



brewer science
Where innovation takes flight!SM

InFlect™ Moisture Sensor

Brewer Science InFlect™ moisture sensors utilize our revolutionary carbon-based nanotechnology to deliver highly sensitive and real time response to small changes in moisture and are ideal for monitoring low humidity environments.

BENEFITS

- Minimizes moisture contamination risk through real-time detection
- Prevents equipment downtime, raw material contamination, scrapped batches, and equipment repair
- Small form factor enables insertion into dry air and inert gas valves and fittings
- Extends battery life due to low power consumption
- Easily interfaces with existing electronic systems



FEATURES

- Ultrafast response time (≤ 10 ms)
- Low-power operation (< 30 pW)
- Rugged encapsulation
- Corrosion-resistant design

APPLICATIONS

- Clean dry air (CDA) lines
- Inert gas lines (N_2 , Ar)
- Glove boxes
- Security
- Process monitoring, breath monitoring, etc.

SPECIFICATIONS

The specifications are for standard moisture sensors. The dimension, form factor, and performance specification can be customized to meet application requirements.

Parameter	Performance	Unit
Resistance value (25°C, 40% RH)	500	k Ω
Resistance tolerance (25°C, 40% RH)	± 10	%
Resolution	< 1	%RH
Average humidity coefficient of resistance (HCR)	150-300	Ω /%RH
Response time (1/e in slow moving air)	< 10	ms
Minimum operating power (< 4 mV, < 8 nA)	< 30	pW
I-V linearity	± 50	V
Operating temperature	-20 to 100	°C
Operating humidity	0 to 85	%



Check out our latest moisture sensor video at www.youtube.com/user/brewerscience.

MOISTURE SENSOR DIMENSIONS

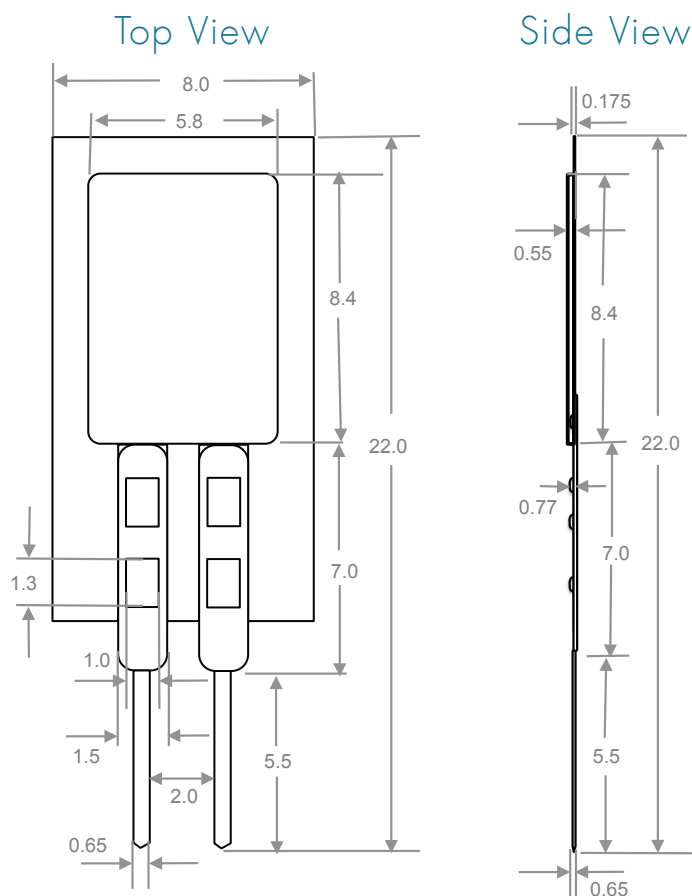


Figure: A schematic of Brewer Science's moisture sensor in millimeters

Parameter	Specification
Sensor dimension	8 x 22 mm
Sensing region dimension	2 x 3 mm
Weight including connecting pins	116 mg
Weight without connecting pins	30 mg
Storage temperature	10-35°C
Storage condition	0-20% RH
Shelf life	> 12 months

Mounting and Electrical

- The moisture sensor comes with 0.1" (2.54 mm) pitch crimp pins
- The moisture sensor is available in FFC connection type for slide-in connection
- Maximum supply voltage = 50 V
- Maximum power dissipation (5 V, 25°C) = 50 μ W

SENSOR CUSTOMIZATION

- Dimensions and form factor of the sensors can be customized to meet application requirements.
- The sensors can be fabricated on a large variety of substrates depending upon the application requirements.

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