

Instruction for Use

020897/04/13

Weather and Thermal Radiation Shield

- compact

1.1025.55.xxx



Safety Instructions

- Before operating with or at the device/product, read through the operating instructions. This manual contains instructions which should be followed on mounting, start-up, and operation. A non-observance might cause:
 - failure of important functions
 - endangerment of persons by electrical or mechanical effect
 - damage to objects
- Mounting, electrical connection and wiring of the device/product must be carried out only by a qualified technician who is familiar with and observes the engineering regulations, provisions and standards applicable in each case.
- Repairs and maintenance may only be carried out by trained staff or **Adolf Thies GmbH & Co. KG**. Only components and spare parts supplied and/or recommended by **Adolf Thies GmbH & Co. KG** should be used for repairs.
- Electrical devices/products must be mounted and wired only in a voltage-free state.
- **Adolf Thies GmbH & Co KG** guarantees proper functioning of the device/products provided that no modifications have been made to the mechanics, electronics or software, and that the following points are observed:
- All information, warnings and instructions for use included in these operating instructions must be taken into account and observed as this is essential to ensure trouble-free operation and a safe condition of the measuring system / device / product.
- The device / product is designed for a specific application as described in these operating instructions.
- The device / product should be operated with the accessories and consumables supplied and/or recommended by **Adolf Thies GmbH & Co KG** .
- Recommendation: As it is possible that each measuring system / device / product may, under certain conditions, and in rare cases, may also output erroneous measuring values, it is recommended using redundant systems with plausibility checks for **security-relevant applications**.

Environment

- As a longstanding manufacturer of sensors Adolf Thies GmbH & Co KG is committed to the objectives of environmental protection and is therefore willing to take back all supplied products governed by the provisions of "*ElektroG*" (German Electrical and Electronic Equipment Act) and to perform environmentally compatible disposal and recycling. We are prepared to take back all Thies products concerned free of charge if returned to Thies by our customers carriage-paid.
- Make sure you retain packaging for storage or transport of products. Should packaging however no longer be required, please arrange for recycling as the packaging materials are designed to be recycled.



Documentation

- © Copyright **Adolf Thies GmbH & Co KG**, Göttingen / Germany
- Although these operating instruction has been drawn up with due care, **Adolf Thies GmbH & Co KG** can accept no liability whatsoever for any technical and typographical errors or omissions in this document that might remain.
- We can accept no liability whatsoever for any losses arising from the information contained in this document.
- Subject to modification in terms of content.
- The device / product should not be passed on without the/these operating instructions.

Contents

1	Models available	3
2	Application	4
3	Mode of Operation	4
4	Mounting	5
4.1	Mechanical Mounting	5
4.2	Electrical Mounting of the Weather- and Thermal Radiation Shield with Ventilator	7
5	Maintenance	7
6	Technical Data	7
7	Dimensions	8
8	EC-Declaration of Conformity	9

1 Models available

Order-No.	Model	Bracket for mast tube mounting	Mounting hole for meas. transm. (Sensor diameter)	Cable length
1.1025.55.000	w/o ventilator	Ø 35...50 mm	Ø 15...21 mm	---
1.1025.55.001	w/o ventilator	Ø 55...60 mm	Ø 15...21 mm	---
1.1025.55.008	w/o ventilator	Ø 35...50 mm	Ø 6...9 mm	---
1.1025.55.011	w/o ventilator	Ø 35...50 mm	Ø 21...25 mm	---
1.1025.55.015	w/o ventilator	Ø 35...50 mm	Ø 12...17 mm	---
1.1025.55.100	with ventilator	Ø 35...50 mm	Ø 15...21 mm	5 m
1.1025.55.111	with ventilator	Ø 35...50 mm	Ø 21...25 mm	5 m
1.1025.55.110	with ventilator	Ø 35...50 mm	Ø 15...21 mm	10 m

Measuring transmitters which can be protected by the weather- and thermal radiation shield, are given in the following table:

Weather- and thermal radiation shield	Suited measuring transmitters	Order-No.
1.1025.55.000 / 001 / 100 / 110	Hygro Thermo Transmitter– compact Temperature Sensor- compact	1.1005.54.xxx 2.1280.00.xxx
1.1025.55.008	Meas. transmitter with Ø 6...9 mm	
1.1025.55.015	Meas. transmitter with Ø 12...17 mm	
1.1025.55. 011 / 111	Meas. transmitter with Ø 21...25 mm	

Remark:

For Hygro-Thermo Transmitter model ...241/441 (4-20 mA) we recommend the use of the weather and thermal radiation shield compact with ventilation order-no. 1.1025.55.1xx

2 Application

Radiation and precipitation can falsify measurement data to an unacceptable extent if the temperature sensors and humidity sensors are inadequately protected or perhaps not protected at all. Moreover, the use of unprotected temperature and humidity sensors increases the risk of mechanical damage.

The use of the Weather and Thermal Radiation Shield - compact in an appropriate combination with suitable temperature and humidity sensors reduces to a minimum the possibility of radiation, precipitation or damage influencing the data in a negative manner.

More exactly measuring results are achieved by using the ventilated Weather and Thermal Radiation Shield (mod. 1.1025.55.10x with ventilation). The ventilation reduces those errors which might occur during the measurements in a weather hut caused by the so-called „proper climate“

Owing to its outstanding technical properties as well as the compact form of construction, the Weather and Thermal Radiation Shield - compact is predestined for use in professional measurement.

3 Mode of Operation

The white UV-proof lamella prevent direct and reflected radiation from striking the sensor. Due to the appropriate geometric arrangement of the lamella, the flow of air around the sensors is hardly affected.

The lamella material exhibits very good reflective properties, low heat conductivity and excellent weather- resistance.

With the **ventilator model** the air is drawn in on the base of the radiation shield, is then run past the sensor with the necessary flow velocity and is emitted again beneath the cover.

4 Mounting

Attention:

Storing, mounting, and operation under weather conditions is permissible only in vertical position, as otherwise water can get into the instrument.

4.1 Mechanical Mounting

Tools

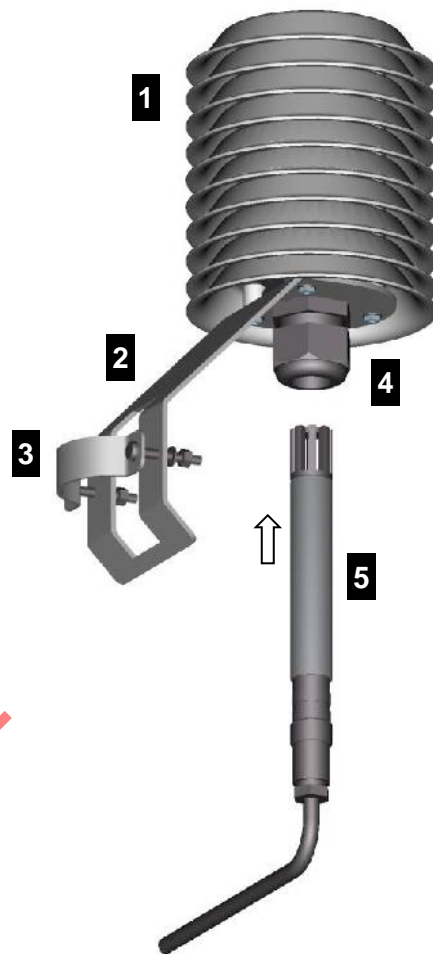
- Screw wrench (SW 19/30/36/42)
- Small screw driver
- Screw wrench SW 8

Mounting: Weather and Thermal Radiation Shield

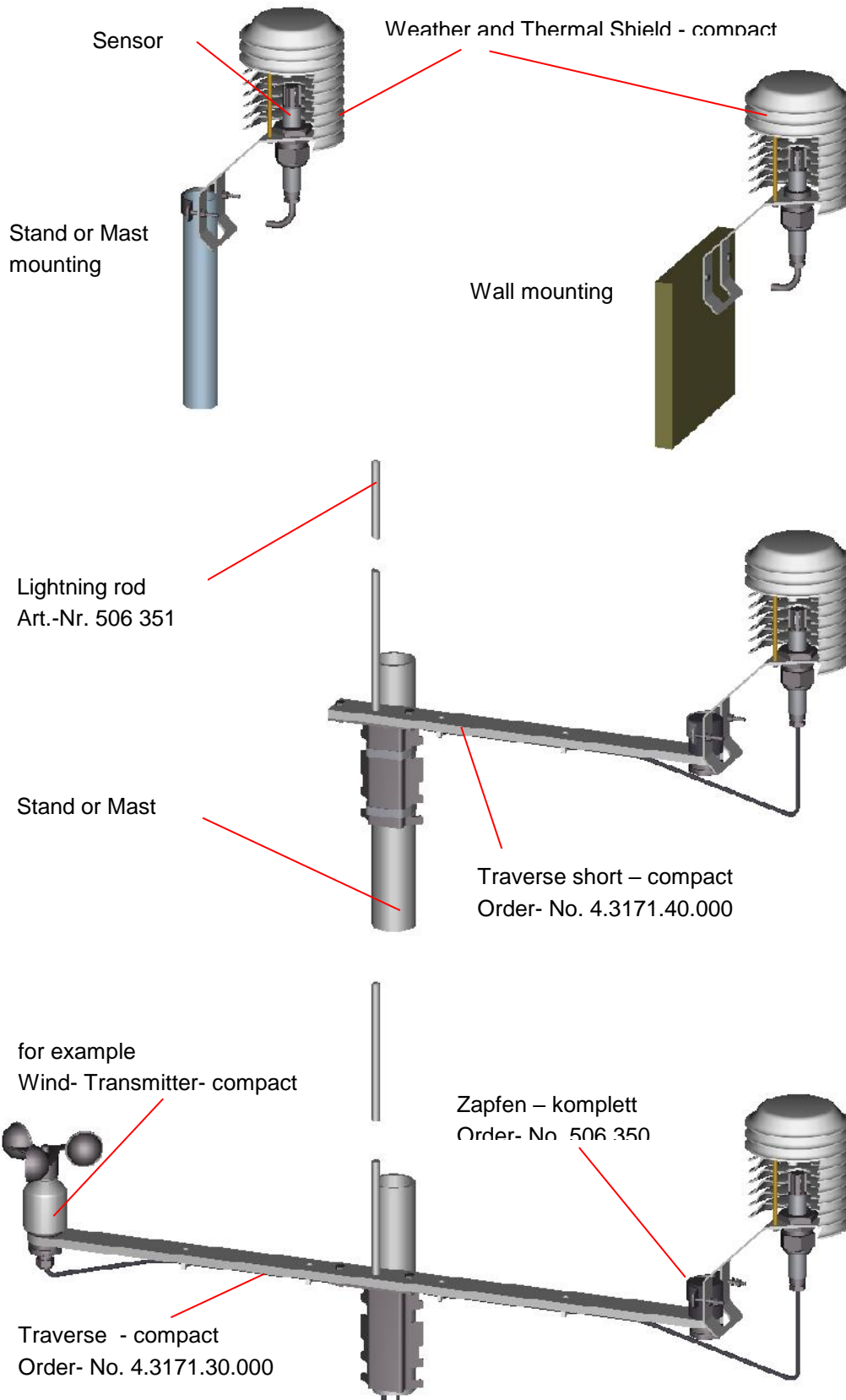
The Weather- and Thermal Radiation Shield **1** is to be mounted at a position that is presentable for the measurement. Operating position is vertical. The Weather- and Thermal Radiation Shield is delivered with a solid angular sheet-metal holder **2**, which makes it possible to mount the Weather and Thermal Radiation Shield-compact to mast tubes, and, after the clamp **3** is removed, also to plane surfaces.

Mounting: Sensor

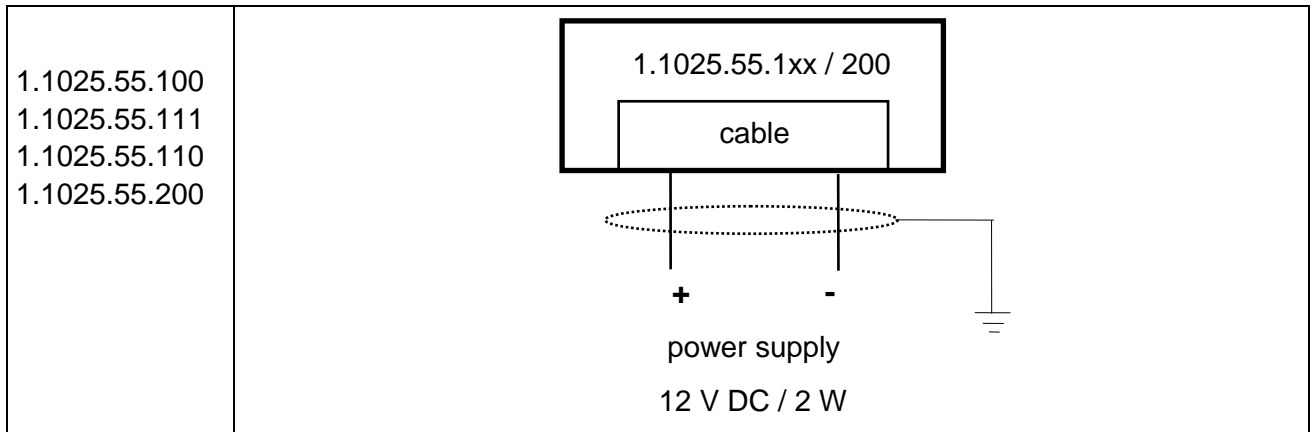
1. Loosen sensor screwing **4**.
2. Put the sensor **5** through the sensor screwing into the weather and thermal radiation shield acc. to the figure. Put it in thus far that the lower part of the sensor housing still can be fastened safely.
3. Tighten sensor screwing again by means of screw wrench.
4. Sensor cable/ ventilator cable should be secured at the mast or tube for ex. by means of cable tie..



Mounting possibilities:



4.2 Electrical Mounting of the Weather- and Thermal Radiation Shield with Ventilator



5 Maintenance

During operation the Weather- and Thermal Radiation Shield might be polluted, to a greater or lesser extent, for ex. by dust, insects or the like.

The protective grating of the Weather- and Thermal Radiation Shield might be clogged with dirty particle which affects the forced ventilation.

We therefore recommend to clean the Weather- and Thermal Radiation Shield regularly, depending on the location, and the expected degree of pollution.

Clean the instrument with a wet cloth, and a brush.

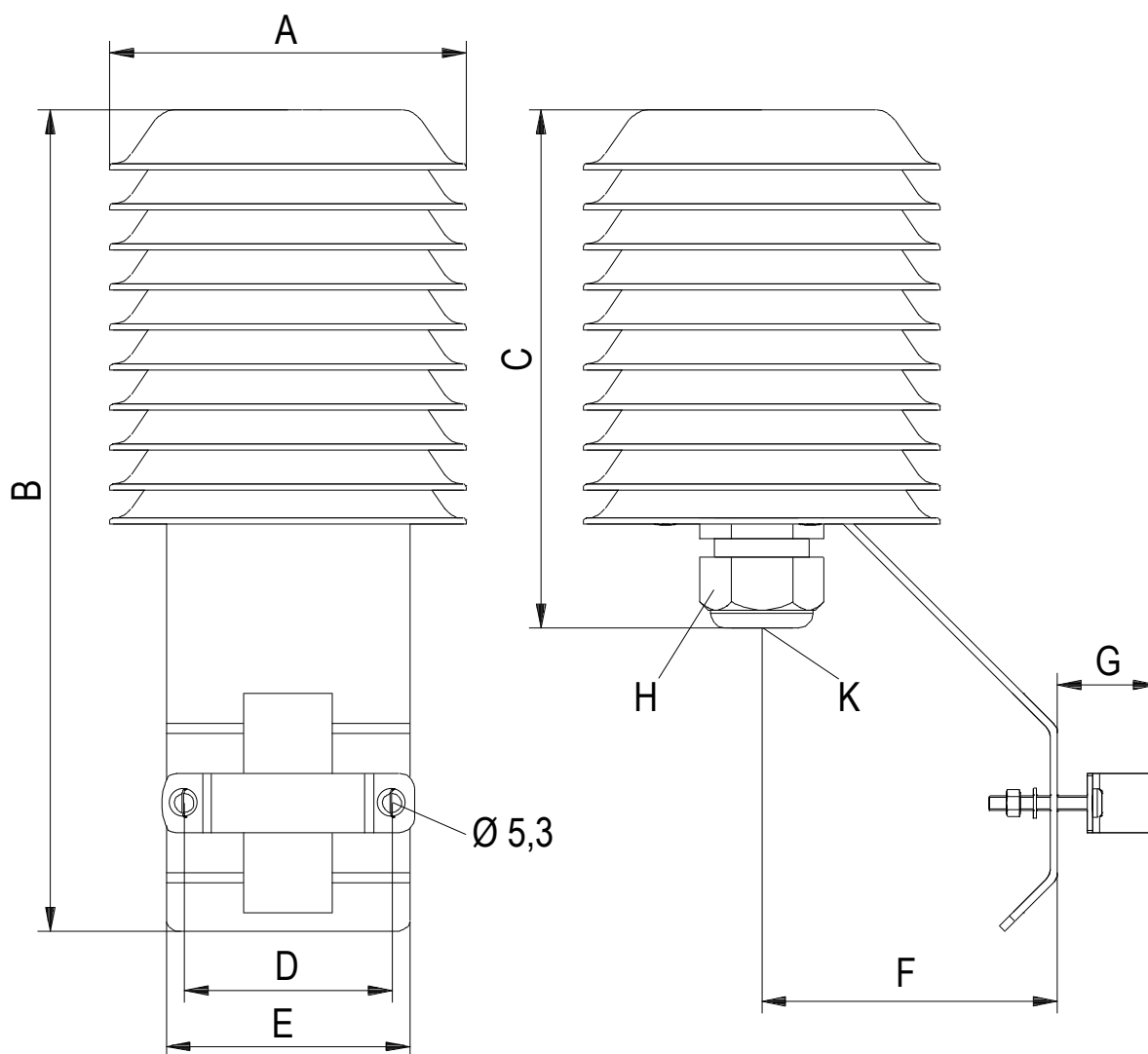
Remark:

Please pay attention also to the maintenance advices of the measuring sensors

6 Technical Data

1.1025.55.000 / 001 / 008 / 011 / 015	
Dimensions	See Chapter 7
Material	
Lamella	Synthetic, white
Bracket	Stainless steel
Weight	approx. 0.65 kg
1.1025.55.100 / 110 / 111 / 200	
Dimensions	See Chapter 7
Material	
Lamella	Synthetic, white
Bracket	Stainless steel
Weight	approx. 0.75 kg
Operating voltage of ventilator	12 VDC / 2 W
Cable length	approx. 5 m
	approx. 10 m (1.1025.55.110)

7 Dimensions



	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [KS]**	K* [mm]
1.1025.55.000	Ø120	275	173	70	82	98	Ø35-50	36	Ø15-21
1.1025.55.001	Ø120	275	173	70	82	98	Ø55-60	36	Ø15-21
1.1025.55.008	Ø120	275	173	70	82	98	Ø35-50	19	Ø 6 - 9
1.1025.55.011	Ø120	282	180	70	82	98	Ø35-50	42	Ø21-25
1.1025.55.015	Ø120	275	173	70	82	98	Ø35-50	30	Ø12-17
1.1025.55.100	Ø120	290	190	70	82	98	Ø35-50	36	Ø15-21
1.1025.55.111	Ø120	290	190	70	82	98	Ø35-50	42	Ø21-25
1.1025.55.110	Ø120	290	190	70	82	98	Ø35-50	36	Ø15-21

* K = Sensor diameter

** KS = Key size

8 EC-Declaration of Conformity

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Month: 02 Year: 15

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

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Description of Product: **Weather and Thermal Radiation Shield - compact**

Article No.	1.1025.55.000	1.1025.55.001	1.1025.55.008	1.1025.55.011
	1.1025.55.015	1.1025.55.100	1.1025.55.110	1.1025.55.111

specified technical data in the document: 020887/04/13

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) |
| 2011/65/EU | DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment |
| 2012/19/EU | DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE) |

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

- | | |
|---------------------|---|
| 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: 2010 | Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements |

Place: Göttingen

Date: 18.02.2015

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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MEETINSTRUMENTATIE



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