



P04i-GPS

Weather station

Technical specifications and installation instructions

Article number 30136



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The **P04i-GPS weather station** for WS1 and WS1000 Color/Style measures temperature, wind speed and brightness. It recognises precipitation and receives the GPS signal for time and location (international time signal and position).

1. Installing the weather station

1.1. Installation location

Select an installation position on the building where the sensors can measure wind, rain and sunshine without hindrance. No structural elements should be mounted above the weather station from which water could continue to drop on the precipitation sensor even after it has stopped raining or snowing. The weather station should not be shaded by structures or, for example, trees.

At least 60 cm of clearance must be left around the device. This facilitates correct wind speed measurement without eddies. At the same time, this prevents spray (raindrops hitting the device) or snow (snow penetration) from impairing the measurement. This also prevents birds from biting it.

Please ensure that the extended awning does not cast shade on the unit, protects it against the wind.

Temperature measurements can also be distorted by external influences such as warming or cooling of the building structure on which the sensor is mounted (sunlight, heating or cold water pipes).

Magnetic fields, transmitters and interference fields from electrical consumers (e.g. fluorescent lamps, neon signs, switch mode power supplies etc.) can block or interfere with the reception of the GPS signal.

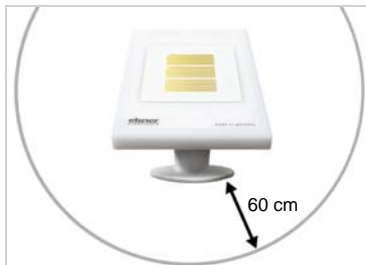


Fig. 1

There must be at least 60 cm clearance to other elements (structures, construction parts, etc.) below, to the sides and in front of the weather station.

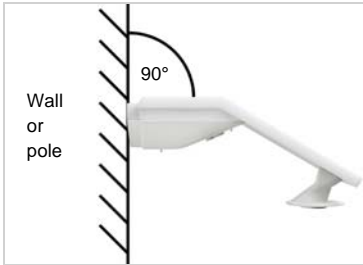


Fig. 2

The device must be attached to a vertical wall (or a pole).



Fig. 3

The device must be mounted in the cross direction, i.e. in horizontal (transverse) direction.

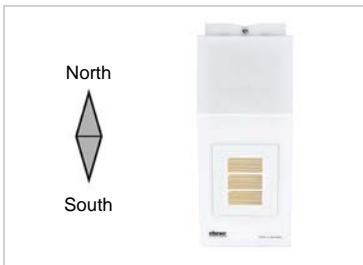


Fig. 4

For installation in the northern hemisphere, the device must be aligned to face south.

For installation in the southern hemisphere, the device must be aligned to face north.

1.2. Device design

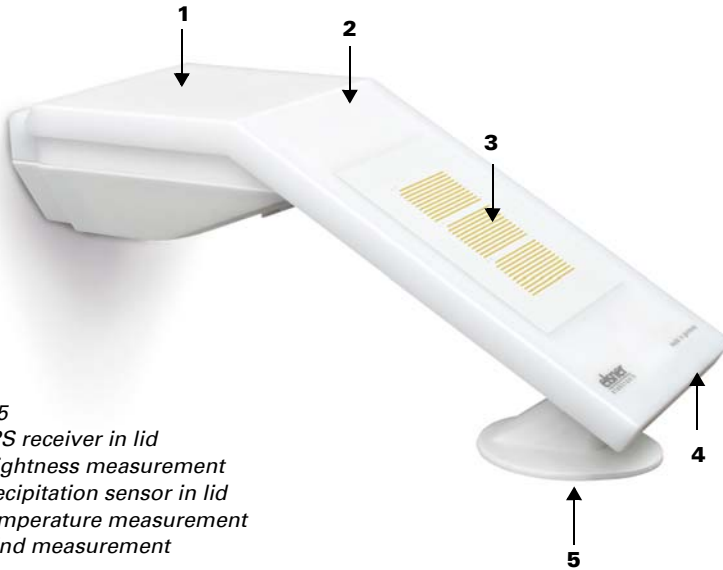


Fig. 5

- 1 GPS receiver in lid
- 2 Brightness measurement
- 3 Precipitation sensor in lid
- 4 Temperature measurement
- 5 Wind measurement



ATTENTION!

Sensitive wind sensor.

- Remove the protective transport sticker after installation.
- Do not touch the sensor on the wind measuring element (no. 5).



ATTENTION!

Even a few drops of water can damage the device electronics.

- Do not open the device if water (e.g. rain) can get into it.

1.3. Preparation for installation



Fig. 6

Slacken both screws on the lid (top) and lower part (bottom) with a Phillips screwdriver.



Fig. 7
Pull the lid and lower part completely apart. This also releases the plug-in connection between the board in the lid and the socket in the lower part.

1.4. Fitting the lower part with mounting

Now, first of all, assemble the lower part of the housing with the integrated mounting for wall or pole installation.

Wall installation

Use fixing materials (dowels, screws) that are suitable for the base.

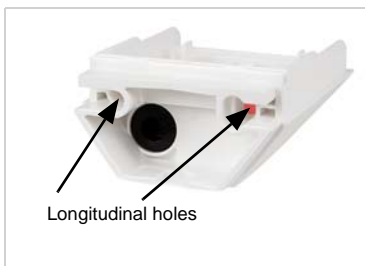


Fig. 8
The device is installed with two screws. Break off the two longitudinal holes in the lower part of the housing.

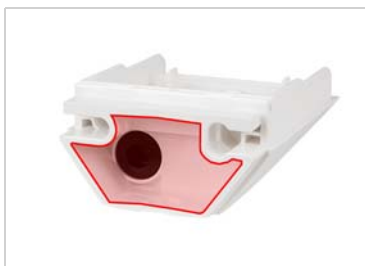
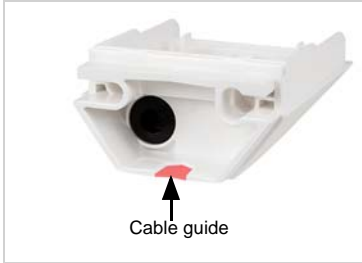


Fig. 9 a+b
 a) *If the power lead is to be hidden when installed, it must emerge from the wall in the vicinity of the rear of the housing (marked area).*



- b) If the power lead is to be surface-mounted, the cable guide is broken off. The lead is then fed into the device at the underside of the housing.

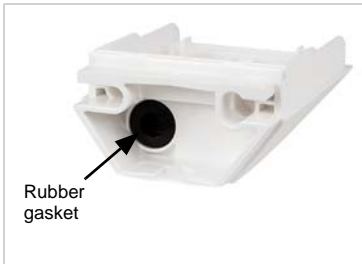


Fig. 10
Feed the power lead through the rubber gasket.

Drilling plan

ATTENTION! The printout of the data sheet does not have original size! A separate, dimensionally correct drilling plan is included ex works and this can be used as a template.

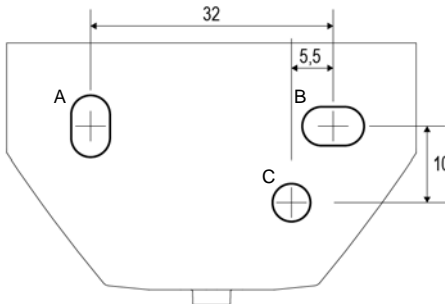


Fig. 11
Dimensions in mm. Variations are possible for technical reasons

A/B 2x longitudinal holes 8 mm x 5.5 mm

C Position of the cable outlet (rubber gasket) in the housing

Pole installation

The device is installed on the pole with the enclosed stainless steel mounting band.



Fig. 12

Feed the mounting band through the eyelets in the lower part of the housing.

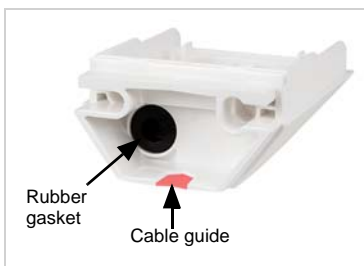


Fig. 13

Break the cable guide off.

Feed the power lead through the rubber gasket.

1.5. Connection

The connector is in the lower part of the housing.

The feed to the weather station must be a maximum of 100 m long. The connection is made with off-the-shelf UV-resistant telephone cable (A-2Y(L)2Y 2x2x0.6 or A-2Y(L)2Y 2x2x0.8).



Fig. 14

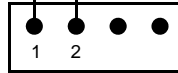
Connect

the controller/voltage (+24 V DC/GND) to the terminals 1/2 P04i-GPS.

The terminal assignment is polarity-independent

Controller

Voltage



1.6. Closing the installation



Fig. 15

Push the lid on the lower part. This also makes the plug-in connection between the board in the lid and the socket in the lower part.



Fig. 16

Screw the lid (top) and lower part (bottom) together.

2. Notes on mounting and commissioning

Remove all existing protection labels after installation.

The correct wind value may only be supplied about 30 seconds after the supply voltage has been connected.

2.1. Maintenance of the weather station

**WARNING!****Risk of injury caused by components moved automatically!**

The automatic control can start system components and place people in danger (e.g. moving windows/awnings if a rain/wind alarm has been triggered while cleaning).

- Always isolate the device from the mains for servicing and cleaning.

The device must regularly be checked for dirt twice a year and cleaned if necessary. In case of severe dirt, the sensor may not work properly anymore.

**ATTENTION**

The device can be damaged if water penetrates the housing.

- Do not clean with high pressure cleaners or steam jets.
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2.2. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



CAUTION! **Live voltage!**

There are unprotected live components inside the device.

- National legal regulations are to be followed.
 - Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
 - Do not use the device if it is damaged.
 - Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.
-

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

3. Technical specifications P04i-GPS

Housing	Plastic
Colour	White / Translucent
Assembly	Surface mount
Protection category	IP 44
Dimensions	approx. 62 × 71 × 145 (W × H × D, mm)
Weight	approx. 80 g
Ambient temperature	Operation -30...+50°C, Storage -30...+70°C
Voltage	24 V DC
Power	max. 105 mA
Temperature sensor:	
Measurement range	30°C ... +50°C
Resolution	0.1°C
Accuracy	±0.5°C at -30°C ... +25°C ±1.5°C at -30°C ... +45°C
Wind sensor:	
Measurement range	0 m/s ... 35 m/s
Resolution	0.1 m/s
Accuracy	±15% of the measurement value when incoming flow is 45°...315° (Frontal incoming flow corresponds to 180°)
Brightness sensor	
Measurement range	0 lux ... 99.000 lux
Resolution	1 lux at 0 ... 999 lux 1 klux at 1 ... 99 klux
Accuracy	±15% of the measurement value at 35 lux ... 99.000 lux

The product is compliant with the provisions of the EU guidelines.