

# HYGROFLEX M

# HYGROCLIP<sup>®</sup>

Humidity goes Digital



## Meteorological Humidity Temperature Transmitter For airport systems and rooftop installations

- Accurate measurement of relative humidity and temperature
- Available with dew point or other calculated parameter
- Fully interchangeable plug-in HygroClip S3 probe
- Durable, field proven sensors
- Software based probe calibration
- Operating temperature at probe - 40 to +85°C
- Analog and digital outputs
- Networkable, user configurable
- Aluminum enclosure with special marine coating

# rotronic

LEADING IN HUMIDITY MEASUREMENT

## General Information

The HygroFlex M is a series of humidity temperature transmitters that uses the HygroClip S3 digital plug-in probe. The probe is separated from the transmitter by a 3 meter (9.8 ft) cable terminated with a weather proof connector.

The microprocessor based HygroFlex M achieves unparalleled accuracy, reliability and versatility. Unique HygroClip digital technology allows the probe to be interchanged without loss of measurement accuracy. Calibration and sensor data are retained permanently within each probe. When it is time for a scheduled calibration, the probe can be "hot swapped" in seconds. Software based calibration of the probe is simple and precise with the optional HW3 software (requires a Windows based PC).

Typical uses of the HygroFlex M are meteorological towers, airport weather stations and building rooftops. The enclosure is made of an aluminum alloy and is coated to withstand marine environments. An optional 10-plate radiation shield as well as a mounting plate are available to facilitate installation of the HygroFlex M and probe.

*The HygroFlex M is available in two versions:*

**HygroFlex M1:** two analog output signals corresponding to relative humidity and temperature (linear voltage or current signal)

**HygroFlex M3:** three analog outputs corresponding to relative humidity, temperature and calculated parameter (i.e. dew point). All parameters are simultaneously available on the RS232 output and, up to 32 HygroFlex M3 can be networked together using the RS485 terminal block.







## Technical Data



Operating Voltage		12 to 35 VDC / 300 mA max 12 to 24 VAC
	or	90 to 264 VAC 50/60 Hz
Operating limits at electronics		0...99%RH (non condensing) -40...60°C (-40...140°F)
Measured parameters		
relative humidity	typical range	0...100%RH
temperature	typical ranges	-30...70°C, -40...60°C other ranges available, specify when ordering
Calculated parameters		
dew / frost point	typical range	-50...100°C / -50...200°F
enthalpy	typical range	-50...250 J/g or -50...150 BTU/lb
Other calculated parameters available are wet bulb, vapor concentration, specific humidity, mixing ratio, vapor concentration at saturation, partial pressure of water vapor, saturation pressure of water vapor. Consult factory for typical ranges.		
System accuracy at 23°C/73°F with HygroClip S3 probe		± (0.5%RH + 1.5% of reading) ± 0.2°C / 0.4°F
Number of probe inputs	HygroFlex M1	1
	HygroFlex M3	1 (standard) or 2 (consult factory)
Probe type	all models	ROTRONIC HygroClip S3 digital probe
Analog outputs (scalable)	HygroFlex M1	2: relative humidity and temperature
	HygroFlex M3	3: relative humidity, temperature and calculated parameter
Analog signals (selectable)	all models	0...1V, 0...5V, 0...10V 0...20 mA, 4...20 mA
Minimum load for voltage outputs		1000 ohm
Maximum load for current outputs		500 ohm
Serial output	HygroFlex M1/M3	RS232 (internal service connector)
	HygroFlex M3	RS232 / RS485
Electrical Connections	power	cable grip and terminals
	analog outputs	cable grip and terminals
	serial output	cable grip (optional) and terminals
	probe input(s)	cable grip
Cable Grip Material		Nickel plated brass
Housing Material		Aluminum AISi12 DIN 1725 painted white over marine environment primer
Housing Dimensions		245 x 135 x 75 mm (9.65 x 5.32 x 2.95")
Weight		1,300 g (2.86 lb)
Protection grade		IP65 / NEMA 4

Modifications reserved - HFM

11/01