

HC2A-PT100



HC2A-PT100



Binder
4 pole female

Advantages

- Developed for the use with Rotronic PT100 probes
- Extended temperature measurement range from -100 up to 400 °C¹
- Advanced probe housing and construction
- Hot swappable (mounted probe)

Applications

- Suitable with all Rotronic PT100 probes with Binder connector in combination with a handheld (HP32) or transmitter (HF5, PF4, PF5)
- All PT100 third party devices with Binder 4 pole connector



Housing and Connector

- New industrial housing (PPS) IP65
- Binder 4 pole female pressed and additional glued

Smart Electronic

- Based on the Rotronic's AirChip3000
- 4-wire technology
- Saves adjustment data so that the connected probe can be interchanged without re-adjusting

Flexibility and Compatibility

- User scalable analog output signal (0...1V)²
- Digital interface via UART³
- Rapidly interfaced with HygroClip2 devices from Rotronic or in OEM⁴ applications

HC2A-PT100



¹ Depending on mounted temperature probe

² HW5 software and service cable AC3001 are required

³ Universal Asynchronous Receiver Transmitter

⁴ Original Equipment Manufacturer

General Information

Rotronic offers a wide range of its own PT100 probes. All PT100 probes have a precision of class A within the range of -30...300 °C according to IEC751. Accuracy class B applies to the remaining temperatures.

Resolution and Temperature dependance of Analog Output

• The analog signal can be displayed with a 15 bit resolution, the smaller the measuring range the better the resolution. The accuracy of the analog output is defined as <10mV at 23 °C (0...1V) without load. The respective temperature dependence is defined with 0.05 mV / °C.

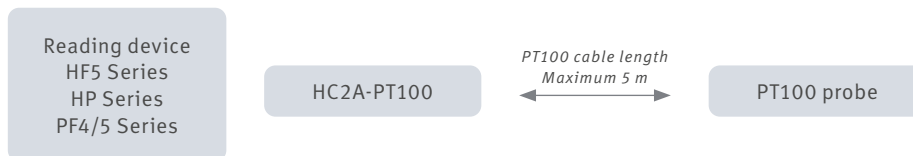
Computer Connection

The cable AC3001 allows direct connection to a computer via USB and with use of the HW5 software, to adjust the HC2A-PT100 probe's parameters such as:

- Scaling of analog outputs

Extension Cable

Recommendation of Rotronic is distancing the sensor (PT100) for a maximum length of 5 meters⁵ and the respective evaluation electronics (Reading device) is to be connected directly to the HC2A-PT100 adaptor:

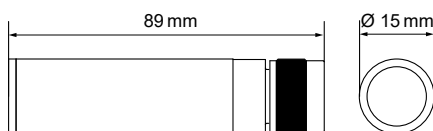


If customers would like to distance the reading devices from the adaptor you may use an extension cable with the risk of possible EMV disturbances.

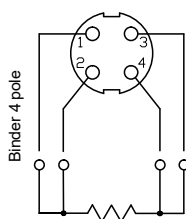
- E2-02A for 2 meters extension between reading device and HC2A-PT100

Technical Information

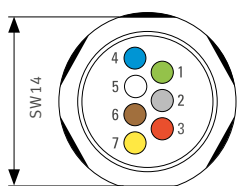
HC2A-PT100



Connector pin-out



Connector pin-out



- 1 ● V+
- 2 ● GND (digital and supply)
- 3 ● RXD (UART)
- 4 ● TXD (UART)
- 5 ○ Analog signal humidity (disabled)
- 6 ● Analog signal temperature (-40...60 °C = 0...1 V)
- 7 ● AGND (analog ground)

Technical Data

Order Code	HC2A-PT100
Supply voltage	3,3...5 VDC
Current consumption	Approx. 5 mA (adjusted at 3.3 VDC)
Load	> 1 kΩ
Protection rating	IP65
Digital Interface	UART (19200 baud fixed)
Protocols	RoASCII (default) MODBUS (setting with HW5)
Analog output 2	1 x 0...1 V
Analog outputs Parameters	Humidity (disabled) Temperature (default)
Analog output scaling Humidity (disabled)	Humidity (disabled) • Temperature (-40...60 = 0...1V) • Temperature freely settable with HW5
Timing	1 st measurement after 1.5 s Measurement interval of 1.1 s
Resolution	15 bit
Measurement uncertainty	0.1 °C
Weight	19.1 g

⁵ PT100 probes without cables can be distanced with the help of AC1607/05 for 5 meters.