

CRP5 series

The differential pressure measurement of the CRP5 clean room panel is based on diaphragm sensor technology. Thanks to its functionality, this device of the highest Swiss quality can be configured perfectly for the application in question. The CRP5 stands out from the crowd with its front panel manufactured with sturdy glass and removable humidity and temperature probe.

FEATURES

- Designed for cleanrooms
- Removable humidity & temperature probe for simple cleaning
- Accuracy: Pressure $\pm 1.0\%$ FS, Temperature: $\pm 0.2\text{ K}$ / Humidity: $\pm 1.5\%$ rh
- Digital communication via Ethernet (Modbus TCP, HW5) and RS-485 (Modbus RTU, HW5)
- Analog and digital inputs
- Front-side pressure connections for room pressure measurement or calibration
- High chemical resistance of glass front panel
- Alarms via relay or color TFT display
- Visual operating elements for operation with protective gloves

Power supply

- Low-voltage: 3-wire

Signal output

- 4 independent current and voltage outputs
- Ethernet (Modbus TCP) / RS-485 (Modbus RTU)
- 6 relay switch contacts

Version

- Panel version with HC2-CRP probe at the front
- Panel version with probe connection at the back

Measured parameters

- Differential pressure, temperature and relative humidity
- Analog and digital input signals
- Psychrometric calculations such as enthalpy, dew point, etc.

Measurement ranges

- $-25\ldots+25\text{ Pa}$ / $-50\ldots+50\text{ Pa}$ / $-100\ldots+100\text{ Pa}$ / $-250\ldots+250\text{ Pa}$ / $-500\ldots+500\text{ Pa}$
- $-5\ldots60\text{ °C}$ ($23\ldots140\text{ °F}$) / $0\ldots100\%$ rh
- Analog IN: $0\ldots3.3\text{ V}$ or $0\ldots24\text{ mA}$ (freely scalable)
Digital IN: $0\ldots1.5\text{ V}$ (low level) / $3.5\ldots24\text{ V}$ (high level)

Display

- Color TFT display with backlight



CRP5

APPLICATIONS

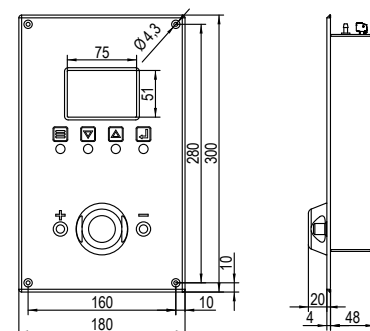
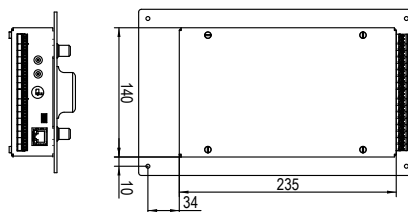
Cleanrooms, operating theaters, food industry and applications where very small pressure differences need to be detected.

Order code	CRP53x
Output signals	0...10 V / 4...20 mA (Customer rescaling possible*) 6 x solid-state relays
Pressure ranges	±50 Pa / ±100 Pa / ±250 Pa / ±500 Pa
Configuration of the pressure connections	<ul style="list-style-type: none"> Caps without holes with pressure connections at the back Cap with hole at «+» connection for room pressure measurement Cap with hole at «-» connection for room pressure measurement
Humidity probe	Removable probe at the front (HC2-CRP) or probe connection at the back (HC2)
Relays	1 A DC / AC 2 A DC

The magnetic HC2-CRP humidity and temperature probe can also be used independently.



CRP5 with HC2-CRP probe



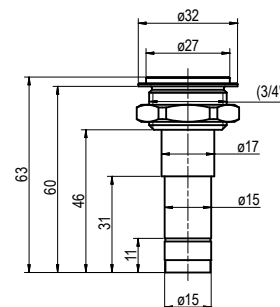
Flush mount probes

The flush mount probe is mounted in the walls of glass cabinets, showcases, gallery walls, laboratories and in cleanrooms for humidity and temperature measurement.

Order code	HC2-IS25
Accuracy	±1.5 %rh, ±0.2 K, at 0...90 %rh and 10...30 °C
Power supply	3.3...5 VDC, adjusted at 3.3 VDC, current: ~4.5 mA
Filter type	Sintered steel
Sensor type	ROTRONIC HYGROMER® WA-1, PT100 1/3 Class B
Response time	<20 s
Housing material	Polycarbonate, stainless steel DIN 1.4301
Weight	50 g



HC2-IS25, steel filter, cover



Compatible

- HygroSoft software

Delivery package

- Factory adjustment certificate
- Short instruction manual

Recommended accessories

- Service cable
- Calibration accessories
- HC2A-S probes

AC3006 / AC3009*

* Requires optional HygroSoft software and service cable.

Technical data	CRP53x
General	
Parameters	Differential pressure, temperature, relative humidity, absolute pressure, digital and analog inputs
Housing material	Front: glass Back: stainless steel
IP protection	Front: IP65 (also with detached probe) Back: IP20
Mounting position	Wall mounting
Dimensions	180 x 300 x 72 mm
Weight	1,700 g (with humidity probe) 1,550 g (without humidity probe)
Display	Color TFT display
Menu navigation	4 optical keys
Electrical connections	Screw terminals at the back
Power supply	20...48 VDC / 16...35 VAC
Current consumption	<450 mA
Range of application / Storage conditions	-5...60 °C (23...140 °F) / 0...100 %rh
Firmware update	Via HygroSoft software
Service interface	UART
CE / EMC compatibility	EMC Directive 2014/30/EU
Fire protection class	Corresponds to UL94-HB
Differential pressure measurement	
Measurement principle	Diaphragm sensor
Measurement ranges	±50 Pa / ±100 Pa / ±250 Pa / ±500 Pa
Medium	Air and non-aggressive gases
Accuracy at 23 °C ±3 K	±1.0 %FS
Zero drift	Compensated (manual or automatic zero adjustment)
Measurement interval	1 s
Pressure resistance	0.7 bar (70,000 Pa)
Pressure connections	Front: tubing connector Ø 6 mm x 10 mm Back: tubing connector Ø 4 mm x 10 mm
Measurement of temperature and relative humidity	
Probes	HC2-CRP, HC2
Measurement range	-100...200 °C (probe dependent) / 0...100 %rh
Outputs	
Analog outputs	4, freely configurable
Analog output type	0 / 4...20 mA or 0...1 / 5 / 10 V
Switch output	6 solid-state relays
Switching capacity	<50 VDC at <2A if polarity is considered <35 VAC at <1 A if polarity is not considered
Accuracy analog output	±5 mV (voltage output) ±20 µA (current output)
Permissible load	>10 kΩ (voltage output) <500 Ω (current output)
Digital communication	Ethernet (Modbus TCP, HygroSoft software) / RS-485 (Modbus RTU)