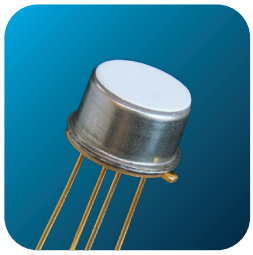
innovative
Sensor
Technology

HUMIDITY SENSORS & MODULES

Capacitive humidity measurement with excellent accuracy and high chemical resistance available as sensor components and modules







physical · chemical · biological

AEROSPACE | APPLIANCE | AUTOMATION | AUTOMOTIVE | BIOTECHNOLOGY

Humidity sensors

Unique choice of linearity ranges, baseline capacity and temperature ranges. Compatibility with different media including ambient air, technical gases, hydrogen, insulation gas and oils.

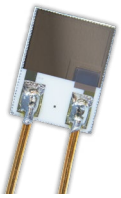
- Excellent linearity
- Low hysteresis
- Fast response time
- Condensation-resistance
- Suitable for extreme environments and dew point measurement



Product code 150464

K5

For low humidity applications



Product code 150466

P14-W

For indoor & outdoor applications



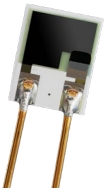
Available as SMD



Product code 150138

MK33 mini

For measurement in oil and extreme environment



Product code 104932

P14 Rapid-2

For meteorology applications

Available as SMD



Product code 150468

MK33-W

For high-end analytical applications



Product code 103590

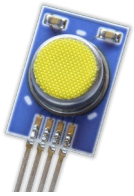
P14 2FW Thermo

For dew-point applications with need to re-heat

HYT humidity modules

Our digital HYT humidity modules offer a wide application window and an optimal price-performance ratio.

- Variable capacitive sensor component
- Pre-calibrated with custom accuracy range option
- Long-term stable under condensating conditions
- Assembly options upon request



Product code 153680

HYT 221 with textile filter

For heating, ventilation and air conditioning

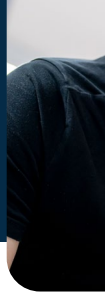


Product code 153349

HYT 271 with pluggable SIL contacts

For fast measurements

HVAC | HANDHELD DEVICES | MEDICAL | METEOROLOGY | SUSTAINABLE ENERGY



HYT 939P

Optimal humidity and temperature sensor component for industrial drying applications. The factory calibrated RH/T module comes in TO39 housing with glass-sealed pins.

- Optional membrane filter for particle and VOC protection
- Temperature range from -40 °C ... +125 °C
- Accuracy ±1.8 % RH at +23 °C (0 % to 90 % RH), ±0.2 °C (0 to 60 °C)
- Digital outputs I²C
- Available with PTFE membrane filter for VOC protection



Product code 153398



Product code 154417

Humidity module for meteorological applications

Designed for meteorological applications with extra fast Rapid-2 humidity sensor component and miniaturized Pt1000 for temperature. Factory-calibrated, exchangeable RH/T module with I²C outputs for fast measurement at high altitudes.

- Excellent RH/T reproducibility
- Fast response
- Pre-calibrated and temperature compensated RH signal
- Suitable for drones and weather balloons
- For breathing gas analysis in medical devices



Product code 153690

Humidity module with integrated heater

Designed for in-process reconditioning. Allows for fast and targeted heating of the humidity component for degassing.

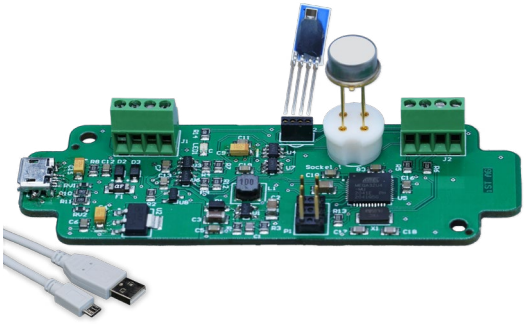
- Factory calibrated humidity and temperature module with I²C outputs
- Integrated ceramic micro heater
- Temperature range from -20 °C up to +120 °
- Suitable for monitoring processes with high humidity or chemicals requiring degassing to avoid drift



Product code 151331

Evaluation kit

Test board with most common RH/T module types HYT939P and HYT271. Unwrap and start to measure!



Product code 154775



iST offers a wide range of sensors based on different technologies suitable for any application.

Standard or customized

Helium tight HYT 939P probe

Especially developed for ultra-clean environments, this compact, potting-free humidity probe is ideal for extremely dry production environments, high-end facilities, and high-purity air generation. The ready-to-use probe is helium leak proof and is delivered factory-calibrated.

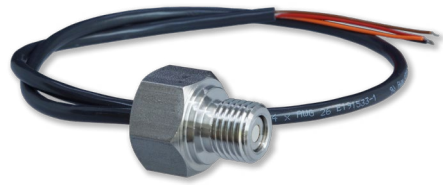


Contact us for samples

Low humidity probe for dew point monitoring

Ready-to-use, factory calibrated humidity probe with digital I²C outputs. Designed for process control based on dewpoint monitoring down to 40 °C Tdp.

- Assembly with installation housing and cable
- ±0.5 % RH at 23 °C (0 ... 5 % RH), ±0.2 °C

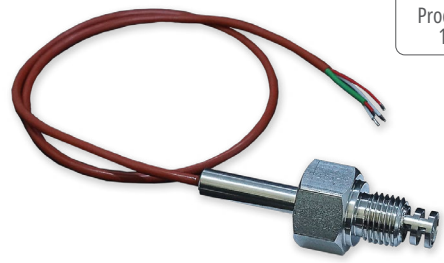


Product code 153326

Humidity module – Moisture in oil sensor

Ideal for the continuous monitoring of industrial moisture in oils. Factory calibrated digital humidity and temperature module with a digital I²C interface.

- Ready-to-use assembled RH/T module
- Pre-calibrated for relative water saturation level and temperature
- Screw-in stainless steel housing
- Interchangeable without adjustments
- Temperature range from 0 ... 100 %RH

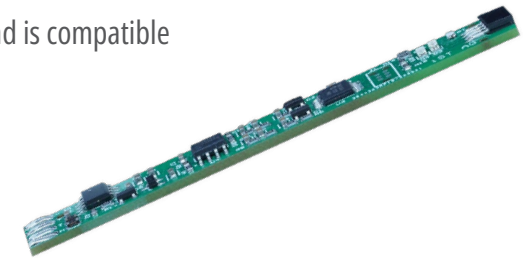


Product code 155958

HYT analog transmitter

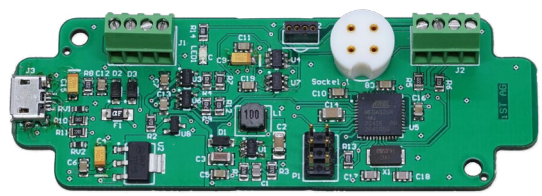
Connector to allow module replacement without re-calibration and is compatible with HYT 271 and HYT 221 modules.

- Two analog outputs for relative humidity and temperature
- Temperature range from -40 °C up to +60 °C
- Choice of 4 - 20 mA or voltage outputs



Testing and evaluation board

- Compatible with HYT 221, HYT 271, HYT 939P



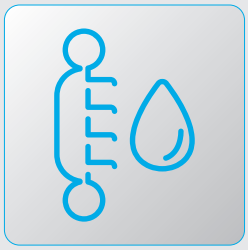
Product code 151429

Explore your ideal sensor solution with our experts

Tailored sensor components for process control: humidity in ultra-dry air/gas in industrial or medical compressors and dryers, under condensation conditions in meteorological and emission monitoring analyzers, or to evaluate moisture in oil in high-performance transformers.

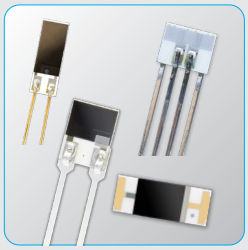
Custom calibration

iST humidity modules come with a full range humidity and temperature calibration and an accuracy of ±1.8 % RH at 23 °C. If higher accuracies are needed, iST humidity modules can be custom calibrated with accuracies down to ± 0.5 % RH



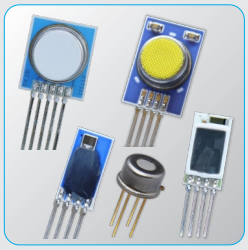
Custom design

The modular design of iST humidity sensors and RH/T modules allows for high flexibility, whenever a new sensor specification is required. Customized humidity modules feature extraordinary response times, high accuracies in a condensing environment or low humidity conditions.



Various form factors

Factory calibrated RH/T modules with digital I^2C interface are available in various form factors - from small planar designs to stainless-steel casings optimized for compact process integration. Variable filter options and optional heating structures for in process reconditioning allow for long-term stability in your application. Match our module types with a suitable humidity sensing element to meet your required performance.



Custom assembly

Our ready-to-use, factory calibrated humidity probes come with robust and easy to integrate screw-in stainless steel housings. Customized housings and packaging options with stainless-steel, or synthetic polymer materials are available to meet the requirements of your application. Contact us for support and discuss the ideal design of an OEM humidity sensor probe tailored to your application.



Customized sensor solutions for your application

Benefit from an agile co-creation of your next sensor solution. Use our competence at component level and focus on your added value for fast and successful product development - from simple design adaptations to new measuring principles: from concept prototyping to high-volume manufacturing.

Design

- Conceptioning
- Material selection
- Process technology
- Layout & geometry

Patterning

- Photolithography
- Screen printing
- Laser trimming
- Dry & wet etching

Packaging

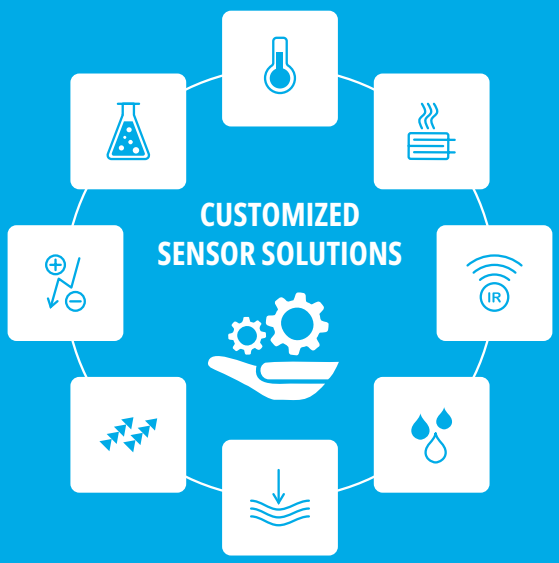
- Welding
- Bonding
- Soldering
- Hot-melt molding
- Injection molding

Services

- Electrical testing
- Optical/AOI testing
- ESD testing
- Calibration
- Metrology

Connection

- PTFE or PEEK insulated
- Ag, Ni/Au, Pt wire
- Cu/Ag, Cu/Ni wire
- AWG 34 to 20
- Flat or round wire
- Multistranded cables
- Ultra-thin wires
- Custom lengths
- Bondable, solderable
- Brazeable, weldable
- SMD & FlipChip
- ...and many more



Substrate

- Alumina
- Zirconia
- Sapphire
- Steel
- Copper
- Glass
- Polyimide
- Aluminium nitride
- Silicon

Metal thin film

- Pt
- Rh
- Ti
- Ni
- W
- Cr
- Ag
- Au
- Al
- Mo
- Alloys

Metal thick film

- Pt
- Au
- Ag
- Ni/Cr and other alloys

Dielectric thin film

- SiO_2
- Si_3N_4
- Ta_2O_5
- Polymers

Dielectric thick film

- Glass
- Organic polymers

Innovative Sensor Technology IST AG
Stegrütistrasse 14 · 9642 Ebnat-Kappel · Switzerland
+41 71 992 01 00 · info@ist-ag.com

www.ist-ag.com