stainless-steel front plate and remote plate that enables the user to wipe down the unit when necessary.

PRODUCT HIGHLIGHTS

• Remote temperature, relative humidity and differential pressure port

• Second pressure port on front panel

• Analog outputs, 4-20mA, 0-5 or 0-10Vdc selectable

• Modbus RTU or BACnet network version

• Bright easy to read display

• Display for Temperature, relative humidity and pressure

• Pluggable screw terminals for easy installation

SPECIFICATIONS

|  |  |
| --- | --- |
| DESCRIPTION | ENGINEERING SPEC |
| TEMPERATURE INPUT | **Sensor Type:** 10KΩ NTC Thermistor**Temperature Range:** 0 to 50°C (32to 122°F)**Accuracy:** ±0.2°C (±0.4°F) curve matched |
| RELATIVE HUMIDITY INPUT | **Sensor Type:** Thermoset polymer based capacitive**RH Range:** 0 to 100 %RH**Accuracy:** ±2 %RH**Hysteresis:** ±1.5 %RH**Stability:** ±1.2 %RH typical @ 50 %RH in 5 years |
| DIFFERENTIAL PRESSURE INPUT | **Sensor Type:** MEMS piezo resistive differential**Pressure Ranges:** *01 -* ±250Pa or ±25mmWC, *02 -* ±500Pa or ±50mmWC**Accuracy:** ±0.5 %FS**Stability:** ±0.5 %FS max 1 year**Thermal Effect:** <±1 %FS, 0 to 70°C (32 to 158°F)**Proof Pressure:** 24.9 kPa (2490 mmWC)**Burst Pressure:** 74.7 kPa (7470 mmWC)**Media Compatibility:** Dry air or inert gasINDICATION **Temperature Display:** 3 digit LED as 0.0-50.0 |
| INDICATION | **Temperature Display:** 3 digit LED as 0.0-50.0°C or 32.0-122°F (°C/°F by LED)**Relative Humidity Display:** 3 digit LED as 0.0-99.9 %RH**Differential Pressure Display:** 3 1/2 digit LED display as -500-500 Pa or -50.0-50.0 mmWC(Pa / mmWC is indicated by an LED)**Digit Type:** 7 segment red LED, 0.80” (20.32 mm) high**Alarm Indication:** Low / High alarm red LED for each parameter (T + RH + DP) |
| USER INPUT | **Programming:** Menu / Up / Down front panel tactile keys**Alarm Silence:** Silence front panel tactile key |
| ANALOG OUTPUTS | **Signal Type:** 4-20 mA (sourcing) and 0-5 Vdc / 0-10 Vdc selectable**Number of Outputs:** 3 (Temp, RH, DP)**Output Drive:** *Current -* 500Ω max, *Voltage -* 10 KΩ min**Output Scales:** 0 to 50°C, 0 to 100 %RH, ±500 Pa |
| ALARM OUTPUTS | **Number of Outputs:** 3 (Temp, RH, DP), can assign condition as low/high/both**Output Type:** NO optically isolated solid state FET switch**Contact Rating:** 100 mA at 28 Vac / 40 Vdc maximum**Trip Point:** Upper and Lower alarms adjustable**Alarm Delay:** 0 to 255 seconds (programmable)**Operation:** Self-resetting, non-latching**Alarm Buzzer:** Internal, operates on any alarm condition**Buzzer Delay:** 0-255 seconds (programmable)**Operations:** Self-resetting, can be silenced via silence button or disabled remotely viaBACnet® or Modbus |
| COMMUNICATION | **Hardware:** Isolated 2-wire RS-485 MS/TP**Software:** Modbus RTU or BACnet®**Baud Rate:** 9600, 19200, 38400, 57600, 76800 or 115200**Address Range:** *Modbus -* 1-255, *BACnet® -* 0-127 |
| OPERATING CONDITIONS | 0 to 50°C (32 to 122°F), 0-90 %RH non-condensing |
| STORAGE TEMPERATURE | -20 to 60°C (-4 to 140°F) |
| POWER SUPPLY | 24-30 Vdc / 20-26 Vac |
| POWER CONSUMPTION | 200 mA max |
| WIRING CONNECTIONS | Pluggable screw terminal block (14 to 22 AWG) |
| PRESSURE CONNECTIONS | Port for 1/8” ID tubing |
| PROTECTION | IP65 front plate |
| ENCLOSURE | Wall mount enclosure, SS304, suitable for wipe-down255mm W x 182.5mm H x 36mm D (8.86” x 7.19” x 1.46”) |
| REMOTE SENSOR PLATE | 70mm W x 115mm H x 45mm D (2.76” x 4.53” x 1.77”) |
| WEIGHT | 1.3 kg |
| CERTIFICATION | CE, RoHS |
| COUNTRY OF ORIGIN | Canada |