

I7000 & 7400 (Hygrosmart)

Interchangeable Sensor Module for Relative Humidity



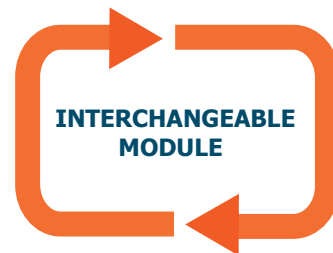
A key feature of the I7000 (Hygrosmart) Series is its interchangeability without the need for recalibration. The small size allows its integration in any equipment while the plug-and-play system allows fast replacement even by non-skilled staff.

Highlights

- Interchangeable without recalibration
- Sensor response time: <10 sec
- Linearization for a specific isotherm on request
- Can be used up to peak temperatures of 200°F / 95°C

Technical Specifications

Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	-40 to +203°F / -40 to +95°C
Accuracy at 23°C / 73°F Humidity	<±2% RH (5–95% RH)
Accuracy at 23°C / 73°F Temperature	±0.36°F / ±0.2°C (Pt100 1/3 DIN direct)
Stability – RH Sensor	<±1% RH/year
Response time – RH Sensor	<10 sec typical (for 90% of the step change)
Electrical output/input	
Output signal (RH)	I7000: 0–1 V I7400: 0.2–1 V Digital, variable frequency output
Output signal (T)	3-wire 1/3 DIN Pt100 direct
Supply voltage	5 VDC ±5%
Power consumption	≤ 1.5 mA max
Operating conditions	
Operating humidity Probe, Housing, Storage	0–100% RH
Operating temperature Probe, Housing Storage	-22 to +185°F / -30 to +85°C -40 to +185°F / -40 to +85°C
Mechanical specification	
Housing material	NORYL PPO UL 94 V0
Dimensions	L=1.3", ø 0.55" / L=33mm, ø14mm
Weight	0.1oz / 3g
Electrical connections	RH: 3-wire T: 3-wire

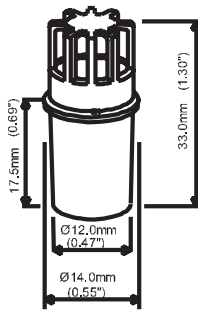


I7000 & I7400

Accessories and spare parts

Wall-mounting fixing clamp	1A01210
Connecting kit with wires	6A06350
Connecting kit for PCBs	6A05130

Dimensions



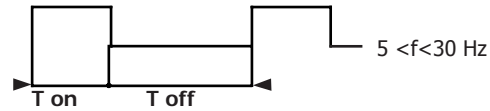
SCALE 2:1
Bottom view

Electrical Connections

Pin	Description
1	Frequency output
2	Ground
3	V+ 5 VDC
4	Output 0-1 VDC (I7000) / Output 0.2-1 VDC (I7400)
5	Pt100
6	
7	

Digital output

Characterized by a variable frequency pulse train as a function of the relative humidity.



$$\% RH = [(T\ on / T\ off) * 2049 - 1] / 16.12$$

Order codes

Relative humidity sensor module I7 4 00 1

Output configuration	
0-1 VDC	0
0.2-1 VDC	4

Temperature configuration	
No temperature signal	0
Pt100 direct (standard)	1

Example: I7 4 00 1

Relative humidity sensor module I7400 with 0.2-1 V RH output, Pt100 direct temperature output.

Note: If you need to exchange the interchangeable element, request the reference information printed on the product label.

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: I7000_1001US_M