

# S6000

INTERCHANGEABLE SENSOR MODULE FOR RELATIVE HUMIDITY



## Main characteristics

- Interchangeable without recalibration
- Linearised and temperature compensated humidity measurement
- Operating range: 0 ... 100 %rh, -30 ... +85 °C
- Accuracy:  $\pm 2$  %rh,  $\pm 0,2$  °C
- Output signal:
  - Humidity: analogue and digital
  - Temperature: Pt100  $\Omega$  1/3 DIN
- Capacitive thin film humidity sensor
- Sensor response time: 10 seconds

The concept of the S6000 is its interchangeability without the need of a recalibration due to a miniaturised electronic circuitry (ASIC).

This reduces maintenance cost drastically.

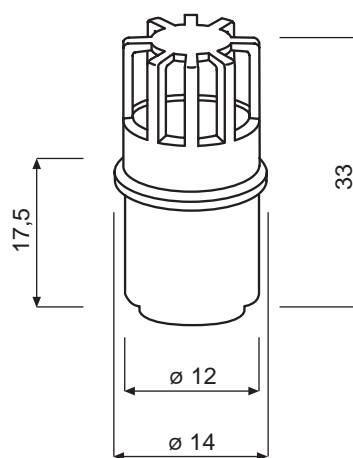
The small size allows its integration in any equipment.

The plug-and-play system guarantees fast replacement also for non-skilled staff.

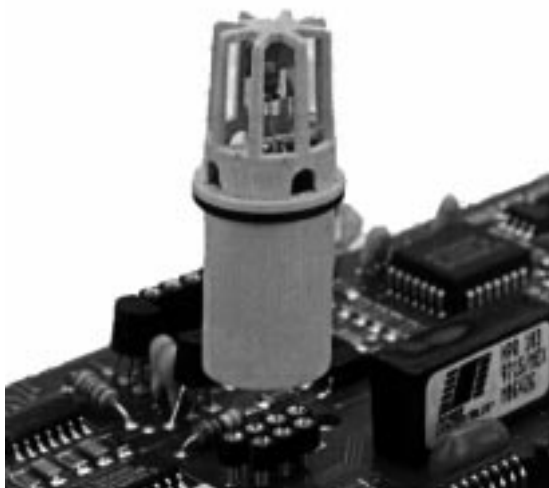
## TECHNICAL DATA

|                               | Humidity   | Temperature                                    |
|-------------------------------|--|--|
| <b>Connections</b>            | 3 wire   | 3 wire   |
| <b>Accuracy @ 23 °C</b>       | Hysteresis and non-linearity included<br>$\pm 1,5$ %rh (5...95 %rh)<br>$\pm 2$ %rh (< 5 %rh, > 95 %rh) | Pt100 $\Omega$ 1/3 DIN<br>direct: $\pm 0,2$ °C |
| <b>Resolution</b>             | 0,124 %rh  | /  |
| <b>Measuring range</b>        | 0 ... 100 %rh  | -30 ... +85 °C                                 |
| <b>Sensor response time</b>   | (90% of scale for a step change from 11% to 75 %rh)  | /  |
|                               | < 10 sec   |  |
| <b>Output signal</b>          |  |  |
| Analogue                      | 0 ... 1V   | Pt100 $\Omega$ direct<br>1/3 DIN (3 wire)      |
| Digital                       | variable frequency output  |  |
| <b>Supply voltage: E</b>      | 5 VDC $\pm 10\%$   |  |
| <b>Impedence: R</b>           | Voltage: $R > 6M\Omega$<br>Digital: CMOS compatible  | /  |
| <b>Consumption</b>            | 1,35 mA  |  |
| <b>Operating range</b>        |  |  |
| Measuring head                | 0 ... 100 %rh  | -30 ... +85 °C                                 |
| Housing                       | 0 ... 100 %rh  | -30 ... +85 °C                                 |
| Storage                       | 0 ... 100 %rh  | -40 ... + 85 °C                                |
| <b>Housing</b>                |  |  |
| Dimension                     | 33mm, $\varnothing$ 14mm   |  |
| Material                      | NORYL PPo UL 94 V0   |  |
| Weight                        | 3 g  |  |
| <b>Electrical connections</b> | "Tulip" connector  |  |

## DIMENSIONS

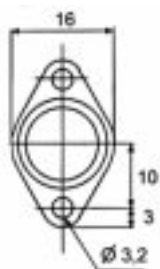


## APPLICATION EXAMPLE

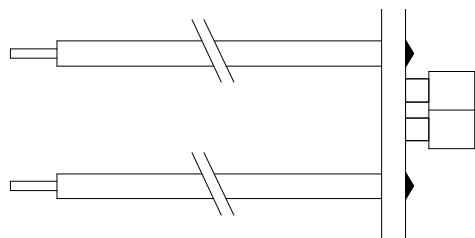


## ACCESSORIES

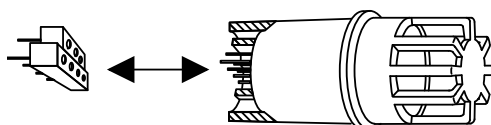
Wall mounting fixing clamp  
Ref.: 1A01210



Connecting kit with wires:  
Ref.: 6A06350

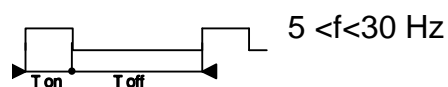


Connecting kit for PCBs:  
Ref.: 6A05130



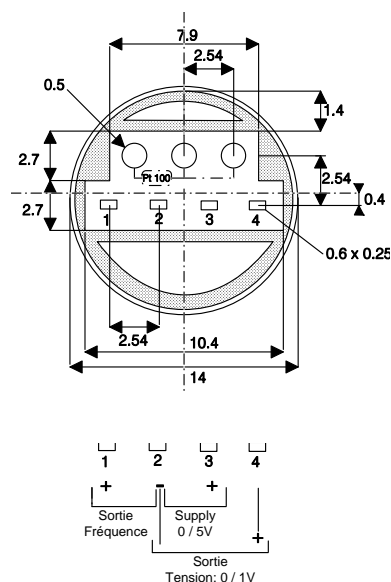
## DIGITAL OUTPUT S6000

It is characterised by a variable frequency pulse train in function of the relative humidity.

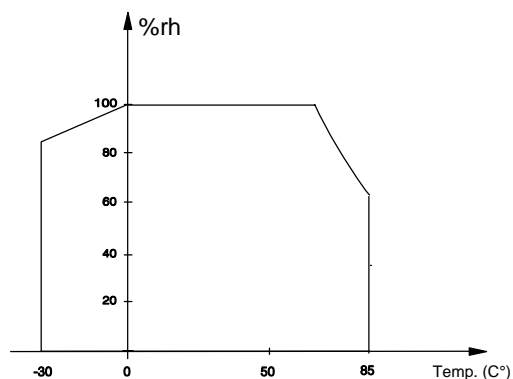


$$HR \% = [(T_{on}/T_{off}) * 2049 - 1] / 16.12$$

## CONNECTION OF S6000



## MEASURING RANGE



## ORDERING CODE

S6000

| Temperature output      |   |
|-------------------------|---|
| No temperature          | 0 |
| Pt100 direct (standard) | 1 |

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice



**LEADER Electronic Co., Ltd**  
116, Jianghuali, Jianghua Road, Jiangmen City, GD, PRC  
Tel: + 86 750 3101711, 3379183  
Fax: + 86 750 3388669  
Website: [www.leadersensors.com](http://www.leadersensors.com)  
E-mail: [leader@leadersensors.com](mailto:leader@leadersensors.com)



code 85581 -05/00