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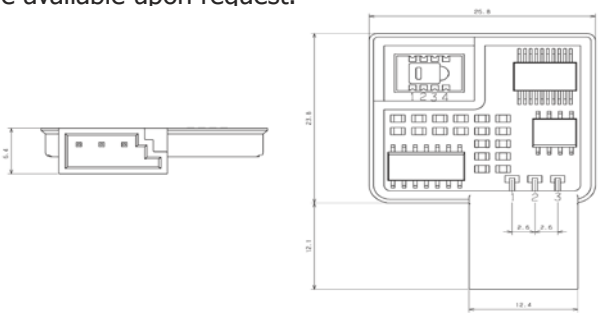
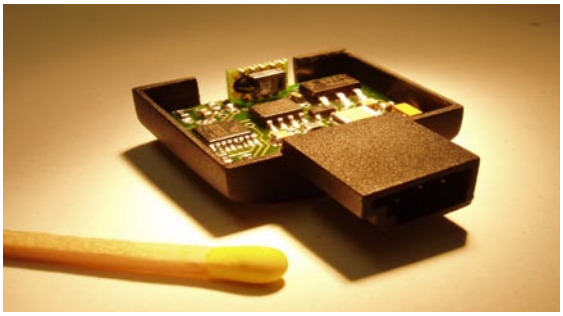
Relative Humidity & Temperature Sensor

The **CASCO** sensor is designed to measure the relative humidity and the temperature on the surface of a car's windshield. The active measuring area of the device is mechanically connected to the windshield surface. Thermal conductivity, between the sensor and windshield is improved with the use of an intermediate foil. The sensor itself consists of a micro-machined, capacitive element on a silicon substrate. A polymer foil is used for humidity measurements and a bandgap device for temperature. Analog signal detection circuitry is integrated on the silicon chip together with the sensor elements.

All control functions of the sensor are unified in a micro-controller. The controller uses the humidity and temperature values to calculate dew point. **Humidity, temperature** and **dew point** measurements can be reported to the climate control system.

The standard CASCO sensor module operates as a (fully compliant) slave (node) in a **LIN 2.0** network. Other output formats are available upon request.





Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Technical Data:						
Measuring range relative humidity	RH	0		100	%	
Measuring tolerances relative humidity						See fig2.
Reproducibility	RH		<1		%	15...95% RH
Operating temperate range	T	-40		+90	°C	
Measuring tolerances temperature						See fig. 3
Connection values:						
Supply voltage	Vbatt	9	14	18	V	
Current consumption	I_s	6		7	mA	Operation
			4		µA	Sleep mode
General Data:						
Weight	G		< 5		g	
Overall dimensions:						
Length -			35,9		mm	
Width -			25, 8		mm	
Height -			6, 4		mm	
Pin out:	Pin 1 = gnd Pin 2 = output Pin 3 = Vbatt					

Fig 2

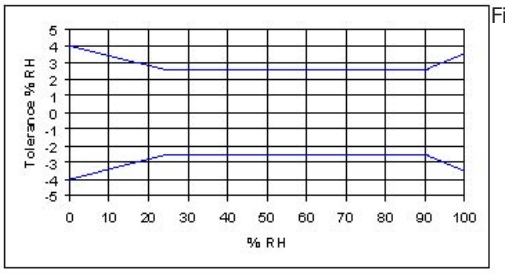
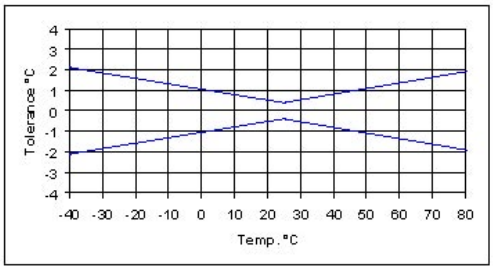


Fig 3



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