

SUNSTAR商斯达实业集团是集研发、生产、工程、销售、代理经销、技术咨询、信息服务等为一体的高科技企业，是专业高科技电子产品生产厂家，是具有10多年历史的专业电子元器件供应商，是中国最早和最大的仓储式连锁规模经营大型综合电子零部件代理分销商之一，是一家专业代理和分销世界各大品牌IC芯片和电子元器件的连锁经营综合性国际公司。在香港、北京、深圳、上海、西安、成都等全国主要电子市场设有直属分公司和产品展示展销窗口门市部专卖店及代理分销商，已在全国范围内建成强大统一的供货和代理分销网络。我们专业代理经销、开发生产电子元器件、集成电路、传感器、微波光电元器件、工控机/DOC/DOM电子盘、专用电路、单片机开发、MCU/DSP/ARM/FPGA软件硬件、二极管、三极管、模块等，是您可靠的一站式现货配套供应商、方案提供商、部件功能模块开发配套商。专业以现代信息产业（计算机、通讯及传感器）三大支柱之一的传感器为主营业务，专业经营各类传感器的代理、销售生产、网络信息、科技图书资料及配套产品设计、工程开发。我们的专业网站——**中国传感器科技信息网（全球传感器数据库）www.SENSOR-IC.COM** 服务于全球高科技生产商及贸易商，为企业科技产品开发提供技术交流平台。欢迎各厂商互通有无、交换信息、交换链接、发布寻求代理信息。欢迎国外高科技传感器、变送器、执行器、自动控制产品厂商介绍产品到**中国**，共同开拓市场。本网站是关于各种传感器-变送器-仪器仪表及工业自动化大型专业网站，深入到工业控制、系统工程计 测量、自动化、安防报警、消费电子等众多领域，把最新的传感器-变送器-仪器仪表买卖信息，最新技术供求，最新采购商，行业动态，发展方向，最新的技术应用和市场资讯及时的传递给广大科技开发、科学研究、产品设计人员。本网站已成功为石油、化工、电力、医药、生物、航空、航天、国防、能源、冶金、电子、工业、农业、交通、汽车、矿山、煤炭、纺织、信息、通信、IT、安防、环保、印刷、科研、气象、仪器仪表等领域从事科学研究、产品设计、开发、生产制造的科技人员、管理人员、和采购人员提供满意服务。**我公司专业生产、代理、经销、销售各种传感器、变送器、敏感元器件、开关、执行器、仪器仪表、自动化控制系统：**专门从事设计、生产、销售各种传感器、变送器、各种测控仪表、热工仪表、现场控制器、计算机控制系统、数据采集系统、各类环境监控系统、专用控制系统应用软件以及嵌入式系统开发及应用等工作。如热敏电阻、压敏电阻、温度传感器、温度变送器、湿度传感器、湿度变送器、气体传感器、气体变送器、压力传感器、压力变送、称重传感器、物（液）位传感器、物（液）位变送器、流量传感器、流量变送器、电流（压）传感器、溶氧传感器、霍尔传感器、图像传感器、超声波传感器、位移传感器、速度传感器、加速度传感器、扭距传感器、红外传感器、紫外传感器、火焰传感器、激光传感器、振动传感器、轴角传感器、光电传感器、接近传感器、干簧管传感器、继电器传感器、微型电泵、磁敏（阻）传感器、压力开关、接近开关、光电开关、色标传感器、光纤传感器、齿轮测速传感器、时间继电器、计数器、计米器、温控仪、固态继电器、调压模块、电磁铁、电压表、电流表等特殊传感器。同时承接传感器应用电路、产品设计和自动化工程项目。

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Humidity Sensors

[self-quiz]

Should I measure humidity?

- Is your system part of machinery which is cooling, heating or drying or, more generally, consuming too much energy?
- Do you measure temperature or do you use information coming from temperature sensors?
- Are there regulatory constraints for the output of your system, such as emissions?

If you answer yes for at least one of those three questions, you may benefit by designing our reliable humidity sensor into your system to reduce energy consumption, lower emission level, improve accuracy or increase customer satisfaction. Our experienced engineers can review your application and demonstrate the immediate benefit. Email us at romuald.gallorini@meas-spec.com.

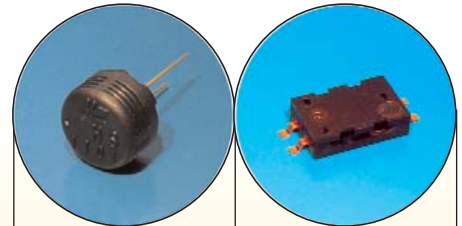
Humidity sensors can improve performance, reduce energy consumption and increase safety in a variety of applications. Increasingly, OEMs are designing relative humidity/temperature sensors into engines, electronics, and other products to improve control and output.

Measurement Specialties' humidity sensor business unit – also known as Humirel – is dedicated to the design, manufacturing, and sales of innovative humidity and temperature sensing solutions in a wide variety of OEM markets. Measurement Specialties' capacitive humidity sensing technology, which converts water absorption information into electrical output, offers accuracy from 2-5% and is highly repeatable. Packaged sensors, which include temperature sensors as a reference, can be used full scale from 0 to 100% relative humidity. Temperature ranges of operation are from -40°C to 125°C.

Measurement Specialties provides quality technical support and works closely with customers to develop competitively priced solutions and to reduce time to market. Sensors are available as components, modules with analog or digital output, or customized sub-systems, also known as application specific modules (ASMs). Products are designed, qualified and manufactured in Toulouse, France, a center of high tech and scientific excellence and the homeland of Airbus and the European Space Agency.

Humidity and Temperature Sensors (Components)

RoHS compliant and lead-free soldering process compatible

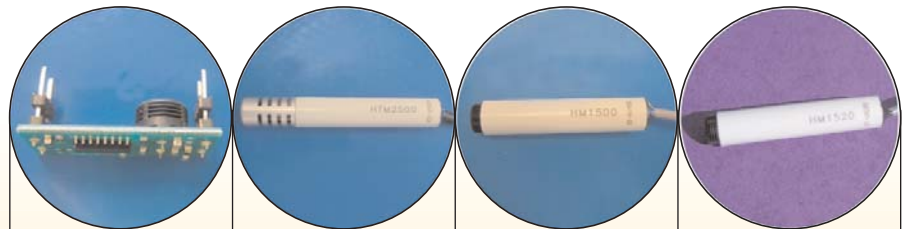


Model	HS1101LF	HTS20305MD
Type	Capacitive humidity sensors through hole mounting	Combined capacitive Humidity and NTC Temperature Sensor
Package Housing	Plastic Cap	SMD Package
Unique Feature	Compatible with wave and reflow processes	Compatible with reflow processes, available in tubes or reel
Size	6.89 x 10 mm	10 mm x 6.5 mm x 2.8 mm
Operating RH Range	0 to 100% RH	0 to 100% RH
Operating Temp Range	-60°C to 140°C	-60°C to 140°C
Applications	Weather station, hygrostat, humidifier, defogging /comfort	Weather station, hygrostat, humidifier, defogging /comfort



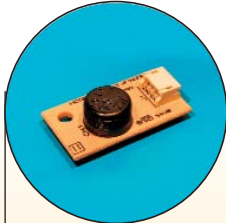
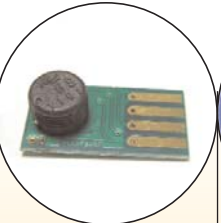
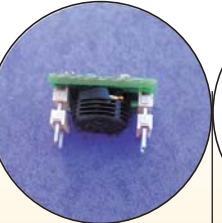
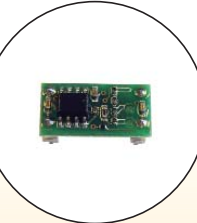
Humidity sensors from Measurement Specialties help HVAC systems run more efficiently.

Humidity and Temperature Voltage Output System (Analog)



Model	HTM1735	HTM2500	HM1500LF	HM1520LF
Type	PCB for board to board connection	Probe	Probe	Probe
Package Housing		Hermetic housing		Low humidity accuracy
Voltage supply (nominal)	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Size	35 mm X 13 mm	75 mm X 11.5 mm	58 mm X 11 mm	58 mm X 11 mm
Calibration	Within +/-2% RH	Within +/-2% RH	Within +/-2% RH @ 55% RH	Within +/-2% RH @ 55% RH
Operating RH Range	0 to 100% RH	0 to 100% RH	0 to 100% RH	0 to 100% RH
Operating Temp Range	-40°C to 120°C	-30°C to 70°C	-30°C to 60°C	-30°C to 60°C
Applications	Weather station, printer	Hygrostat, data loggers	Medical, telecommunication cabinets	Medical, telecommunication cabinets

Humidity and Temperature Frequency Output Systems (Digital)

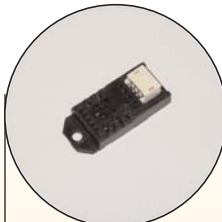

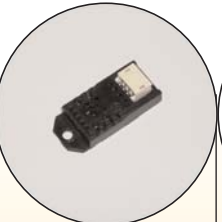

				
Model	HTF3226LF	HTF3227LF	HTF3000LF	HTF3130
Type	PCB	PCB	PCB	PCB
Unique feature	Miniature connector (JST) / very cost effective		Board to board connection	Board to board connection
Voltage supply (nominal)	5 Vdc	3 to 16 Vdc	3 to 16 Vdc	3 to 16 Vdc
Size	30 mm X 15 mm	28.5 mm X 15 mm	18 mm X 13 mm	18 mm X 13 mm
Calibration	Within +/-5% RH @ 55% RH	Within +/-3% RH @ 55% RH	Within +/-3% RH @ 55% RH	Within +/-3% RH @ 55% RH
Operating RH Range	0 to 100% RH	0 to 100% RH	0 to 100% RH	0 to 100% RH
Operating Temp Range	-30°C to 80°C	-30°C to 85°C	-40°C to 85°C	-40°C to 85°C
Applications	Inkjet plotter, color laser copier, humidifier, HVAC	Printers, hygrosat	Passenger comfort improvement, hygrosat	Passenger comfort improvement, hygrosat

The letters "LF" in model numbers for PCB or modules indicated those parts are compliant with RoHS and Lead Free soldered. QA department is available to supply conformance certificates upon request. Email us at laurent.berthezene@meas-spec.com.

Humidity and Temperature Mini-Modules

Analog Voltage

Digital Output (PWM)

				
Model	HTG351XCH	HTG353X	HTG341XCH	HTG343X
Type	Probe	Probe	Probe	Probe
Unique feature	Side connector (JST)	Board to board: through hole or SMD, Side connector (JST), Optional wiring connection	Side connector (JST)	Board to board: through hole or SMD, Side connector (JST), Optional wiring connection
Voltage supply (nominal)	X=3 for 3.3 Vdc / X=5 for 5 Vdc	X=3 for 3.3 Vdc / X=5 for 5 Vdc	X=3 for 3.3 Vdc / X=5 for 5 Vdc	X=3 for 3.3 Vdc / X=5 for 5 Vdc
Size	27 x 12 x 7 mm	27 x 12 x 7 mm	27 x 12 x 7 mm	27 x 12 x 7 mm
Calibration	within +/-3% RH @ 55% RH	within +/-3% RH @ 55% RH	within +/-3% RH @ 55% RH	within +/-3% RH @ 55% RH
Operating RH Range	0 to 100% RH	0 to 100% RH	0 to 100% RH	0 to 100% RH
Operating Temp Range	-40°C to +110° C	-40°C to +110° C	-40°C to +110° C	-40°C to +110° C
Applications	humidity and temperature plug and play transducers for OEM low cost applications	humidity and temperature plug and play transducers for OEM applications (home appliance, printer)	humidity and temperature plug and play transducers for OEM low cost applications	humidity and temperature plug and play transducers for OEM applications (home appliance, printer)

Measurement Specialties has application expertise in the following industries:



- Automotive and Truck**
- Car fogging prevention
 - Passenger comfort improvement
 - Engine management
 - Fuel cell control



- Industrial and Medical**
- Hygrometers and Hygrostats
 - Green houses
 - Telecommunication cabinets
 - Data loggers
 - Food storage
 - Respirators



- Home and appliance**
- Clothes dryer
 - Dishwashers
 - Refrigerators
 - Vent hoods
 - Exhaust fans
 - Humidifiers
 - Dehumidifiers
 - HVAC



- Consumer & printing**
- Reprographics: inkjet plotter, laser copier, color laser printer
 - Weather station

Humidity and Temperature Application Specific Modules

Measurement Specialties' continuous R&D efforts deliver customized components for high volume markets. Sensing applications include:

- Displaying or recording ambient humidity content
- Compensating for the influence of humidity in order to improve the performance of equipments
- Reducing energy consumption in all heating, cooling and drying processes
- Minimizing health risks and improving safety when facing too high / low humidity contents

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