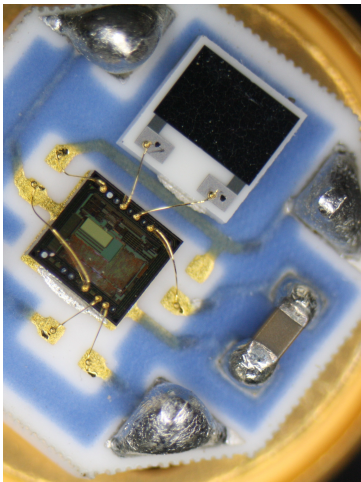




## Pressure Resistant Digital Humidity Sensor



### Pressure resistant, digital sensor for relative humidity and temperature

The pressure resistant humidity sensor HYT 939 has especially been developed for medicine technology or ambitious industrial uses – for example the measurement of pressure dew point. The component fulfils the highest demand of quality and offers definite advantages in comparison with other sensor solutions.

These unique capability characteristics have been achieved by combining a precise, capacitive humidity sensor with the high integration density and functionality of an ASIC which features a micro system technical module on a ceramic substrate.

Thanks to integrated signal processing, the innovative humidity sensor delivers the following physical values directly: Humidity and temperature about the I2C compatible digital interface. The addressability of the sensor enables the possibility to power 126 sensor components on a 4way bus line.

In the production process up to 10 humidity points are calibrated. While additionally calibrating the 0% rF point, three different temperatures are taken into account. This secures a precise measurement of the pressure dew point – even at low dew point temperatures. The temperature drift, as well as mistakes in linearity are compensated with the ASIC. Hence, other costly calibration or compensation by the user is unnecessary. The components are fully interchangeable.

The high-capacity polymer engaged - in connection with the special layer construction - offers excellent performance data and is stable towards chemical influences as well as dew. This provides excellent long time stability results in permanent applications, even in critical areas of deployment. With a measuring range of 0% to 100% rF and the quick response characteristics, the component is suited for a variety of applications, as well as special customised applications.

The robust TO39-body consists of a stainless steel cap and glass which both are autoclavable and resistant to pressure. Connector pins can be brazed or tucked. In conclusion, the sensor is fully interchangeable without calibration.

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The areas of application for the component are versatile. In medical environments, humidity measurement in breathing gas and incubators are typical application fields. Industrial uses: Measurement of the pressure dew point in compressed air, pneumatics, supervision of cold and membrane dryers, humidity control in compressed gases or humidity measurement in biogas – just to name a few typical areas of deployment.

An extensive evaluation kit with component samples, a detailed data sheet, physical fundamentals and application notes are available for the sensor. Other variants - such as an SMD version - are available upon request. Even customised adaptations and OEM versions in lower quantities are possible.

Further information can be obtained from the manufacturer.

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