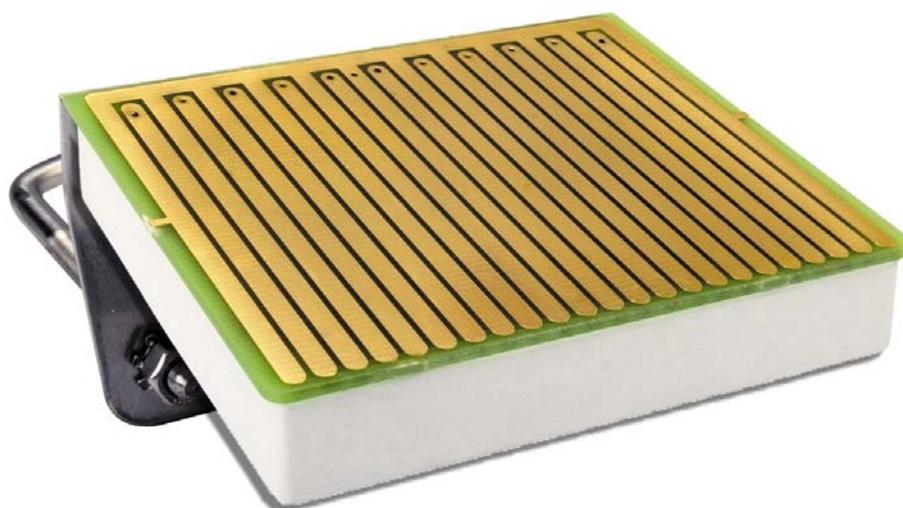


Instruction for use

021014/08/08

Rain Monitor

5.4105.00.xxx



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1 Model

Order- No.	Measured value: Rain- status	Elect. Output	Operating Voltage	Cable length
5.4105.00.000	Yes / No	Relay	24 V AC/DC	3 m
5.4105.00.010	Yes / No	Relay	24 V AC/DC	10 m
5.4105.00.020	Yes / No	Relay	24 V AC/DC	20 m

2 Application

The rain monitor transmits signals to determine the beginning and the end of precipitation and the duration of the period of precipitation.

In addition, the precipitation monitor can be used to report status or to transmit control signals to connected rain protection devices such as windows, air vents, awnings, or Venetian blinds.

3 Mode of Operation

In case of rain the water drop establishes an electrical contact between the two electrodes of the sensor surface, and releases immediately a breaker signal (relay). After drying of the sensor surface, and after a release delay of approx. 5,5 minutes the relay changes back again.

The sensor surface is heated in double-stage. The first heating stage is permanently active and avoid dewing or icing. The second stage is connected only for the period of rain moistening and provides for fast drying of the surface.

4 Installation

Please Note:

The electrical connection is to be carried out by experts only.

4.1 Mechanical Mounting

The rain monitor is screwed on a plane vertical surface with its angle plate, or is mounted onto a mast (\varnothing 30...50 mm) by means of its mounting clamp. Please make sure that the falling rain is not disturbed.

4.2 Electrical Mounting

The connection is carried out via a cable acc. to the connection diagram chapter 7.

5 Taking into Operation

After the electrical connection has been established, the operating voltage can be activated.

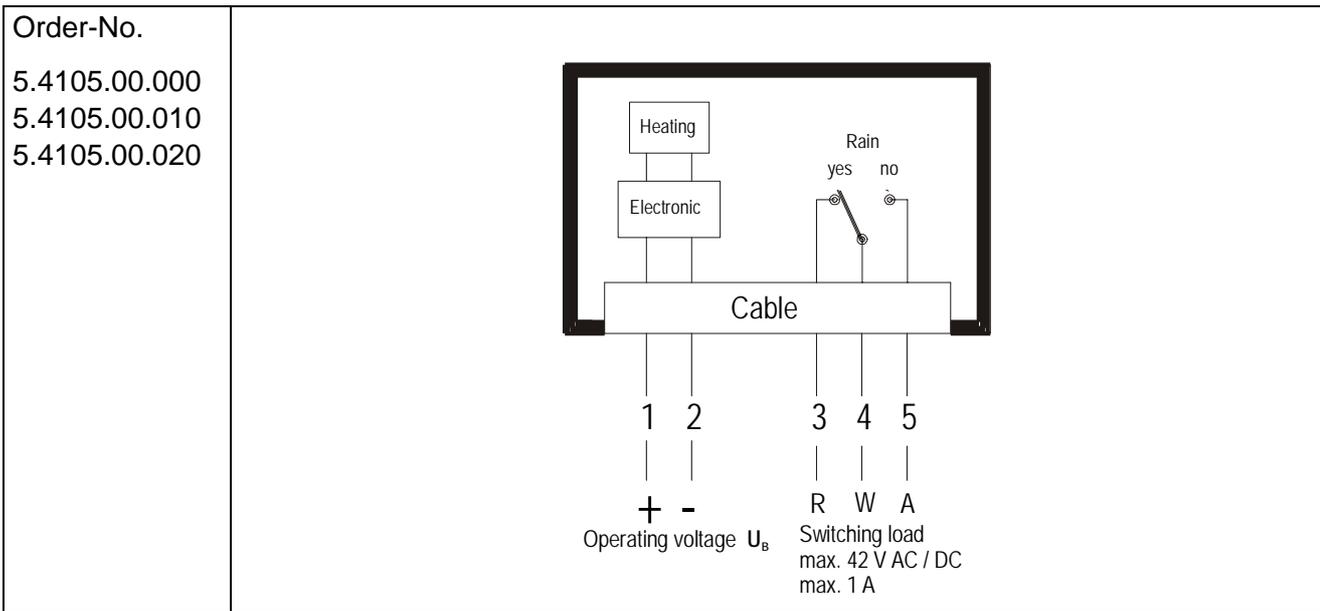
Attention:

Only after connecting the operating voltage, and after a release delay of approx. 5,5 minutes the instrument is ready for operation.

6 Maintenance

A layer of dirt can form on the sensor surface as a result of atmospheric pollution, This dirt has an isolating effect, and can lead to short-circuits. An accurate signal cannot be set off by the falling rain. Therefore the sensor surface has to be cleaned with a light cleaner at regular intervals, without damaging it.

7 Connecting Diagram



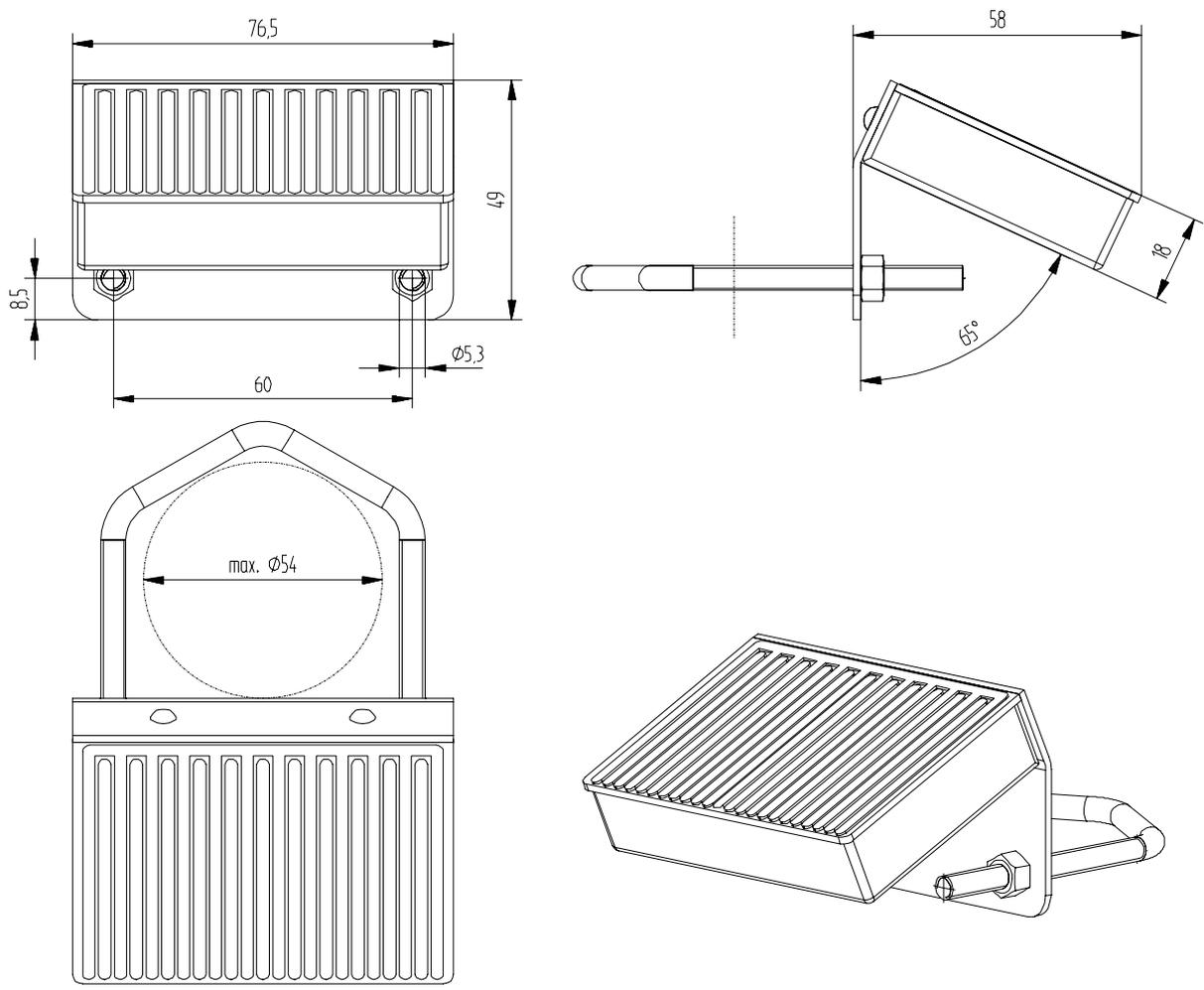
Status:

Status of Sensor surface	Relay Status	Status of rain
Wet or without operating voltage	yes (Pin 3+4)	= yes
Dry	no (Pin 4+5)	= no

8 Technical Data

Measuring value	Rain (yes/no)
Signal- output	Relay contact, potential-free rain „yes“ = relay - yes in resting position (also with $U_B = 0$) rain „no“ = relay – no in working position (tightened)
Switch-on delay	1 sec.
Switch-off delay	5,5 min
Switching load (Relay)	max. 42 V AC/DC; 1 A
Operating voltage U_B	24 V AC or DC
Sensor area	40 cm ²
Operating temperature	-30 ... +50°C
Protection	IP 65 acc. to DIN 40050
Dimension	See dimensional drawing
Weight	approx. 0,2 - 0,5 kg depending on cable length
Connection	Cable, LiYY 5 x 0,25 mm ²

9 Dimensions



10 Accessories

<p>Power supply unit</p> <p>The unit serves for the power supply of the rain sensor. It supplies the necessary operating voltage for electronics and heating.</p>	<p>9.3388.00.002</p>	<p>Primary : 230 V / 50 Hz Secondary : 24 V AC / 20VA Housing : synthetic Protection : IP 65 acc. to DIN 40050 Dimension : 107 x 125 x 100 mm Weight : 1,2 kg</p>
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11 EC-Declaration of Conformity

Document-No.: **000903**

Month: 08 Year: 08

Manufacturer: **ADOLF THIES GmbH & Co. KG**

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Description of Product: **Precipitation Monitor**

Article No. **5.4105.00.000** **5.4105.00.010** **5.4105.00.020**

specified technical data in the document: **021012/08/08**

The indicated products correspond to the essential requirement of the following European Directives and Regulations:

- | | |
|-------------|--|
| 2004/108/EC | DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC |
| 2006/95/EC | DIRECTIVE 2006/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits |
| 552/2004/EC | Regulation (EC) No 552/2004 of the European Parliament and the Council of 10 March 2004 on the interoperability of the European Air Traffic Management network (the interoperability Regulation) |

The indicated products comply with the regulations of the directives. This is proved by the compliance with the following standards:

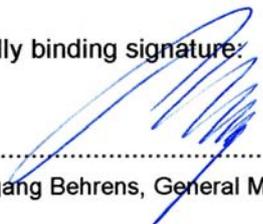
Reference number	Specification
IEC 61000-6-2: 2005	Electromagnetic compatibility Immunity for industrial environment
IEC 61000-6-3: 2006	Electromagnetic compatibility Emission standard for residential, commercial and light industrial environments
IEC 61010-1: 2001	Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements

Place: Göttingen

Date: 09.10.2008

Legally binding signature:

issuer:


.....
Wolfgang Behrens, General Manager


.....
Joachim Beinhorn, Development Manager

This declaration certifies the compliance with the mentioned directives, however does not include any warranty of characteristics. Please pay attention to the security advises of the provided instructions for use.



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- Alterations reserved -