

**SUITABLE FOR**

**Applications:**

- Transmitters
- Handheld units
- Dataloggers
- Portable probes

**Integrated in:**

- Electronic enclosures
- Computer rooms
- Incubators
- Provers
- Cold stores

# Sensor module for humidity and temperature

## HygroClip®

**MAIN FEATURES**

- 100% interchangeable
- Digital and analogue interface
- ROTRONIC Humidity Sensor HYGROMER® (0...100% rh)
- Accuracy  $\pm 1.5\%$  rh
- Long-term stability  $< 1\%$  rh/year
- Temperature sensor Pt100 1/3 DIN
- Optimum price and performance thanks to state of the art ASIC technology
- SWISS-MADE

**HYGROCLIP®**



ROTRONIC - Your  
SCS Calibration Laboratory  
for Relative Humidity  
Accred. Reg N°. 065

**rotronic ag**

## Why HygroClip?

The high-quality sensor module for measuring humidity and temperature is 100% exchangeable without readjustment and offers many advantages:

- Negligible down times
- Reduced service costs
- World-wide availability ex stock
- Cost-saving problem solution

## Compatible equipment

ROTRONIC offers a wide range of ancillary products which make use of the HygroClip.

Maintenance and adjustment of this equipment is not required as the HygroClip can be installed pre-calibrated.

## Technical data:

	HygroClip S (anthracite)	HygroClip S3 (white)
<b>Power Supply:</b>	3,5...50 VDC	
Current consumption	< 4 mA	
<b>Measuring range:</b>		
Humidity	0...100 %rh	
Temperature	-40...+85 °C	
<b>Operating range:</b>	-40...+85 °C	
<b>Accuracy at 23°C:</b>		
Humidity	± 1,5 %rh	
Temperature	± 0,3 K	
<b>Output signal:</b>		
Analogue	0...100 %rh = 0...1 V	
	ROV: -40...+85 °C = -0,4...+0,85 V	-40...+60 °C = 0...+1 V
Digital (DIO)	One Wire	
Measuring time	< 0,7s (Start-up 3s)	
<b>Resolution:</b>		
Humidity	100 %rh / 12 bit analogue / 16 bit digital	
Temperature	250°C / 12 bit analogue / 16 bit digital	
<b>Adjustment:</b>	via PC (EE-Prom)	
<b>Sensor:</b>		
Humidity	HYGROMER®-C94	
Temperature	Pt100 1/3 DIN	
<b>Output load:</b>	> 10 kOhm	
<b>Cable length:</b>	max. 5 m (with booster up to 100 m)	
<b>Sensor protection:</b>	Wire filter (20m/s)	
<b>Dimensions:</b>	Total length 100mm, D=15mm	
<b>Installation type:</b>	Bayonet cap on mounting connector	
<b>Protection category:</b>	IP65	
<b>Material, Colour:</b>	Polycarbonate, anthracite Ral 7016	white
<b>EMC compatibility (CE):</b>	EN 50081-2, EN 50082-2	

## Ordering data

	Description
<b>HygroClip C</b>	HygroClip S with Mounting part MOC
<b>HygroClip S</b>	Sensor module for % rh and °C suitable for MOC and MOK Series
<b>MOC</b>	Mounting connector anthracite for HygroClip S with 30 cm wires
<b>HygroClip C3</b>	HygroClip S3 with Mounting part MOC 3
<b>HygroClip S3</b>	Sensor module for % rh and °C suitable for MOC 3 and MOK Series
<b>MOC 3</b>	Mounting connector white for HygroClip S3 with 30 cm wires

## Our HygroClip-Philosophy

Don't lose any time calibrating and readjusting your HygroClip S. With the exchange procedure you receive at an extremely favourable price on a replacement HygroClip (HygroClip R).

The HygroClip R always contains a new humidity sensor and a new filter and it is perfectly adjusted.

To guarantee practically uninterrupted measurement, we recommend that you keep a HygroClip S in reserve.

## Our range includes:

- HygroLog data-logger
- HygroLog-D data-logger with display
- A1H integrated hand-held unit
- Hand held probes
- Transmitters with alternative output signals
- Meteorological probes with direct Pt100 output

## MOK/HPH (only for HygroClip S)

The extensive connection range for the HygroClip

### Convincing features:

- Bridging large distances
- Signal level matching
- Shielded cables of highest quality
- Flexible connection technology
- Several temperature ranges

### The MOK

The MOK is a connection adapter for the HygroClip and produces a cable connection to the HygroClip.

The MOK is also available as converter for the HygroClip output signals. We also offer a version for connecting the HygroClip to a PC port.

### Who needs the MOK ?

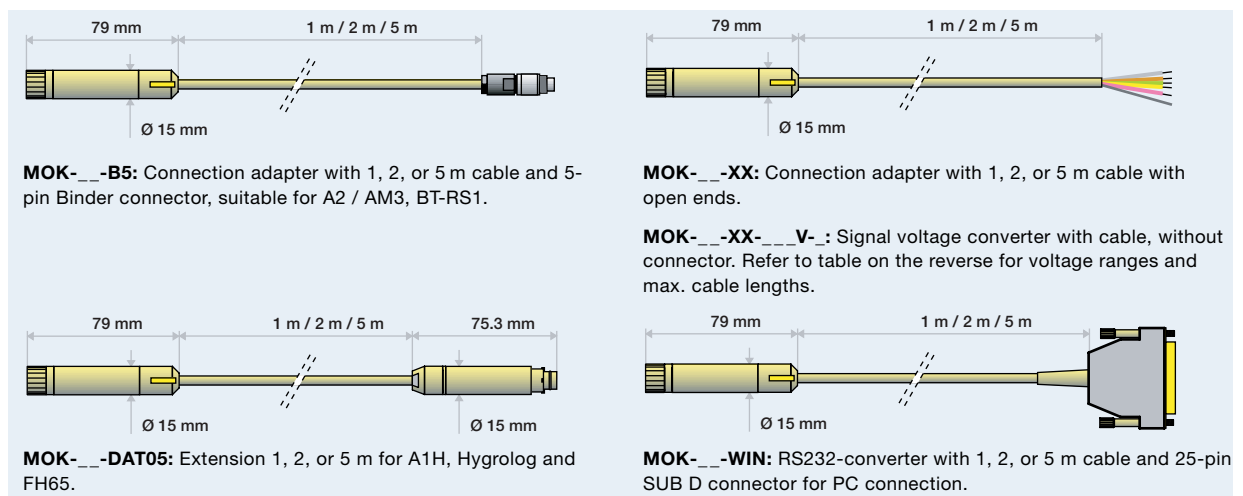
Our HygroClip provides the output signals for relative humidity and temperature as follows: 0...100% rh = 0...1 VDC; -40...+85 °C = -0.4...+0.85 VDC.

If another signal level is desired, we can offer different ranges (refer to code table).

Several ranges can also be selected for the temperature range.

Our selection of MOKs facilitates adaptation to a large number of controllers, displays, central control units, etc. With some versions connection cables up to 20 m long can be realized.

### All MOK at a glance

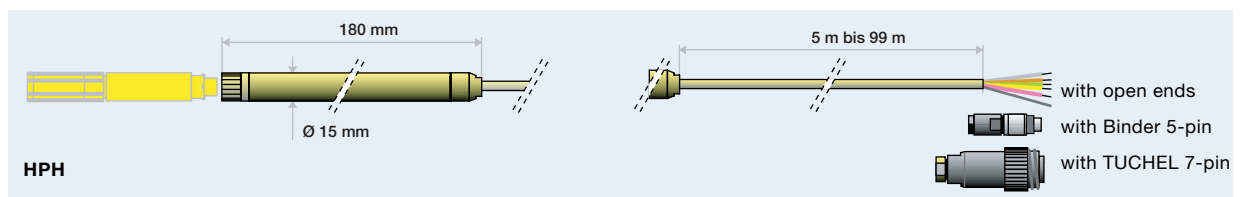


## Amplifier HPH (only for HygroClip S)

The HPH amplifier reveals its full strength whenever the HygroClip is at a large distance from the

evaluation or control unit. The analog measuring signals can be transmitted without loss

of accuracy over a distance of up to 100 m thanks to the cable length compensation.



### HPH technical data

	Humidity	Temperature
<b>Electronic operating range</b>	0 ... 100 %	-20 ... +85 °C
<b>Electronic operating range (HygroClip S)</b>	0 ... 100 %	-40 ... +85 °C
<b>Input signals (HygroClip)</b>	0 ... 100 %rh = 0 ... 1 V	-40 ... +85 °C = -0,4 ... +0,85 V
<b>Outputs:</b>	10 mV/%rh	10 mV/°C
	0 ... 100 %rh = 0 ... 1 V	-40 ... +85 °C = -0,4 ... +0,85 V
<b>Supply voltage:</b>	3,6 ... 35 VDC	
<b>Dimensions:</b>	180 x 15 mm	
<b>Connections:</b>	Cable Binder 5-pin Tuchel 7-pin	

### Ordering data

**HPH-CG05B5**  
**HPH-CG05XX**  
**HPH-CG99XX**

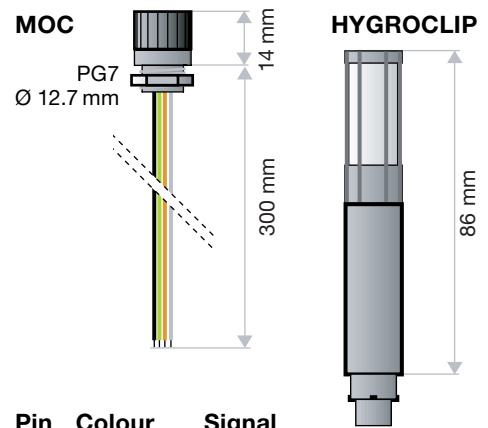
### Description

Amplifier, 5 m cable with Binder connector 5-pin  
 Amplifier, 5 m cable with open ends  
 Amplifier, 99 m cable with open ends

## MOK signal converter technical data

	Order code for the signal converter MOK
Example	M O K - 0 1 - X X - 0 0 1 V - 1
Basic type	M O K
Cable lengths	-
1 m	0 1
2 m	0 2
5 m	0 5
10 m	1 0
20 m	2 0
Cable configuration	-
- with open ends	X X
Output signal	-
0...1 VDC	0 0 1 V
0...2.5 VDC	0 2 5 V
0...5 VDC	0 0 5 V
0...10 VDC	0 1 0 V
Temperature range, °C	-
0... 100	1
-30... +70	2
-40... +60	3

### Dimensional diagrams



Pin	Colour	Signal
1	brown	Temperature
2	green	+VDC
3	black	GND
4	yellow	DIO
5	white	Humidity

Note on the output	Required supply in VDC*	Max. cable length in m
0...1 VDC	min. 5.5	2
0...2.5VDC	min. 5.5	5
0...5 VDC	min. 10.0	10
0...10 VDC	min. 15.0	20

Load: 1 kOhm / Volt  
 Temperature operating range: -40...+85 °C  
 \* The maximum supply voltage is 26.5 Volt !

Order numbers	Description	Suitable for:
<b>MOK-01-XX</b>	Connection cable 1 m, open ends	
<b>MOK-02-XX</b>	Connection cable 2 m, open ends	
<b>MOK-05-XX</b>	Connection cable 5 m, open ends	
<b>MOK-01-B5</b>	Connection cable 1 m, 5-pin Binder connector	A2, AM3, BT-RS1
<b>MOK-02-B5</b>	Connection cable 2 m, 5-pin Binder connector	A2, AM3, BT-RS1
<b>MOK-05-B5</b>	Connection cable 5 m, 5-pin Binder connector	A2, AM3, BT-RS1
<b>MOK-01-AM</b>	Connection cable 1 m, ALMEMO connector	PA 20, LA 8
<b>MOK-02-AM</b>	Connection cable 2 m, ALMEMO connector	PA 20, LA 8
<b>MOK-05-AM</b>	Connection cable 5 m, ALMEMO connector	PA 20, LA 8
<b>MOK-_-_-_-_-V-_-</b>	Signal voltage converter, See above table for coding	
<b>MOK-01-WIN</b>	RS232 adapter, 1 m cable, 25-pin SUB D-connector	PC, RS232 interface
<b>MOK-02-WIN</b>	RS232 adapter, 2 m cable, 25-pin SUB D-connector	PC, RS232 interface
<b>MOK-05-WIN</b>	RS232 adapter, 5 m cable, 25-pin SUB D-connector	PC, RS232 interface
<b>MOK-01-DAT05</b>	Extension cable 1 m, with HygroClip connectors	A1H, Hygrolog, FH65
<b>MOK-02-DAT05</b>	Extension cable 2 m, with HygroClip connectors	A1H, Hygrolog, FH65
<b>MOK-05-DAT05</b>	Extension cable 5 m, with HygroClip connectors	A1H, Hygrolog, FH65

### Drawings

Cable connections Binder 5-pin	Cable connections Tuchel 7-pin	Cable/signal colours																												
		<table border="1"> <thead> <tr> <th>Signal</th> <th>B5</th> <th>T7</th> <th>Cable colour</th> </tr> </thead> <tbody> <tr> <td>+VDC</td> <td>2</td> <td>1</td> <td>green</td> </tr> <tr> <td>GND</td> <td>3</td> <td>2,3</td> <td>shield</td> </tr> <tr> <td>Comp.</td> <td>3</td> <td>5</td> <td>yellow</td> </tr> <tr> <td>Temperature</td> <td>1</td> <td>4</td> <td>brown</td> </tr> <tr> <td>Humidity</td> <td>5</td> <td>6</td> <td>white</td> </tr> <tr> <td>DIO</td> <td>4</td> <td>E</td> <td>red</td> </tr> </tbody> </table>	Signal	B5	T7	Cable colour	+VDC	2	1	green	GND	3	2,3	shield	Comp.	3	5	yellow	Temperature	1	4	brown	Humidity	5	6	white	DIO	4	E	red
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