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 (see http://www.cometsystem.com) or using the www interface.

type *	measured value	design	mounting
P8610	temperature	built in temperature sensor	wall
P8611	temperature, relative humidity	1-channel transducer for external probe using	wall
P8641	temperature, relative humidity	4-channel transducer for external probe using	wall

* models Pxxxx**Z** are custom - specified devices

INSTALLATION AND OPERATION

The devices are designed for wall mounting with two screws or bolts. 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. The Web Sensor with attached DSRH/C or DST/C probe install always vertically with the sensor cover downwards. 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 at www.cometsystem.com). 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.

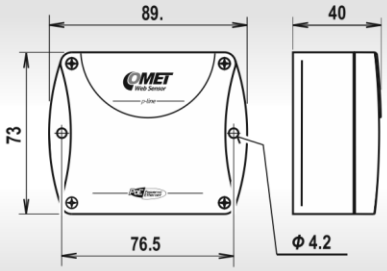
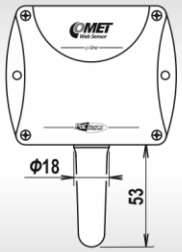
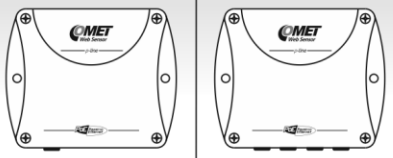
Alarm message is sent when new alarm occurs. You can set re-sending of warning e-mails too. In case of power failure or reset the device (e.g. changing the configuration) will new alarm state evaluated and new alarm message will be sent.

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 probes without a sensor cover.
- It is not recommended to use the relative humidity probes 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.
- **To supplement the information** provided in this data sheet, use the manuals and other documentations which are available at www.cometsystem.com.

Technical specifications

Device type	P8610	P8611	P8641
Supply voltage - power coaxial connector, diameter 5.1 x 2.1mm, positive pole in the midle	4.9 to 6.1 Vdc	4.9 to 6.1 Vdc	4.9 to 6.1 Vdc
Power over Ethernet according to IEEE 802.3af, PD Class 0 (max. 15.4W), voltage from 36V to 57Vdc	yes	yes	yes
Power consuption	approximately 1W	approximately 1W	approximately 1W
Temperature measuring range	-20 to +60°C	according the probe *	according the probe *
Accuracy of temperature measurement	± 0.8°C (-10 to +60°C) ± 2.0°C (below -10°C)	according the probe *	according the probe *
Relative humidity measuring range and accuracy of measurement	—	according the probe *	according the probe *
Temperature operating range (humidity 0 to 100%RH, no condensation)	-20 to +60°C	-20 to +60°C	-20 to +60°C
Protection class	IP30	IP30	IP30
Recomended calibration interval	2 years	according the probe *	according the probe *
Mounting position	sensor cover downwards	any position **	any position **
Electromagnetic compatibility according to	EN 61326-1	EN 61326-1	EN 61326-1
Electrical safety	EN 60950-1 ed.2	EN 60950-1 ed.2	EN 60950-1 ed.2
Weight	145 g	135 g	140 g
Dimensions [mm]			

** see the specification of external probes*
*** the device with attached DSRH/C or DST/C probe install always vertically with the sensor cover downwards*

External probes

Probe type	DSTG8/C	DSTGL40/C	DSTR162/C	DSRHxx	DSRH/C	DST/C
Temperature measuring range	-50 to +100°C	-30 to +80°C		0 to +50°C	0 to +50°C	-30 to +80°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)		± 2°C	± 0.5°C	± 0.5°C (-10 to +80°C) ± 2.0°C (below -10°C)
Relative humidity measuring range	—	—		10 to 90 %RH *	10 to 90 %RH *	—
Accuracy of humidity measurement	—	—		± 3.5 %RH **	± 3.5 %RH **	—
Temperature operating range	-50 to +125°C	-30 to +80°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	0 to 100 %RH
Protection class	IP67	IP67		IP40	IP20	IP20
Recomended calibration interval	2 years	2 years		1 year	1 year	2 years
Cable length	1, 2, 5, 10 m	1, 2, 5, 10 m		1, 2, 5, 10 m	—	—
Mounting position	any position	any postion		any position	sensor cover downwards	sensor cover downwards
Dimensions of the sensor [mm]	Ø5.7 x 40	Ø5.7 x 40	Ø10 x 25	Ø18 x 90	Ø14 x 100	Ø14 x 100

** 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*

Device connection procedure