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Industrial Ethernet Thermometer - low cost intelligent www sensor

Also known as: industrial Ethernet, server environment monitoring, computer room monitor, data center thermometer, temperature IP sensor, computer room temperature alert.

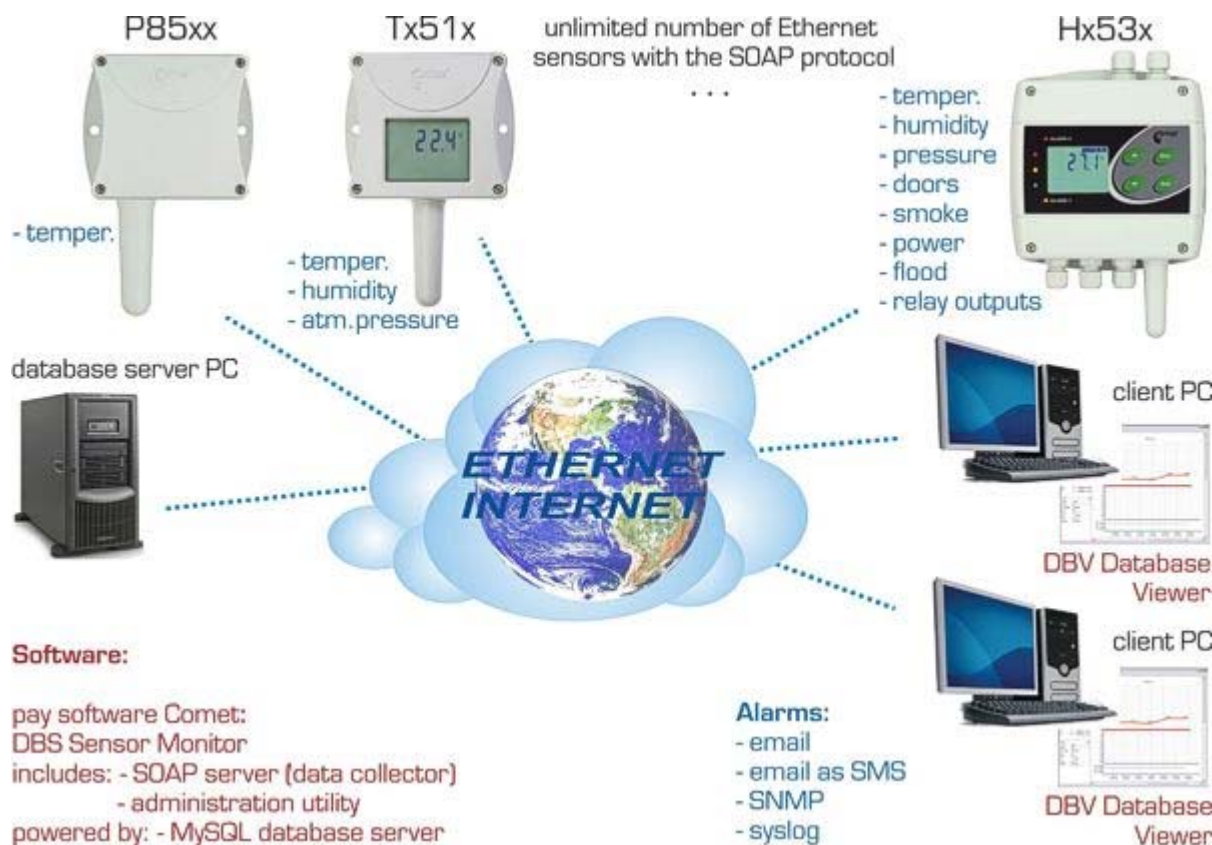
Online Ethernet thermometer is designed for online temperature measurement and measurement from up to four external temperature cable probes. Measurement in degrees Celsius and degrees Fahrenheit supported. Online Ethernet thermometer is built in a durable plastic case.



APPLICATIONS - online measuring and control of temperature at:

- building HVAC management
- building HVAC automation
- industrial Ethernet
- server rooms
- telecommunication devices
- warehouses
- glasshouses
- manufacturers
- museums, archives, galleries
- air-conditioned rooms

NEW ! Easy creation of online data acquisition system from Ethernet thermometers by using new low cost database software Comet **[DBS Sensor Monitor](#)** - see also Accessories.



MODES OF COMMUNICATION

Modbus TCP:	Modbus TCP protocol enables to read measured values, set alarm limits, adjust the probe.
Telnet:	Port 9999 enables to set alarm limits (lower, upper limits, hysteresis for temperature and time delay), e-mail addresses, SNMP addresses, probe description, refresh of www pages (10s to 65535s), set storing interval to history (10s to 65535s), enable each communication channel. Capacity of the history memory is 600 values. Password protection of this port is enabled. Automatic IP address assignment from DHCP server is also enabled.
WWW pages:	User selectable design of www pages enabling to display curve of measurement history. User can design the look of www pages and temperature history. Online temperature, humidity, pressure in Roznov, Czech Republic from similar Comet internet www sensor T7511
SNMP:	It is possible to read actual values and alarm limits. In case of alarm creation warning message (trap) is sent to addresses defined by the user (maximum three addresses).
SOAP:	Online transmitter enables to send actual measured data in the format of SOAP message to selected web server in preset interval 10-65535 s.
Online thermometer enables to monitor measured values. In case of exceeding of adjusted limits warning message can be sent to specified addresses.	
There are the following options of alarm indication:	

ALARM INDICATION OPTIONS

E-mail:	In case of alarm creation warning e-mail message is sent to addresses defined by the user (maximum three addresses) or via e-mail to SMS message.
SNMP:	In case of exceeding of adjusted temperature limits alarm is activated and warning trap is sent to user specified IP addresses (maximum 3 addresses).
WWW pages:	In case of exceeding of adjusted temperature limits active alarm is displayed on www page.
syslog:	Online thermometer enables to send text messages to selected syslog server after different events appear. E.g. after thermometer restart, alarm activation, communication error with SNTP, after firmware change, after alarm termination, after communication error with SOAP server.
Synchronizing of time and record to www table and temperature history is enabled by SNTP via Internet.	

TECHNICAL PARAMETERS

Supported physical units:	degrees Celsius, degrees Fahrenheit
Supported temperature sensors:	Digital temperature sensor Dallas DS18B20
Measuring range:	-55 to +80°C, -30 to +80°C model P8510
Accuracy:	±0.5°C from -10 to +80°C, ±0.8°C model P8510 ±2°C below -10°C
Resolution:	0.1°C
Sampling interval:	2 s
Memory capacity for temperature history:	600 values, export to CSV file enabled
Interval for temperature history record:	adjustable from 10 s to 18 h
Temperature operating range:	-30 to +80°C
Protection of the case:	IP30
LAN connection:	RJ-45 connector
Power:	5Vdc, maximum consumption 250mA. For power over Ethernet any PoE splitter is necessary e.g. DWL-P50 from D-Link company
Power connector:	co-axial, diameter 5.5 x 2.1 mm
Dimensions of the P8510 case:	88 x 126 x 39,5 mm (W x H x D)
Dimensions of the P8511,P8541 case:	88 x 74 x 39,5 mm (W x H x D)
Weight:	240 g
Warranty:	two years

Thermometer type	Description	Notes
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P8510



Thermometer with built-in temperature sensor

accuracy ±0.8°C
measuring range -30 to +80°C

P8511



Single channel thermometer for one digital probe

accuracy ±0.5°C
measuring range -55 to +80°C

P8541



Four channel thermometer for four digital probes

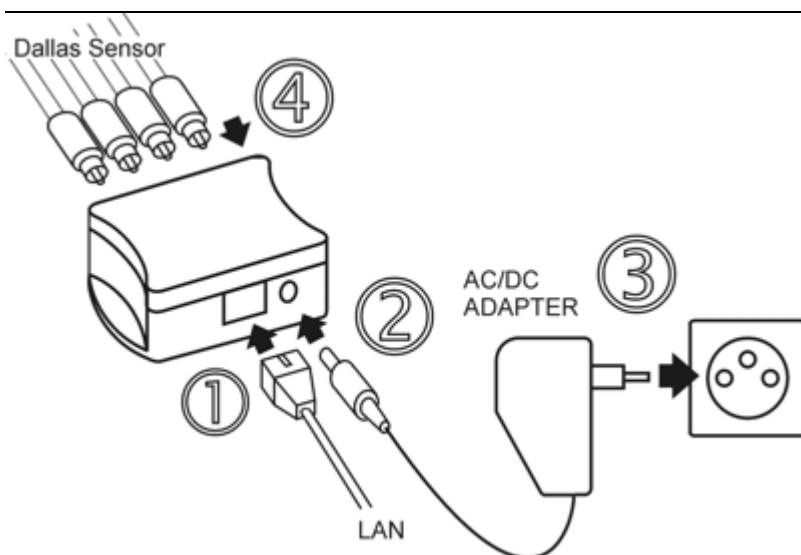
accuracy ±0.5°C
measuring range -55 to +80°C


[Quick Start Manual](#)

[Basic Manual](#)

[Appendixes for Manual](#)


Four-channel thermometer P8541
at rack 19" holder



Included accessory:

Traceable calibration certificate from the manufacturer, instruction manual. Calibration certificate with declared metrological traceability of etalons is based on requirements of EN ISO/IEC 17025 standard. Example of [calibration certificate](#).

TSensor - freeware for online configuring of the transmitter is ready to [download](#).

SensorReader - freeware for online logging values from one transmitter to a PC disk file is ready to [download](#). Program enables to alarm acoustically the PC user if adjusted alarm limits are exceeded. Recorded values in CSV format are easy to process in e.g. Excel. Program can be started several times on a computer at the same time to monitor values from several transmitters. For acquiring values from several transmitters, also third party software is possible to use. Tested functionality is with programs:

[LabVIEW](#) from National Instruments, by means of the free [Modbus Library](#) for LabVIEW. For viewing of actual values and graphs following examples of application were created in LabVIEW 8.5 :

[P851x-Ethernet.vi](#) for single channel thermometers P8510, P8511

[P8541-Ethernet.vi](#) for quad channel thermometers P8541

[TIRS.NET](#) - transmitters are also directly supported by program TIRS.NET from Coral s.r.o. company. Please download [demo](#) enabling full work with transmitters.

Tested functionality is also with programs:

[ControlWeb](#), [EasyView](#).

For record of values to graphs via web interface, project Cacti www.cacti.net is available.

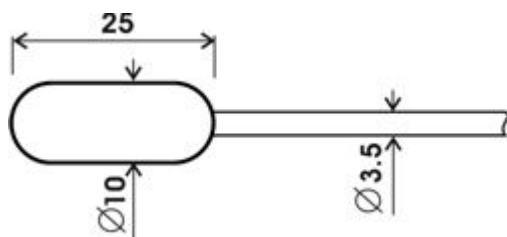
OPTIONAL ACCESSORY



DBS

Database program **[DBS Sensor Monitor](#)** for online data acquisition and analysis from Comet sensors. It contains all necessary components for monitoring of sensors, including one licence of DBV Database Viewer.

More information on [online data acquisition](#).



probes

DSTR162/C - temperature probes
 -40 to +80°C with digital sensor Dallas DS18B20 with the Cinch connector for thermometers P8511, P8541.
 Accuracy $\pm 0.5^{\circ}\text{C}$ from -10 to +80°C,
 $\pm 2^{\circ}\text{C}$ below -10°C.
 Watertight IP67. With PVC cable of specified length.
 Diameter 10mm, length 25mm. Cable lengths 1,2,5 or 10 meters available.
 Specify required cable length please.



MP046

universal holder for P85xx, Tx51x transmitters for easy mounting to rack 19"



MP047

universal holder for probes for easy mounting to rack 19"
 (probes not included)



MD036 self adhesive Dual Lock for easy installation



A1825 ac/dc adapter 230V-50Hz/5Vdc

OPTIONAL ACCESSORY



DWL-P50 Power over Ethernet (PoE) adapter from company [D-Link](http://www.dlink.com).
The adapter is supposed to be connected to Ethernet switch supporting PoE.

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[Ethernet temperature, humidity, pressure sensors with relay outputs](#)

[19-inch rack mount version of the sensor](#)



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