



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, ventilation, air conditioning
- Food industry
- Pharmaceutical industry
- Printing and paper industries



### New housing

- Robust, industrial-quality housing (IP65)
- Wall mount version (Duct version can be achieved together with an industrial cable probe)

### Outputs

- The 2 analog outputs are freely selectable and scalable
- 2-wire (HF5A-21), 3/4 wire analog (HF5A-31) and 3/4 wire digital RS485 on screw terminal (HF5A-D1)
- 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



For pricing or any further information, please contact Omni Instruments Ltd.

## Versions

### HF5A wall version

#### HF5A-21/HF5A-31/HF5A-D1 serie

Use in  
technical rooms



Use in  
ventilation shafts



Use in  
air blade rooms



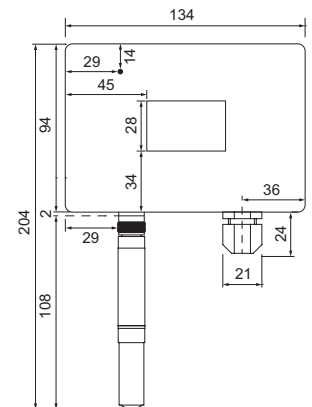
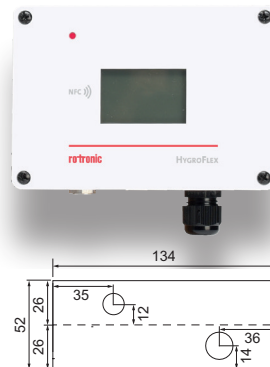
## Technical information

	HF5A-21 2-wire	HF5A-31/ HF5A-D1 ¾-wire
<b>Humidity Probe</b>	HygroClip2, HC2 Probes, various types	
<b>Accuracy at 23 ± 5 °C</b>	Probe dependent	
<b>Initialization time</b>	Typically, > 30 sec.	Typically, 3 sec.
<b>Measurement range</b>	Probe dependent	
<b>Range of applications</b>	-10...60 °C with display / -40...70 °C without display / humidity 0...100 %rH (non-condensing)	
<b>Trend indicator</b>	Yes	
<b>Display resolution</b>	Resolution up to 2 decimal places (0.01)	
<b>Output signals analog</b>	4...20 mA	Freely scalable 0...5, 0...10 V, 0...20 mA, 14...20 mA
<b>Resolution Analog output</b>	≥ 15 bit	
<b>Output signals digital</b>	-	RS485 signals on screw terminal
<b>Cable connections</b>	1 x M16 x 1.5, screw terminals	
<b>Psychrometric calculations</b>	All	
<b>Power supply</b>	18...36 VDC (Vmin = 12 VDC + 6 VDC)	18...36 VDC
<b>Circuit Type</b>	2-wire	3-wire with mounted Jumper J1 (default) 4-wire galvanically separated with unmounted J1

<sup>1</sup> 4...20mA Default Setting

#### HF5A-21, HF5A-31 and HF5A-D1

Wall version (W)



<b>Current consumption</b>	50 mA (when both outputs are connected)	< 100 mA (when both outputs are connected)
<b>Load per analog output</b>	Max. 500 Ω	Current: Max. 500 Ω Voltage : Min. 10 kΩ
<b>Interface</b>	NFC Interface and Rotronic Software	
<b>Software</b>	Accessoire NFC-USB-READER: NFC to USB Reader or with the HygroSoft software mobile App and a mobile phone with an integrated NFC-Reader.	
<b>Housing Material</b>	Top: PMMA, Bottom: ABS	
<b>Standards</b>	CE Conformity 2014/30/EU	
<b>GMP/ FDA Compliance</b>	Conforms to FDA 21 CFR Part 11 and GAMP5	
<b>Dimensions</b>	134 × 94 × 52 mm	
<b>Weight</b>	Display version 277g, Others 270g	
<b>IP-protection</b>	IP65	
<b>Fire protection class</b>	Corresponds to UL94-HB	
<b>Soldering material</b>	Lead free (RoHS-Directive 2011/65/ EU)	

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## 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

Order Code	Accessories for Hygroflex Advanced Transmitters	
NFC-USB-READER		<p>The Hygroflex Advanced HF5A devices are equipped with an NFC-interface<sup>1</sup> 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.</p>

<sup>1</sup> 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	±0.1 %FS	-500...500 Pa	Flow or Membrane	±0.1 %FSS per year

Compatibility: Only HF5A-31 & HF5A-D1 versions (3/4 wire Transmitter)

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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