

HygroSmart PR Series

Advanced Pressurized Remote Probe Relative Humidity Transmitter

The PR Series advanced pressurized remote probe transmitter is designed to reliably measure moisture in specialized higher pressure/temperature process applications. This rugged and flexible transmitter features the new generation HygroSmart USTE interchangeable remote sensor — minimizing downtime and reducing maintenance costs.



Highlights

- Accuracy $\pm 2\%$ RH
- Flexible analog output configurations
- Interchangeable probe for rapid maintenance
- Digital RS485 ModBus multidrop output
- Rugged heavy industrial housing
- Traceable 5-point calibration certificate
- 30 bar pressure rating
- Operating temperature -40 to $+120^{\circ}\text{C}$

Applications

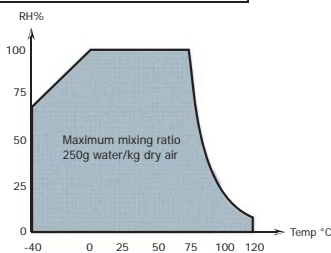
- Power
- Energy
- Nuclear
- Paper processing
- Transportation
- Marine
- Metallurgy

Technical Specifications

Performance Specifications	
RH measurement range	0 to 100% RH
RH accuracy @ 23°C	±2% RH (5 to 95% RH)
RH measurement response time	Less than 10 seconds
RH long term stability	±1% RH per year
RH element	H8000
Recommended storage range	+10 to +40°C
Electrical Specifications	
Output signals	0–1 V, 0–5 V, 0–10 V, 4–20 mA, 0–20 mA
Supply voltage range	15 to 21 V AC or 18 to 30 V DC
Power consumption	1.7 W max
CE conformity	2004/108/EC 94/9/E
Communication kit (optional)	Digicor2 280/290 software, USB to RS485 interface cable
Operating Specifications	
Operating temperature	USTE probe: –40 to +120°C USTE cable: –40 to +120°C Housing: –30 to +70°C Storage: –40 to +70°C
Mechanical Specifications	
Ingress protection	IP65 (NEMA 4 level)
Material	USTE probe: Stainless steel USTE cable: PTFE white Housing: Aluminum die casting
Dimensions	USTE probe: L=148mm ø18mm USTE cable: L=2m (optional extra 2m) Housing: 120 x 120 x 49.5mm
Weight	450g (approx)
Electrical connections	Internal screw terminals

Measurement Operating Envelope

The new HygroSmart PR285 transmitter operates to the defined technical specifications within the following operating condition envelope:



The orange HygroSmart symbol is used to identify any Michell RH product which has the latest generation HS3 interchangeable sensor



The blue HygroSmart symbol identifies products using the I7000XP generation interchangeable sensor

Related Products from Michell Instruments



HS3 Probe & OEM Sensor
Advanced interchangeable RH and Temperature Probe



WM281/291
Advanced Wall Mount RH and Temperature Transmitter



DT282/292
Advanced 19mm Duct Mount RH and Temperature Transmitter



WR283/293
Advanced Remote Probe RH and Temperature Transmitter



DT284/294
Advanced 12mm Duct Mount RH and Temperature Transmitter

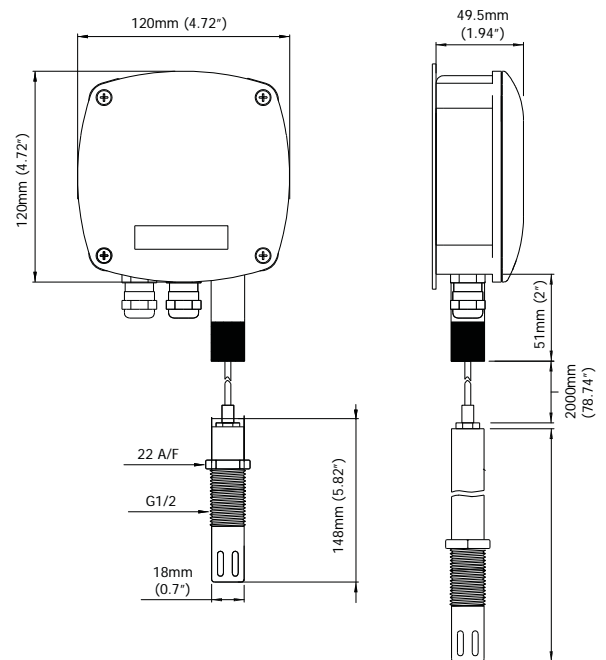
The Pressurized Transmitter

Process control customers need to have reliable and stable instrumentation giving repeatable data to the control system to minimize downtime, ensuring long-term process accuracy.

The PR series remote humidity transmitter is designed for use in niche applications, which require RH measurement in pressurized systems for temperatures upto +120°C. The USTE remote probe is fitted into the pressurized vessel via a standard G1/2 process connection.

It uses the latest Michell advanced capacitive polymer, developed over 40 years of specialization in moisture measurements and now incorporated into the latest generation USTE interchangeable sensor assembly connected to the transmitter.

Product Dimensions



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Michell Instruments adopts a continuous development programme which sometimes necessitates specification changes without notice.
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