Sensors

I7000 & 7400 (Hygrosmart)
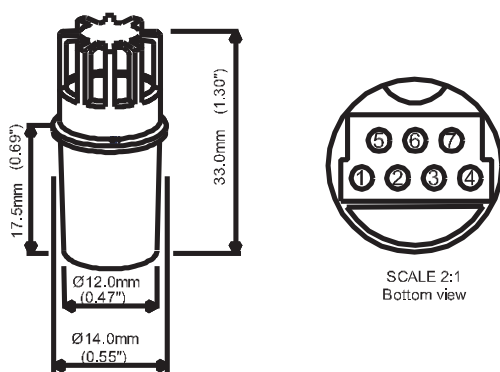## Interchangeable Module for Relative Humidity

The I7000 (Hygrosmart) Series is interchangeable 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: <10sec
- Linearization for a specific isotherm on request
- Can be used up to peak temperatures of 95°C (200°F)

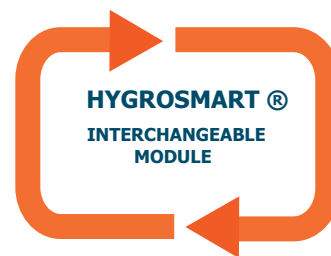## Technical Specifications

Performance

Measurement range (RH)	0–100% RH
Measurement range (T)	-30 to +85°C (-22 to +185°F)
Accuracy at 23°C (73°F) Humidity	<±2% RH (5–95% RH)
Accuracy at 23°C (73°F) Temperature	±0.2°C (±0.36°F) 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 V DC ±5%
Power consumption	≤ 1.5 mA max

Operating conditions

Operating temperature Probe, Housing Storage	 -30 to +85°C (-22 to +185°F) -40 to +85°C (-40 to +185°F)

Mechanical specification

Housing material	NORYL PPo UL 94 V0
Dimensions	L=33mm, ø14mm (L=1.3", ø0.55")
Weight	3g (0.1oz)
Electrical connections	RH: 3-wire T: 3-wire

Dimensions

17.5mm (0.69")
33.0mm (1.30")
Ø12.0mm (0.47")
Ø14.0mm (0.55")

SCALE 2:1
Bottom view

Accessories and Spare Parts

Mini flange	**1A01210**
Connecting kit with wires	**6A06350**
Connecting kit for PCB	**6A05130**

HYGROSMART ®

INTERCHANGEABLE MODULE

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MICHELL Instruments

I7000 & I7400

Electrical Connections

Pin	
1	Output frequency
2	Common Ground
3	Power Supply V + (5 V DC)
4	Output RH + 0-1 V DC (I7000) (Output 0.2-1 V DC (I7400)
5	Pt100
6	
7	

Digital output

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

5 <f<30 Hz

T on   T off

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

Order Codes

I7000 & I7400 - Interchangeable Module for Relative Humidity		
Feature	**Item**	**Description**
Type	I7-0-00-0	0-1 V without temp configuration
	I7-0-00-1	0-1 V with direct Pt100
	I7-4-00-0	0.2-1 V without temp configuration
	I7-4-00-1	0.2-1 V with direct Pt100

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