

### Instruction for use

020939/05/07

---

## ***Brightness Transmitter***

**7.1414.1x.xxx**

**7.1414.2x.xxx**



## Contents

1	Models .....	2
2	Application .....	3
3	Mode of Operation .....	3
4	Mounting .....	3
5	Maintenance .....	3
6	Connecting Diagram .....	4
7	Technical Data .....	4
8	Dimensional drawing .....	5
9	EC-Declaration of Conformity .....	6

## 1 Models

---

<b>Order- No.</b>	<b>Meas. Range</b>	<b>Electr. Output</b>
7.1414.10.040	0...100 000 Lux	0 ... 20 mA
7.1414.10.041	0...100 000 Lux	4 ... 20 mA
7.1414.10.061	0...100 000 Lux	0 ... 10 V
7.1414.10.541	0...150 000Lux	4 ... 20 mA
7.1414.10.561	0...150 000 Lux	0 ... 10 V
7.1414.10.941	0...120 000 Lux	4 ... 20 mA
7.1414.12.040	0.... 20 000 Lux	0 ... 20 mA
7.1414.12.041	0.... 20 000 Lux	4 ... 20 mA
7.1414.12.061	0.... 20 000 Lux	0 ... 10 V
7.1414.15.040	0..... 5 000 Lux	0 ... 20 mA
7.1414.15.041	0..... 5 000 Lux	4 ... 20 mA
7.1414.15.061	0..... 5 000 Lux	0 ... 10 V
7.1414.22.040	0..... 2 000 Lux	0 ... 20 mA
7.1414.22.041	0..... 2 000 Lux	4 ... 20 mA
7.1414.22.061	0..... 2 000 Lux	0 ... 10 V
7.1414.25.040	0.... 50 000 Lux	0 ... 20 mA
7.1414.25.041	0.... 50 000 Lux	4 ... 20 mA
7.1414.25.061	0.... 50 000 Lux	0 ... 10 V

## 2 Application

---

The Brightness Transmitter is designed to determine the light intensity of daylight. The analogue output signal controls the systems which regulate shading, heating and irrigation systems in automatically regulated greenhouses. The sensor is adapted to the contrast sensitivity of the eye.

## 3 Mode of Operation

---

The direction-dependent sensor is connected to a subsequently added electronic system which, depending on the model, converts the incident daylight proportionally into a current of 0/4...20 mA mA respectively into a voltage of 0...10 V.

The synthetic case is waterproof and protects the circuit from weather damage.

**Attention:**

*The electrical output follows the measuring value even in case of exceeding the measuring range. The input value of the peripheral instrument should be checked to that effect, and is possibly to be protected.*

## 4 Mounting

---

The Brightness Transmitter is designed to be mounted to a horizontal surface out-of-doors. To do so, first unscrew the cover of the case. Mount the instrument using 4 mm screws through the now accessible boreholes.

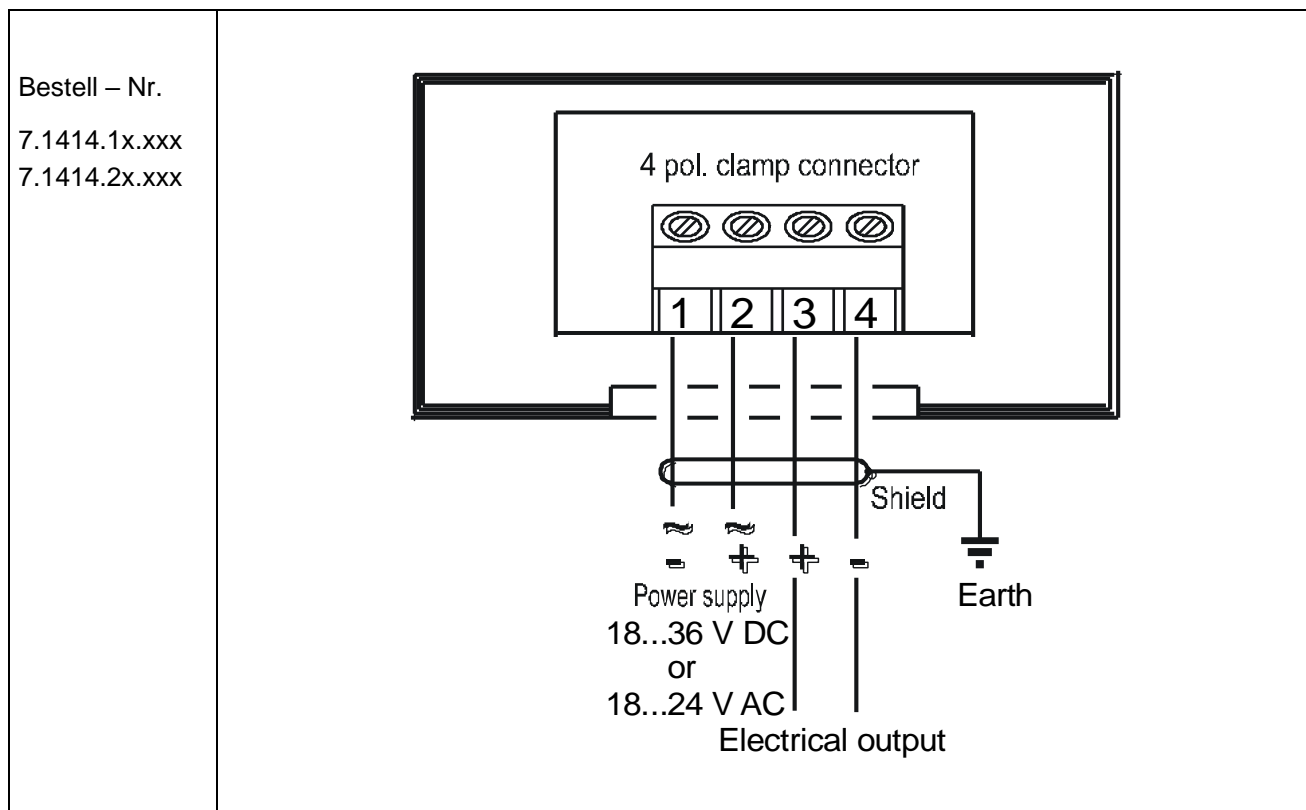
Use a shielded LiYCY 4x0.5 mm<sup>2</sup> cable to connect the instrument electrically. Lead the cable through the screw-type conduit fitting and place it on the terminal strip as shown in the connecting diagram. Ground the shielding.

## 5 Maintenance

---

Clean the light dome at regular intervals as needed with a soft cloth and pure water (no additives).

## 6 Connecting Diagram

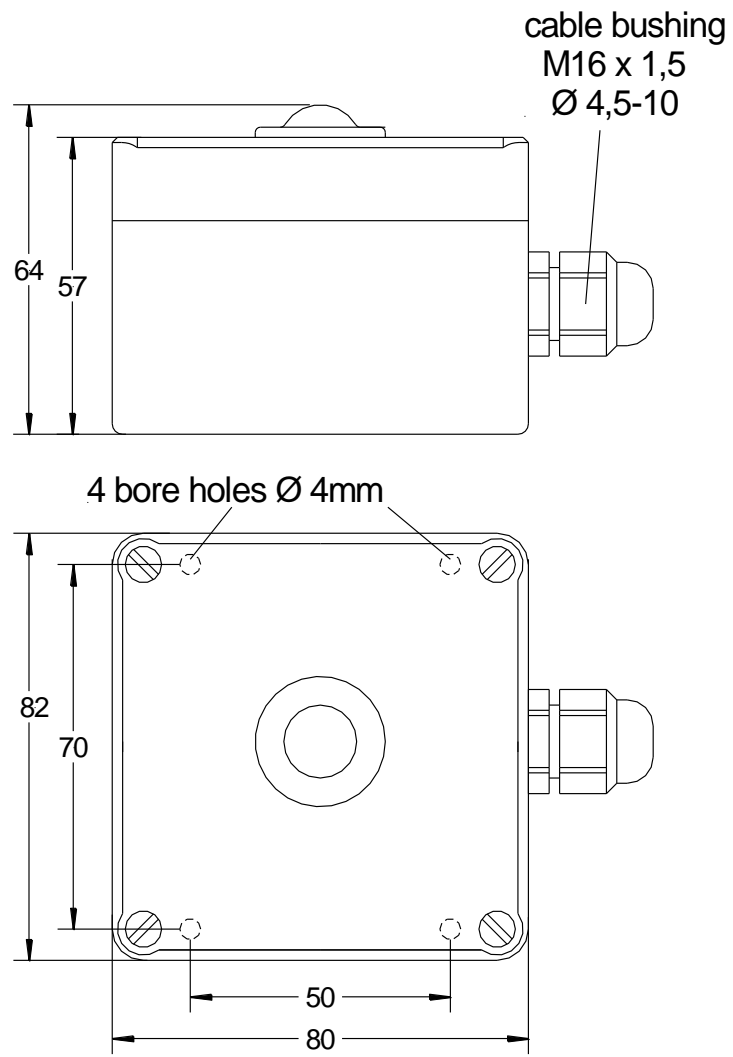


## 7 Technical Data

Meas. range	see Models
Electric. output	see Models
Type of sensor	BPW 21
Accuracy	± 3 % of meas. range
Spectral range	350...775 nm
Half-power angle	± 55 degrees
Operating voltage	18... 36 V DC oder 18... 24 V AC
Load resistance:	
7.1414.xx.x40 / x41	≤ 600 Ω
7.1414.xx.x61.....	≥ 1000 Ω
Ambient temp.	- 30...+ 70° C
Type of protection	IP 65
Dimensions	see Dimensional drawing
Weight	0.15 kg
Connection	Cable gland M16 x 1,5

## 8 Dimensional drawing

---



## 9 EC-Declaration of Conformity

---

Document-No.: 000318

Month: 08 Year: 08

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

Hauptstr. 76  
D-37083 Göttingen  
Tel.: (0551) 79001-0  
Fax: (0551) 79001-65  
email: Info@ThiesClima.com

Description of Product: **Brightness Transmitter**

Article No.	<b>7.1414.10.003</b>	<b>7.1414.10.040</b>	<b>7.1414.10.041</b>	<b>7.1414.10.061</b>
	<b>7.1414.10.541</b>	<b>7.1414.10.561</b>	<b>7.1414.10.941</b>	<b>7.1414.12.040</b>
	<b>7.1414.12.041</b>	<b>7.1414.12.061</b>	<b>7.1414.15.040</b>	<b>7.1414.15.041</b>
	<b>7.1414.15.061</b>	<b>7.1414.22.040</b>	<b>7.1414.22.041</b>	<b>7.1414.22.061</b>
	<b>7.1414.25.040</b>	<b>7.1414.25.041</b>	<b>7.1414.25.061</b>	<b>7.1414.40.002</b>
	<b>7.1414.40.102</b>	<b>7.1414.40.103</b>	<b>7.1414.40.112</b>	<b>7.1414.40.141</b>
	<b>7.1414.40.152</b>	<b>7.1414.51.150</b>	<b>7.1414.51.550</b>	
	<b>7.1414.60.000</b>	<b>7.1414.61.000</b>		

specified technical data in the document: **020923/05/07; 021316/05/07; 021327/04/03; 021524/05/07; 021458/08/06**

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: 05.08.2008

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.





Official BeNeLux distributor: [www.catec.nl](http://www.catec.nl)



- Alterations reserved-