

GIEBEL SENSE Modbus RTU

-Prototype-

Ventilation dryers are indispensable to prevent the occurrence of condensation water damage. However, the effective and predictive maintenance of these filters is only possible if the monitoring of the filter loading is signaled in such a way that the filter change does not cause any unplanned downtime.

The GS24-A monitors the loading status of the filter. The information pre-warning (filter loaded to 75%) and change (filter loaded to 100%) are output via the Modbus RTU protocol.

Continuous saturation monitoring of the adsorber
4 fixed switching outputs for 0% / 50% / 75% / 100% Loading
Modbus RTU protocol (RS485 Half-Duplex serial connection)
Error corrections for unusual deployment changes
Easy to mount, to any adsorber

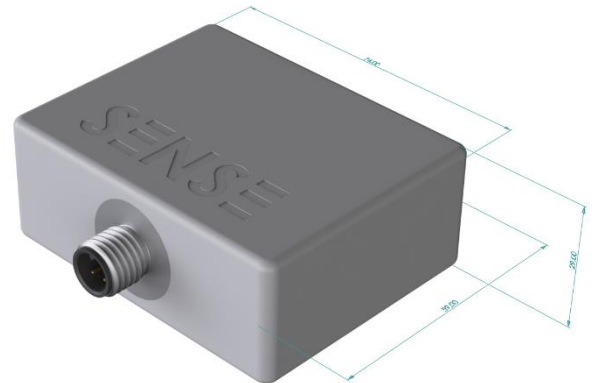


Function of GIEBEL Sense

Silica gel reduces the relative humidity in its ambient air and does so independently of the temperature. The more the gel is loaded, the less water it can remove from the air. When the silica gel is new, the air around it has a relative humidity of 2-3%RH. If the gel is loaded to about 15%, it has a relative humidity of 15%RH. With the help of this and other correlations, we have developed a sensor which measures the loading state of our adsorbers.

Technical data

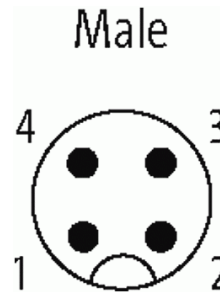
<i>Temperature</i>	-40°C bis +70°C
<i>Housing</i>	Polyamide PA6
<i>Size</i>	60 x 75 x 30 mm
<i>Weight</i>	200 g
<i>Input variable</i>	Humidity 0-100% rF
<i>Operating voltage</i>	9...30 V DC
<i>Current consumption</i>	200 µA
<i>Protection class</i>	IP 67
<i>Abweichungen</i>	+/- 10%
<i>Ausgang</i>	RS485 A/B





Module plug pinout

<i>Model</i>	GS RTU
<i>Plug</i>	M12 a-coding, 4-pin
<i>Pin 1</i>	+24 V DC (brown)
<i>Pin 2</i>	RS485 A (white)
<i>Pin 3</i>	GND (blue)
<i>Pin 4</i>	RS485 B (black)



Supported Modbus function codes

<i>Function code</i>	<i>Description</i>
03 (0x03)	Read Holding Register
04 (0x04)	Read Input Register
06 (0x06)	Write Single Holding Register
16 (0x10)	Write Multiple Holding Registers

Holding Registers (read/write)

<i>Register</i>	<i>Communication address (dec)</i>	<i>Description</i>	<i>Values (dec)</i> (defaults are bold)
40001	0	Slave ID	1 ... 247 123
40002	1	Baudrate	1 (= 9600) 2 (= 19200) 3 (= 38400) 4 (= 57600) 5 (= 76800) 6 (= 115200)



40003	2	Serial mode	1 (= 8E1) 2 (= 8O1) 3 (= 8N1) 4 (= 8N2)
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Input Registers (read only)

Register	Communication address (dec)	Description	Values (dec)
30011	10	Sensor output Adsorber saturation	0 (= OK, 0-49%) 1 (= MEDIUM, 50-74%) 2 (= WARNING, 75-99%) 3 (= FULL, 100%)

Sensor readings hourly