HF5A TRANSMITTER

HF5A wall version

Benefits

- Measures relative humidity, temperature and dew point
- Interchangeable probes, compatible with Standard-, Industrial and RMS probes
- Freely programmable Outputs via NFC-Interface & supports NFC Powerless

Applications

- HVAC Heating, vetilation, air conditioning
- Food industry
- Pharmaceutical industry
- Printing and paper industries

New housing

- Robust, industrial-quality hosuing (IP65)
- Wall mount version (Duct version can be achieved together in combination with extension cable and mounting screw connection)

Outputs

- The 2 analog outputs are freely selectable and scalable (current output monitoring according to NAMUR NE43)
- 2-wire (HF5A-2), 3- /4-wire analog (HF5A-3) and 3- /4- wire digital RS485 on screw terminal (HF5A-D)
- Combined digital and analog output signals allow simultaneous control and monitoring of a device by just one transmitter

Power supply

- 18...36 VDC

Flexible choice of probes

- Connection of a wide range of probes possible
- Connection of simulators facilitates process validation
- 3- /4-wire version compatible with RMS Probes

ProcessSensing.com

rotronic
MEASUREMENT SOLUTIONS
A PST BRAND

Versions

HF5A wall version

HF5A-2/HF5A-3/HF5A-D serie

Use in
technical rooms
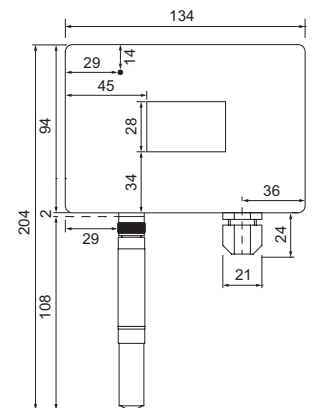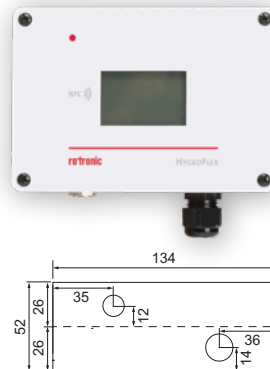
Use in
ventilation shafts

Use in
air blade rooms

HF5A wall mount
HC2A-S / RMS-HCD-S

HF5A wall-mounted version
for duct with AC5005 and
E2-F3A / HC2A

HF5A wall mount
PCD-S-XX

Technical information

	HF5A-2 2-wire	HF5A-3/ HF5A-D 3- /4-wire
Humidity Probe	HygroClip2, HC2 Probes, various types	
Accuracy at 23 ± 5 °C	Probe dependent	
Initialization time	Typically, > 30 sec.	Typically, 3 sec.
Measurement range	Probe dependent	
Range of applications	-10...60 °C with display / -40...70 °C without display / humidity 0...100 %rH (non-condensing)	
Trend indicator	Yes	
Display resolution	Resolution up to 2 decimal places (0.01)	
Output signals analog	4...20 mA	Freely scalable 0...5, 0...10 V, 0...20 mA, [1]4...20 mA (4...20 mA per default)
Resolution Analog output	≥ 15 bit	
Output signals digital	-	RS485 signals on screw terminal
Cable connections	1 x M16 x 1.5, screw terminals (2 x M16 for HF5A-D)	
Psychrometric calculations	All	
Power supply	18...36 VDC (Vmin = 12 VDC + 6 VDC)	18...36 VDC
Circuit Type	2-wire	3-wire with mounted Jumper J1 (default) 4-wire galvanically separated with unmounted J1
Current consumption	50 mA (when both outputs are connected)	< 100 mA (when both outputs are connected)

[1] 4...20mA Default Setting

HF5A-2, HF5A-3 and HF5A-D
Wall version (W)

Load per analog output	Max. 500 Ω	Current: Max. 500 Ω Voltage : Min. 10 kΩ
Interface	NFC Interface	
Software	Accessoire NFC-USB-READER: NFC to USB Reader or with the HygroSoft software mobile App and a mobile phone with an integrated NFC-Reader.	
Housing Material	Top: PC, Bottom: ABS	
Standards	CE Conformity 2014/30/EU	
GMP/ FDA Compliance	Conforms to FDA 21 CFR Part 11 and GAMP5	
Dimensions	134 × 94 × 52 mm	
Weight	Display version 277g, Others 270g	
IP-protection	IP65	
Fire protection class	Corresponds to UL94-HB	
Soldering material	Lead free (RoHS-Directive 2011/65/ EU)	

rotronic

Probes for Hygroflex Advanced Transmitters

Conventional probes

Order Code	Type	Accuracy @ 23 °C	Application Range	Sensor Element	Long-Term Stability
Standard Precision probes are factory-adjusted at 23 °C and 10, 35 and 80 %RH					
HC2A-S	Standard, black	±0.8 %RH / ±0.1 K	-50...100 °C / 0...100 %RH	HYGROMER HT-1	< 1 %RH per year with clean air
HC2A-S3	Meteo, white				
HC2A-SM	Standard, steel				
HC2A-S(M)-HH	Standard, for rough environment, black	±1.0 %RH / ±0.1 K	0...60 °C / 0...100 %RH	HYGROMER-HH1-SK	-
High Precision probes are factory-adjusted at 23 °C and 10, 20, 30, 40, 50, 60, 70, 80 and 90 %RH, then calibrated at 20, 50 and 80 %RH					
HC2A-SH	High precision, black	±0.5 %RH / ±0.1 K	-50...100 °C / 0...100 %RH	HYGROMER HT-1	< 1 %RH per year with clean air
HC2A-S3H	Meteo High precision, white				
Industrial probes are factory-adjusted at 23 °C and 10, 35 and 80 %RH					
HC2A-ICXXX	Industrial, black	±0.8 %RH / ±0.1 K	-100...200 °C / 0...100 %RH	HYGROMER HT-1	< 1 %RH per year with clean air
HC2A-IMXXX-M	Industrial, steel				
HC2A-ICXXX-A	Industrial, black				
HC2A-IE02-XXX	Industrial, steel				

Compatibility: HF5A all versions

Accessories for Hygroflex Advanced Transmitters

Order Code	
NFC-USB-READER	The Hygroflex Advanced HF5A devices are equipped with an NFC-interface[1] through which the device can be configured. The NFC-interface can be accessed by means of a mobile phone or a computer equipped with an NFC reader. The NFC-USB-READER has an USB plug to connect the Reader with a Computer and requires no further configuration. The Hygroflex Advanced Transmitter is compatible with HygroSoft software only.

[1] *Rotronic Switzerland AG only support the NFC-USB-READER, which can be purchased through Rotronic. Devices from third party suppliers cannot be considered.*

RMS probes

Order Code	Type	Accuracy @ 23 °C	Application Range	Sensor Element	Long-Term Stability
Digital Standard Precision probes are factory-adjusted at 23 °C and 10, 35 and 80 %RH					
RMS-HCD-S	Digital Standard, black	±0.8 %RH / ±0.1 K	-40...85 °C / 0...100 %RH	HYGROMER HT-1	< 1 %RH per year with clean air
RMS-HCD-S3	Digital Standard, white				
Digital Industrial probes are factory-adjusted at 23 °C and 10, 35 and 80 %RH					
RMS-HCD-IC102	Digital Industrial, black	±0.8 %RH / ±0.1 K	-100...200 °C / 0...100 %RH	HYGROMER HT-1	< 1 %RH per year with clean air
Digital Temperature probe					
RMS-TCD-S-001	Digital Temperature, steel	±0.25 °C (-50...85 °C)	-190...200 °C	PT100	±0.5 °C per year with clean air

Compatibility: HF5A all versions

Order Code	Type	Accuracy @ 23 °C	Application Range	Sensor Element	Long-Term Stability
Digital Differential Pressure probe, 5-point calibration					
PCD-S-XX	Digital Differential Pressure, black	±1 % Full Scale	-500...500 Pa	Flow or Membrane	±0.1 %FSS per year

Compatibility: Only HF5A-3 & HF5A-D versions (3- /4-wire Transmitter)

rotronic