



1% ROOM AND DUCT MULTI-PARAMETER HUMIDITY AND TEMPERATURE TRANSMITTER HF5 SERIES

DESCRIPTION

The **Rotronic HF5 Series** high performance multi parameter humidity and temperature transmitters are ideal for all applications where exact measurement of humidity, enthalpy, dry bulb, wet bulb, temperatures plus other psychrometric parameters are critical. This high performance transmitter accurately measures relative humidity to within $\pm 0.8\%$ RH. The HydroClip2 probe can be individually calibrated and adjusted to increase measurement precision where you need it the most. The **HF5 Series** is available in a duct mount or wall mount configuration. This unit can be factory configured or software is available for field configuration.

FEATURES

- **Interchangeable probe**
- **Calculates all psychrometric values**
- **Automatic sensor and drift compensation**
- **Optional DIN rail mounting**
- **Field configurable with software**

APPLICATION

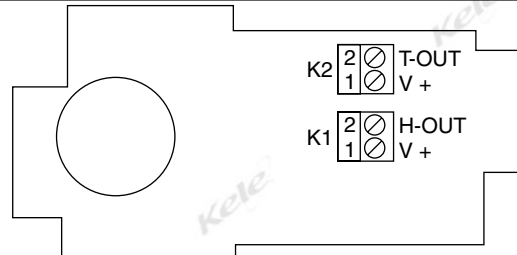
The **HF5** is ideal for high accuracy HVAC applications, building management systems, museums, libraries, environmental monitoring systems. The **HF5 Series** measures dew point, wet bulb, enthalpy, specific humidity, absolute humidity and mixing ratio.

HydroClip2

The new HygroClip2 is available in various formats: from a simple plug-in probe for handheld instruments and data loggers to the highly developed cable probes for high temperature and other special applications. As standard, they all have high accuracy, which can be increased further by specific adjustments within our patented AirChip, making every HygroClip2 a high-end product for all applications.



WIRING



Terminals	Description
K2-2: T-OUT	Temperature output (+) OUT-2
K2-1: V+	Power supply: 10...28 VDC (+)

Terminals	Description
K1-2: H-OUT	Relative humidity or dew point (+) OUT-1
K1-1: V+	Power supply: 10...28 VDC (+)

Note: Connect the + of the power supply to only one of the V+ terminals. The two terminals marked V+ are internally connected.

SPECIFICATIONS

Accuracy	$\pm 0.8\%$ RH @ 73°F (23°C) from 5% to 95% RH	Display	Optional: LCD, 1 or 2 decimals
Stability	0.5% drift per year	Operating Humidity	0 to 100% non-condensing
Repeatability	0.3% RH	Operating Temperature	-40° to 140°F (-40° to 60°C)
Long Term Stability	<1% RH/year	Enclosure Rating	ABS/IP65 conforms to UL94-HB
Supply Voltage		Wiring Terminations	Screw terminals/ M16 cable gland or ½" conduit adapter
HF52	10 to 28 VDC, 40 mA	Dimensions	
HF53	15 to 40 VDC, 50 mA; 12 to 28 VAC, 1.2 VA	Case	5.1"H x 5.1"W x 1.8"D (13 x 13 x 4.5 cm)
Response Time	RH: Typically 10 seconds for 63 % of a jump 35 to 80 %RH (1 m/sec air flow at sensor) Temperature: Typically 4 seconds for 63% of a change from 23 to 80°C (1 m/sec air flow at sensor)	Wall Plate	0.6" Ø x 3.5"L (1.5 x 9 cm)
Signal Output	4-20 mA @ 500Ω	Duct Probe	0.6" Ø x 8.3"L (1.5 x 21 cm)
Range		Approvals	CE/EMC: EMC Directive 2004/108/EC
Humidity	0-100%	Weight	1 lb (0.45 Kg)
Temperature	-148° to 392°F (-100° to 200°C)	Warranty	1 year



HUMIDITY

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ORDERING INFORMATION

MODEL	DESCRIPTION
HF520	2-wire (loop powered), 4-20 mA
HF532	3-wire, 4-20 mA
HF534	3-wire, 0-5 V
HF535	3-wire, 0-10 V
INSTALLATION/MOUNTING	
D	Duct mount (through wall)
W	Wall mount
PSYCHROMETRIC PARAMETERS	
B	Humidity (0 to 100 %RH) and Temperature - see range below
A	Temperature & Dew / Frost point - see range below
C	Temperature & Wet Bulb temperature (Tw) - see range below
D	Temperature & Enthalpy (H) - see range below
TEMPERATURE OUTPUT RANGES	
6X	0° to 100°F (-18° to 38°C)
OPTIONAL KEYPAD AND DISPLAY	
D	Keypad and display (HF52: no backlight – HF53: w. backlight) [only horizontal models]
X	No keypad and display
ELECTRICAL CONNECTION	
3	1x ½" conduit adapter (horizontal mounting)
4	1x ½" conduit adapter (vertical mounting - type D w/o display)
DEWPOINT, WETBULB OR ENTHALPY RANGES (optional)	
4X	0° to 100°F (-18° to 38°C)
S	Hydroclip standard climate probe (see packet)

HF520	D	B	6X	D	4	S
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Example: HF520DB6XD4S 2 Wire psychrometric transmitter, duct mount, humidity and temperature outputs, display and HydroClip Standard Climate probe.

RELATED PRODUCTS

691-K0A	Control transformer, 120:24 VAC, 40 VA, Class 2
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT