



EPND-2S-3C-POE

Quick start

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PRODUCT DESCRIPTION

Web Sensor EPND-2S-3C and **Web Sensor EPND-2S-3C-POE** with Ethernet connection are designed to measure temperature and relative humidity of the air. The devices are equipped with two connectors for connection of the temperature and humidity external probes and three binary inputs for two-states signals. The dry contact or two-state voltage signal can be connect to the binary input. The devices are powered from an external power supply adapter. Web Sensor EPND-2S-3C-POE supports also Power over Ethernet (PoE).

Measured values can be read and then processed using an Ethernet connection. The following formats of Ethernet communication are supported: www pages with user-design possibility, Modbus TCP protocol, SNMPv1 protocol, SOAP protocol and XML. The instrument may send also a warning message if the measured value exceeds adjusted limit. The messages can be sent up to 3 e-mail addresses or to Syslog server and can be sent by SNMP Trap too. The alarm states are also displayed on the websites. The device setup can be made by the *TSensor* software and using the www interface.

type	measured value	design	mounting	PoE
EPND-2S-3C	temperature, humidity	2-chanel transducer for external probe using, three binary inputs	wall	no
EPND-2S-3C-POE	temperature, humidity	2-chanel transducer for external probe using, three binary inputs	wall	yes

INSTALLATION AND OPERATION

The devices are designed for wall mounting with two screws or bolts. The external probes you place into the measured environment. Pay attention to the location of the device and probe. Incorrect choice of working position could adversely affect accuracy and long-term stability of measured values. Devices don't require any special operation and maintenance. We recommend you periodic calibration for measurement accuracy validation.

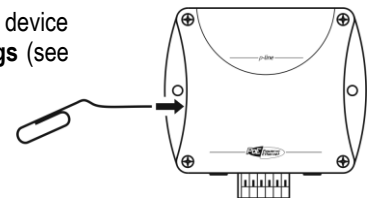
DEVICE SETUP

Contact your network administrator to obtain necessary information for the device connection into the network (IP address, default gateway, subnet mask) and check if there is no IP address conflict when you connect the device into network for the first time. IP address of each device is set by manufacturer to **192.168.1.213**. Install the latest version of *TSensor* to your PC, connect the Ethernet cable and connect the power supply (see "Device connection procedure" on the other side of this data sheet).

Run the configuration software *TSensor*. Set the „Ethernet“ communication interface and press „Find Device“ button. According to MAC address (see device label) select device for configuration and by „Change IP Address“ button set new address according to network administrator instructions. Gateway IP address may not be entered if you want to use the device only in local network. After changing of IP address the device is restarted and new IP address is assigned. Restart of the device takes about 10 seconds.

The device setup can be made by the web interface. Main page will be shown when you insert device address into address bar of your web browser. Access to device setup is possible via tile **Settings** (see user manual).

To restore the Web Sensor to the **factory default settings** use the button inside the device. Turn of the power supply and press the button (see picture). Turn on the power supply and keep the button pressed for 10 sec.



ERROR STATES AND TROUBLESHOOTING

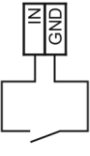
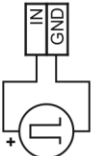
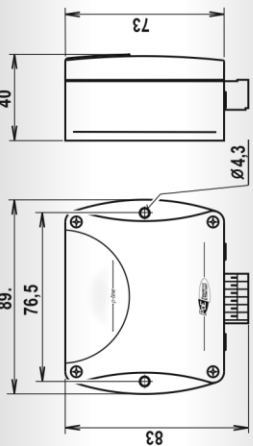
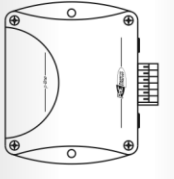
Device continuously checks its state during operation and if an error appears, the device sends the error message. The detailed description of the error messages is given in the user manual Chapter "Troubleshooting".

SAFETY INSTRUCTIONS



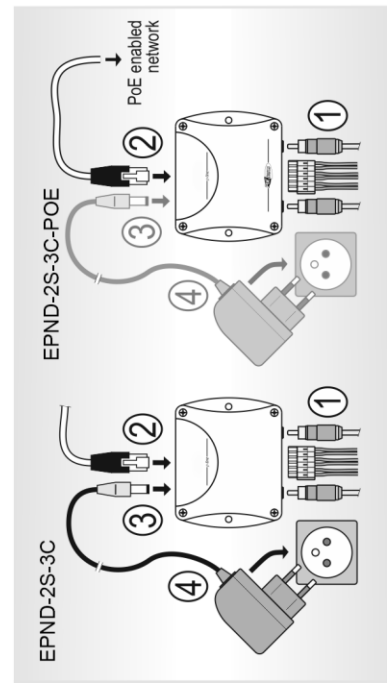
- Don't use and don't store the relative humidity probe without a sensor cover.
- It is not recommended to use the relative humidity probe for long time under condensation conditions.
- Don't connect or disconnect thermometers while power supply is on.
- Installation, electrical connection and commissioning should be performed by qualified personnel only.
- Use the power adapter according to technical specifications and approved according to relevant standards only.
- The external probe cable should be located as far as possible from potential interference sources.
- If it is necessary connect the device to the Internet, properly configured firewall must be used.
- The device should not be used for applications, where malfunction could cause to injury or damage to property.
- Devices contain electronic components, it needs to liquidate them according to legal requirements.

Technical specifications

Device type	EPND-2S-3C	EPND-2S-3C-POE	Binary inputs
Supply voltage - power coaxial connector, diameter 5.1 x 2.1mm, positive pole in the middle Power over Ethernet according to IEEE 802.3af, PD Class 0, voltage from 36V to 57Vdc Power consumption	4.9 to 6.1 Vdc no approximately 1W according to the probe* according to the probe* according to the probe* according to the probe* -20 to +60°C IP30 according to the probe* EN 61326-1 any position 140 g	4.9 to 6.1 Vdc yes approximately 1W according to the probe* according to the probe* according to the probe* according to the probe* -20 to +60°C IP30 according to the probe* EN 61326-1 any position 145 g	Number of inputs 3 Galvanic isolation of the inputs no Configuration Dry contact / Voltage input by software **
Temperature measuring range			Dry contact 
Accuracy of temperature measurement			Voltage input 
Relative humidity measuring range			Terminal voltage with open contact 3.3 V Current through closed contact < 0.1 mA Resistance of the contact < 5 kΩ
Accuracy of relative humidity measurement			Voltage level for „LOW“ < 1.0 V Voltage level for „HIGH“ > 2.5 V Internal resistance of the voltage source < 2 kΩ Input voltage range 0 to 30 V Reverse polarity protection yes
Temperature operating range (humidity 0 to 100%RH, no condensation)			
Protection class			
Recommended calibration interval			
Electromagnetic compatibility according to			
Mounting position			
Weight			
Dimensions [mm]			
			** using web interface, title Settings / BIN inputs

* see the specification of external probes

Device connection procedure



External probes

the sensor is fixed to the cable that is terminated by CINCH connector for connecting the probe to the device

Probe type	TEPD-102C	TED-102E	TEDX-102E	TRHD-101
Temperature measuring range	-50 to +100°C	-30 to +80°C	-30 to +80°C	0 to +50°C
Accuracy of temperature measurement	± 0.5°C (-10 to +85°C) ± 2.0°C (-50 to -10°C) ± 2.0°C (+85 to +100°C)	± 0.5°C (-10 to +80°C) ± 2.0°C (below -10°C)	± 0.5°C (-10 to +80°C) ± 2.0°C (below -10°C)	± 2°C
Relative humidity measuring range	—	—	—	10 to 90 %RH ** ± 3.5 %RH ***
Accuracy of humidity measurement	—	—	—	—
Temperature operating range	-50 to +125°C	-30 to +80°C	-30 to +80°C	-30 to +80°C
Humidity operating range (no condensation)	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH
Protection class	IP67	IP67	IP67	IP40
Recommended calibration interval	2 years	2 years	2 years	1 year
Cable length	1, 2, 5, 10 m	1, 2, 5, 10 m	1, 2, 5, 10 m	1, 2, 5, 10 m
Mounting position	any position	any position	any position	any position
Dimensions of the sensor [mm]	5.7 x 40 mm	5.7 x 40 mm	10 x 25 mm	∅18 x 90

** The relative humidity measuring range is limited at temperatures below 0°C and above 50°C, see manual for probe.
*** from 10 to 90%RH at temperature 25°C