

User guide

Windsensor / Windmill Pro 200 with pulse output and heating

Performance characteristics

- Private and professional applications
- weather station
- Heating for winter operation
- Robust connection cable 3m
- Lacquering grey hammer finish lacquer
- Stainless steel ball bearings and screws

Typical fields of application

- Protection of awnings, roller shutters and slats from gusts of wind
- Mounting on 50mm mast (antenna mast)
- Wall or roof bracket
- flat roof mast



1 Product description

With the professional wind sensor Pro 200, the current wind speed can be recorded and, e.g. in gusts of wind, the information for retracting an awning or raising roller shutters or blinds / slats can be provided via the system control.

The wind sensor Pro 200 is an optimal environmental sensor for recording the wind speed for weather recording in weather stations.

All metal parts of the Pro 200 wind sensor, such as bearings and screws, are made of weather-resistant stainless steel and are durable over a long period of time. This makes them suitable for many years of continuous use in professional Smart Home operation or building automation.

Via the sensor interface (S0 interface) impulses are output depending on the wind speed. 4 pulses are output per revolution. 4 pulses correspond to a speed of 1m/s.

The Pro 200 wind sensor has a pulse output and is intended for connection to the 1-Wire S0 counter module (Art. No. 11211) or comparable counter inputs. The sensor is weatherproof and has an approx. 3 meter long connection cable. A mounting bracket, wall bracket or pole for roof mounting (vertical) are available as accessories. The energy-saving heating of the wind sensor ensures operation even in winter during snowfall, rain and frost.

2 Technical data

Measuring range	0 - 50m/s
Output signal Sensor	4 pulses / 1 m/s
Electrical data	- Heating: 24 V AC or DC ca. 25mA - Pulse output (normally open contact) max. 24VAC/DC 10mA
Connecting cables	ca. 3m cable, 4-strands
Evaluation	Pulse output for 1-Wire S0 counter 11211
Dimensions	ca. 210 mm x 80mm (height x width) Windmill Ø 160 mm
Accessories	Mast bracket, wall bracket, mast for flat roof
Scope of delivery	Windsensor without mounting bracket

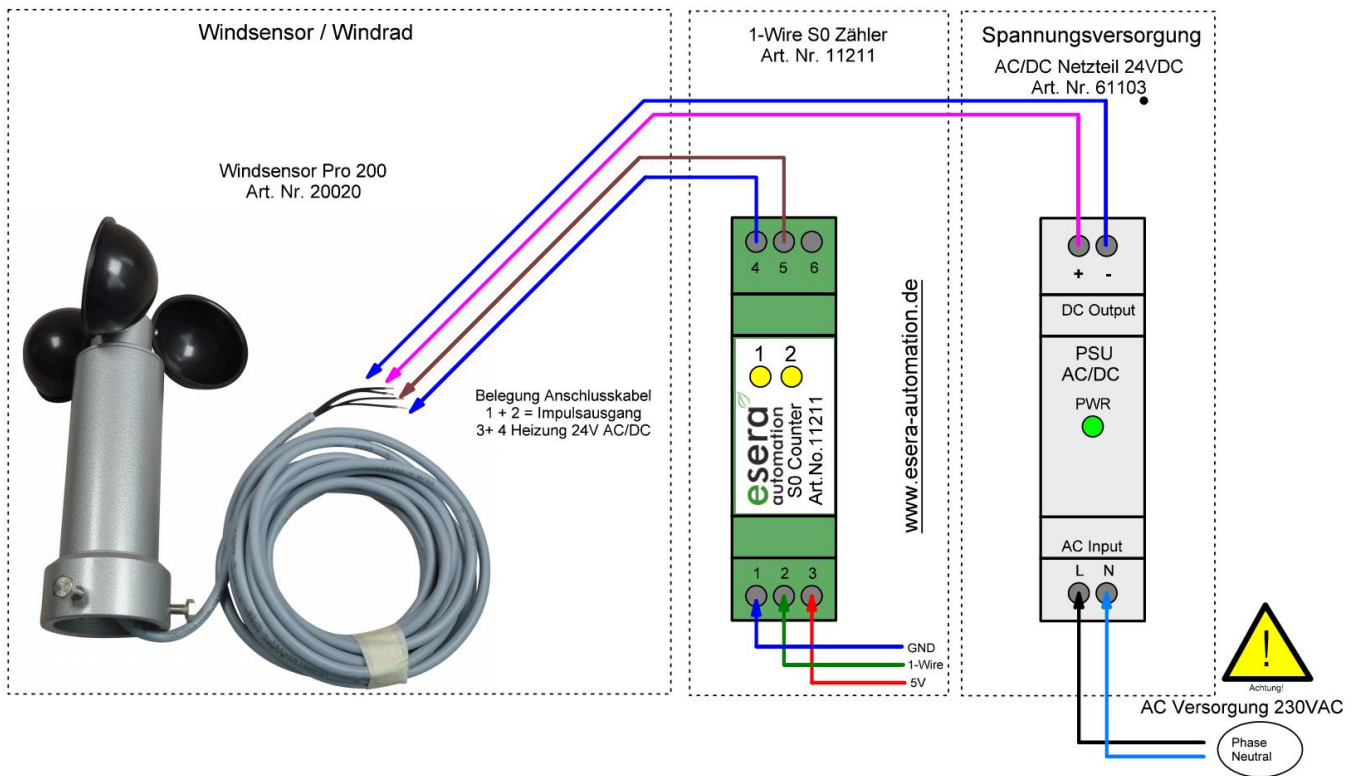
3 Ambient conditions

Protection system:	IP65
Protection class:	III
Temperature,operation:	-40°C to +125°C

4 Conformity

EN 50090-2-2, EN 61000-4-2 ESD, EN 61000-4-3 HF, EN 61000-4-4 Burst, EN 61000-4-5 Surge, EN 61000-6-1 Interference immunity, EN 61000-6-3 Interference radiation, RoHS

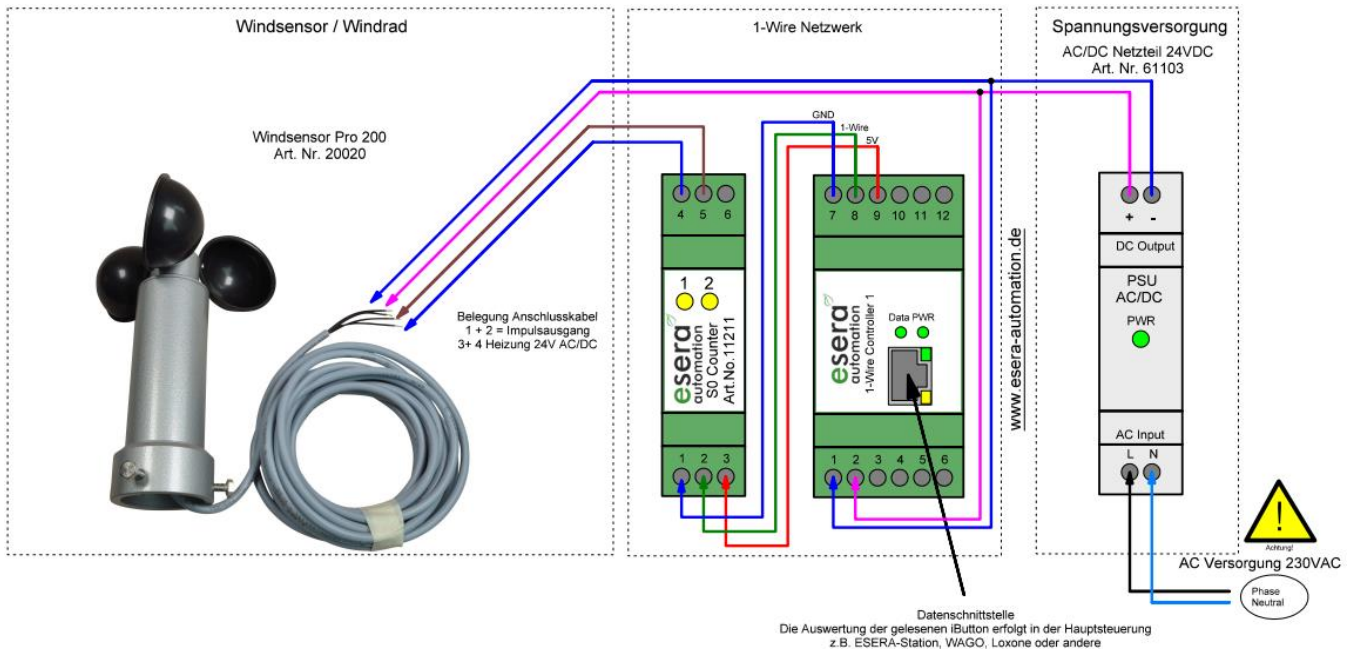
5 Wiring diagram



The connection cable has numbers printed on it. The assignment of the number cable is:

- 1 + 2 Pulse output
- 3 + 4 Heater 24V AC/DC +/-10% approx. 60mA

6 Connection example 1-Wire System and 1-Wire Controller / 1-Wire Gateway



7 Software / Evaluation

The wind sensor delivers 4 pulses per revolution. To calculate the wind speed, the pulses are usually counted for a period of e.g. 1 minute, in our example by the ESERA 1-Wire S0 counter 11211 and then divided by the factor 4 (4 pulses = 1m/s). The result is the wind speed in m/s. To get to Km/h, the value m/s is multiplied by 3600 and then divided by 1000.

Formula:

Counter reading new - Counter reading old = Delta

Wind speed: m/s = delta / factor (4), Km/h = m/s x 3600 / 1000

8 Operating conditions

The sensor may only be operated at the specified voltages and ambient conditions. The operating position of the device is vertical. The sensor is designed for continuous outdoor operation. Due to the heating inside the sensor, the housing heats up. Do not operate the sensor in an environment in which flammable gases, vapors or dusts are present or may be present.

9 Disposal instructions

Do not dispose of the device in domestic waste! Electronic devices are to be disposed of according to the Directive on waste electrical and electronic equipment (WEEE) on local authorities and collection points for waste electronic equipment!



10 Safety instructions

When using products that come into contact with electrical voltage, the valid VDE regulations must be observed, especially VDE 0100, VDE 0550/0551, VDE 0700, VDE 0711 and VDE 0860

- All final or wiring work must be carried out with the power turned off.
- Before opening the device, always unplug or make sure that the unit is disconnected from the mains.
- Components, modules or devices may only be put into service if they are mounted in a contact proof housing. During installation they must not have power applied.
- Tools may only be used on devices, components or assemblies when it is certain that the devices are disconnected from the power supply and electrical charges stored in the components inside the device have been discharged.
- Live cables or wires to which the device or an assembly is connected, must always be tested for insulation faults or breaks.
- If an error is detected in the supply line, the device must be immediately taken out of operation until the faulty cable has been replaced.
- When using components or modules it is absolutely necessary to comply with the requirements set out in the accompanying description specifications for electrical quantities.

All rights reserved. Reproduction as well as electronic duplication of this user guide, complete or in part, requires the written consent of ESERA GmbH. Errors and technical modification subject to change. © ESERA GmbH, ESERA-Automation 2020

- If the available description is not clear to the non-commercial end-user what the applicable electrical characteristics for a part or assembly are, how to connect an external circuit, which external components or additional devices can be connected or which values these external components may have, a qualified electrician must be consulted.
- It must be examined generally before the commissioning of a device, whether this device or module is basically suitable for the application in which it is to be used.
- In case of doubt, consultation with experts or the manufacturer of the components used is absolutely necessary.
- For operational and connection errors outside of our control, we assume no liability of any kind for any resulting damage.
- Kits should be returned without their housing when not functional with an exact error description and the accompanying instructions. Without an error description it is not possible to repair. For time-consuming assembly or disassembly of cases charges will be invoiced.
- During installation and handling of components which later have mains potential on their parts, the relevant VDE regulations must be observed.
- Devices that are to be operated at a voltage greater than 35 VDC / 12mA, may only be connected by a qualified electrician and put into operation.
- Commissioning may only be realized if the circuit is built into a contact proof housing.
- If measurements with an open housing are unavoidable, for safety reasons an isolating transformer must be installed upstream or a suitable power supply can be used.
- After installing the required tests according to DGUV / regulation 3 (German statutory accident insurance, https://en.wikipedia.org/wiki/German_Statutory_Accident_Insurance) must be carried out.

11 Warranty

ESERA GmbH guarantees that the goods sold at the time of transfer of risk to be free from material and workmanship defects and have the contractually assured characteristics. The statutory warranty period of two years begins from date of invoice. The warranty does not extend to the normal operational wear and normal wear and tear. Customer claims for damages, for example, for non-performance, fault in contracting, breach of secondary contractual obligations, consequential damages, damages resulting from unauthorized usage and other legal grounds are excluded. Excepting to this, ESERA GmbH accepts liability for the absence of a guaranteed quality resulting from intent or gross negligence. Claims made under the Product Liability Act are not affected.

If defects occur for which the ESERA GmbH is responsible, and in the case of replacement goods, the replacement is faulty, the buyer has the right to have the original purchase price refunded or a reduction of the purchase price.

ESERA GmbH accepts liability neither for the constant and uninterrupted availability of the ESERA GmbH or for technical or electronic errors in the online offer.

We are constantly developing our products further and reserve the right to make changes and improvements to any of the products described in this documentation without prior notice. Should you require documents or information on older versions, please contact us by e-mail at info@esera.de.

12 Trademarks

All mentioned designations, logos, names and trademarks (including those which are not explicitly marked) are trademarks, registered trademarks or other copyright or trademarks or titles or legally protected designations of their respective owners and are hereby expressly recognized as such by us. The mention of these designations, logos, names and trademarks is made for identification purposes only and does not represent a claim of any kind on the part of ESERA GmbH on these designations, logos, names and trademarks. Moreover, from their appearance on ESERA GmbH webpages it cannot be concluded that designations, logos, names and trademarks are free of commercial property rights.

ESERA and Auto-E-Connect are registered trademarks of ESERA GmbH.

13 Contact

ESERA GmbH
 Adelindastrasse 20
 87600 Kaufbeuren
 GERMANY
 Tel.: +49 8341 999 80-0
 Fax: +49 8341 999 80-10
www.esera.de
info@esera.de
 WEEE-Number: DE30249510