



EPND-T-INT-POE

Quickstart

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PRODUCT DESCRIPTION

Thermometers and hygrometers Web Sensor P86xx with power over Ethernet are designed to measure temperature and relative humidity of air. Devices are available either with built-in sensor for temperature measurement in place of installation or with CINCH connectors for external probes connection. Devices can be powered from external power supply adapter or by using 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 or using the www interface.

type *	measured value	design	mounting
EPND-T-INT-POE	temperature	built in temperature sensor	wall
EPND-3T-POE	temperature, relative humidity	3-channel transducer for external probe using	wall
EPND-4S-POE	temperature, relative humidity	4-channel transducer for external probe using	wall

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

For network device connection it is necessary to know new suitable IP address. The device can obtain this address automatically from a DHCP server or you can use the static IP address, which you can get from your network administrator.

According to the "Device connection procedure" (see next page) connect the external probes, Ethernet cable and power adapter (when using the Ethernet connection without PoE). Then you run the latest version of *TSensor* software, set the new IP address, configure the device in accordance with your requirements and finally store the settings. The device setting can also be made by the web interface (see manual for devices) The IP address of each device is set by the manufacturer to **192.168.1.213**.

ALARM LIMITS AND ERROR STATES

It is possible to set an upper limit, lower limit, time delay (for alarm activation) and hysteresis (for alarm clearing) to each measured channel. If the measured value exceeds the upper limit for longer than the set time delay, the alarm occurs and a warning e-mails or traps are send. When the measured value drops below the upper limit minus hysteresis, the alarm will be cancelled. If the measured value drops below the lower limit, alarm is causes similar.

Alarm message is sent when new alarm occurs. You can set re-sending of warning e-mails too. In case of power failure or reset the device (e.g. changing the configuration) will new alarm state evaluated and new alarm message will be sent.

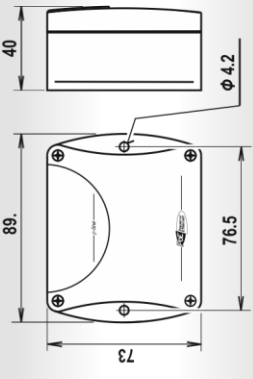
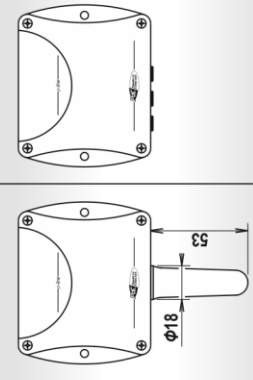
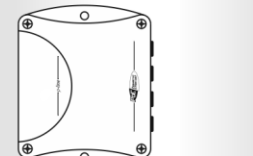
Device continuously checks its state during operation and if an error appears, it is displayed **Error** instead measured value. The detailed description of the error messages is given in the user manual.

SAFETY INSTRUCTIONS

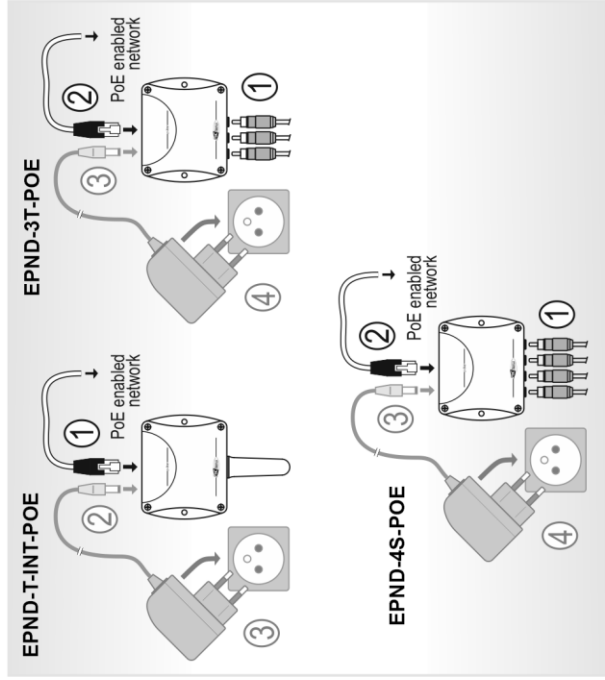


- Don't use and don't store the relative humidity probe without a sensor cover.
- It is not recommended to use the relative humidity probe for long time under condensation conditions.
- Don't connect or disconnect thermometers while power supply voltage is on.
- Don't use the device without the cover.
- 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-T-INT-POE	EPND-3T-POE	EPND-4S-POE
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 (max. 15.4W), voltage from 36V to 57Vdc	4.9 to 6.1 Vdc	4.9 to 6.1 Vdc	4.9 to 6.1 Vdc
Power consumption	yes	yes	yes
Temperature measuring range	approximately 1W -20 to +60°C ± 0.8°C (-10 to +60°C) ± 2.0°C (below -10°C)	approximately 1W according to the probe * according to the probe *	approximately 1W according to the probe * according to the probe *
Accuracy of temperature measurement	—	according to the probe *	according to the probe *
Relative humidity measuring range and accuracy of measurement	-20 to +60°C	-20 to +60°C	-20 to +60°C
Temperature operating range (humidity 0 to 100%RH, no condensation)	IP30	IP30	IP30
Protection class	2 years	according to the probe *	according to the probe *
Recommended calibration interval	sensor cover downwards	any position	any position
Mounting position	EN 61326-1	EN 61326-1	EN 61326-1
Electromagnetic compatibility according to	EN 60950-1 ed.2	EN 60950-1 ed.2	EN 60950-1 ed.2
Electrical safety	145 g	140 g	140 g
Weight			
Dimensions [mm]			

Device connection procedure



* see the specification of external probes

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 ± 0.5°C (-10 to +85°C) ± 2.0°C (-50 to -10°C) ± 2.0°C (+85 to +100°C)	-30 to +80°C ± 0.5°C (-10 to +80°C) ± 2.0°C (below -10°C)	-30 to +80°C ± 0.5°C (-10 to +80°C) ± 2.0°C (below -10°C)	0 to +50°C ± 2°C
Accuracy of temperature measurement	—	—	—	10 to 90 %RH ** ± 3.5 %RH ***
Relative humidity measuring range	—	—	—	-30 to +80°C
Accuracy of humidity measurement	-50 to +125°C	-30 to +80°C	-30 to +80°C	0 to 100 %RH
Temperature operating range	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH	0 to 100 %RH
Humidity operating range (no condensation)	IP67	IP67	IP67	IP40
Protection class	2 years	2 years	2 years	1 year
Recommended calibration interval	1, 2, 5, 10 m	1, 2, 5, 10 m	1, 2, 5, 10 m	1, 2, 5, 10 m
Cable length	any position	any position	any position	any position
Mounting position	Ø5.7 x 40	Ø5.7 x 40	Ø10 x 25	Ø18 x 90
Dimensions of the sensor [mm]	** 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			