HM1520LF

Relative Humidity Module

SPECIFICATIONS

- **Tubular form for through wall mounting**
- **Product free from Lead, Cr(6+), Cd and Hg**
- **Calibrated, linear voltage for easy electronic interface**
- **Typical 1 to 1.6 Volt DC output for 0 to 20% RH at 5Vdc supply**
- **Ratiometric to voltage supply**
- **Patented solid polymer structure**

Based on the rugged HS1101LF capacitive humidity sensor, HM1520LF is a dedicated humidity transducer designed for measurements at low humidity. Direct measurement of dew point or water concentration can be easily obtained in really cost effective conditions. Direct interface with a micro-controller is made possible with the module's linear voltage output

FEATURES

- Full interchangeability
- Not affected by water immersion
- Controlled temperature dependency

Humidity Sensor Specific features
Not affected by long period at low humidity values
High resistance to chemical
Fast response time

APPLICATIONS

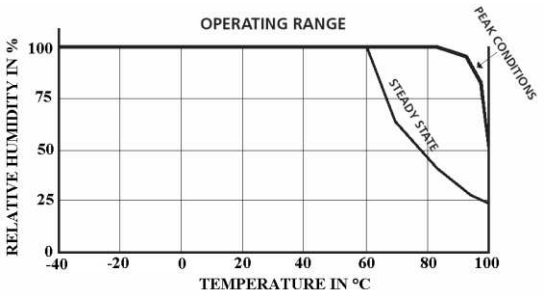
- Low Humidity
- Meteorology

PERFORMANCE SPECS

MAXIMUM RATINGS

Ratings	Symbol	Value	Unit
Storage Temperature	Tstg	-30 to 70	°C
Storage Humidity	RHstg	0 to 100	% RH
Supply Voltage (Peak)	Vs	10	Vdc
Humidity Operating Range	RH	0 to 100	% RH
Temperature Operating Range	Ta	-40 to 60	°C

Peak conditions: less than 10% of the operating time.



ELECTRICAL CHARACTERISTICS

(Ta=23°C, Vs=5Vdc +/-5%, R_L>1MΩ unless otherwise stated)

Humidity Characteristics	Symbol	Min	Typ	Max	Unit
Humidity Measuring Range / Ta -40 to 60°C	RH	0		100	%RH
Relative Humidity Accuracy (1 to 20% RH) at 23°C	RH		+/-2	+/-3	%RH
Relative Humidity Accuracy @55% RH at 23°C	RH		+/-5		%RH
Supply Voltage (regulated at 5Vdc*)	Vs	4.75	5	5.25	Vdc
Nominal Output @10%RH (Ta = 25°C)	Vout	1.17	1.24	1.31	V
Current Consumption	Ic		1.4	2	mA
Temperature Coefficient (10 to 50°C and 1 to 20% RH)	Tcc		- 0.05	-0.1	%RH/°C
Humidity Average Sensitivity from 5% to 10%RH	ΔVout/ΔRH		+26		mV/%RH
Sink Current Capability (R_L=33kΩ)	Is			150	µA
Humidity Hysteresis				+/-1	%RH
Time Constant (at 63% of signal, static) 5% to 10%RH	τ			10	s
Warm Up Time (electronic)	tw		150		ms
Humidity Resolution			0.4		%RH
Long Term Stability			0.5		%RH/yr
Output Impedance	Z		70		Ω

**Maximum power supply ramp up time to Vcc should be less than 4ms*