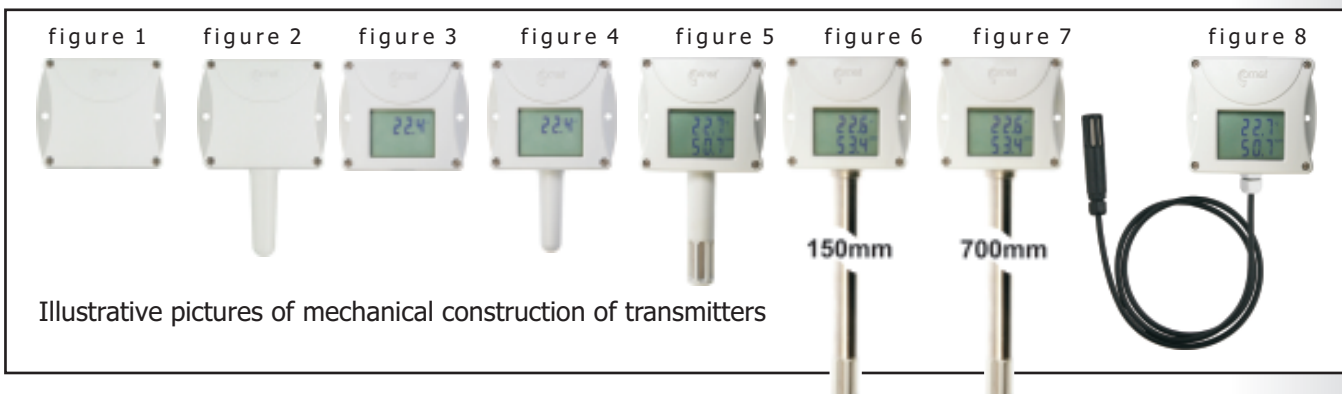


SELECTION TABLES OF TEMPERATURE, HUMIDITY, PRESSURE CO₂ TRANSMITTERS Txxxx, Pxxxx

INDUSTRIAL TRANSMITTERS of Txxxx, Pxxxx family:

MEASURED VALUE / OUTPUT	4 to 20mA	0 to 10V	RS485	RS232	Ethernet
temperature	P0120 figure 2 page 42	T4211 figure 3 page 47	T0410 figure 4 page 49	T0310 figure 4 page 51	P86xx figure 2 page 53
	Px1x1 figure 1 page 42		T4411 figure 3 page 49	T4311 figure 3 page 51	P85xx figure 2 page 55
	T0110 figure 4 page 43				T0510 figure 4 page 57
	T4111 figure 3 page 43				T4511 figure 3 page 59
humidity	T1110 figure 5 page 43				
atmospheric pressure	T2114 figure 3 page 45	T2214 figure 3 page 45	T2414 figure 3 page 49	T2314 figure 3 page 51	T2514 figure 3 page 59
temperature+humidity	T3110 figure 5 page 43	T0210 figure 5 page 47	T3411 figure 5 page 49	T3311 figure 5 page 51	T3510 figure 5 page 57
	T3113 figure 6 page 43	T0213 figure 6 page 47	T3413 figure 6 page 49	T3313 figure 6 page 51	T3511 figure 8 page 59
	T3117 figure 7 page 43	T0211 figure 8 page 47	T3417 figure 7 page 49	T3319 figure 8 page 51	
	T3111 figure 8 page 43		T3419 figure 8 page 49		
temperature+humidity +atmospheric pressure			T7410 figure 5 page 49	T7310 figure 5 page 51	
CO ₂	T5140 figure 3 page 46	T5240 figure 3 page 47	T5440 figure 3 page 49	T5340 figure 3 page 51	T5540 figure 3 page 57
	T5141 figure 8 page 46	T5241 figure 8 page 47	T5441 figure 8 page 49	T5341 figure 8 page 51	T5541 figure 8 page 59
temperature+humidity+ CO ₂			T6440 figure 5 page 49	T6340 figure 5 page 51	T6540 figure 5 page 57

Pxxxx, Txxxx



INTERIOR TRANSMITTERS of Txx18 family

MEASURED VALUE / OUTPUT	4 to 20mA page 63	0 to 10V page 63	RS485 page 65	RS232 page 65
temperature	T0118	T0218	T0418	T0318
atmospheric pressure	T2118	T2218		
temperature + humidity	T3118	T3218	T3418	T3318
temperature + humidity + atmospheric pressure			T7418	T7318





APPLICATIONS

- server rooms
- telecommunication devices
- warehouses, glasshouses
- manufacturers
- museums, archives, galleries
- air-conditioned rooms

Ethernet thermometer hygrometer is designed for ambient temperature and humidity measurement or measurement from up to four external cable probes. Measurement in degrees Celsius and degrees Fahrenheit supported. Ethernet transmitter is built in a durable plastic case.

Online data acquisition system from transmitters connected to **Ethernet/Internet** can be easily built by means of Comet software **Database Sensor Monitor**.

MODES OF COMMUNICATION

ModBus TCP:	Modbus TCP protocol enables to read measured values and alarm states. This most applied protocol in automation is possible to use for connection of sensors to third party software such as SCADA systems, etc.
www pages:	At instrument www pages actually measured values are displayed including history graphs. It enables export of history values to CSV format for consequent processing. Measured values can be read also in XML format. User can design the look of www pages and select values to display.
SNMP:	Protocol enables to read actual values hodnoty and alarm states. Thanks SNMPv1 protocol sensor can be easily added to your IT infrastructure. MIB tables are available to download at www.cometsystem.cz
SOAP:	Transmitter enables to send actual measured data in the format of SOAP protocol. Transmitter can send measured values in XML with selected period to selected www server.

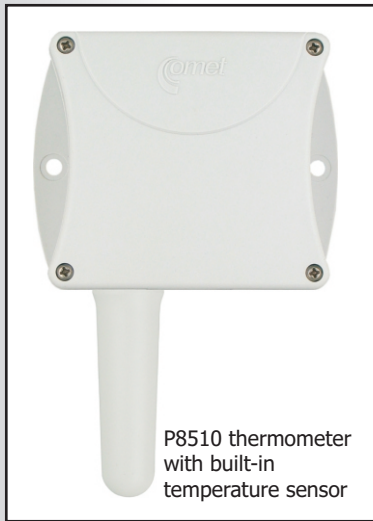
ALARM OPTIONS

E-mail:	In case of alarm creation warning e-mail message is sent to addresses defined by the user (maximum three addresses). Basic SMTP autentization is supported.
www pages:	In case of exceeding adjusted limits of measured values active alarm is displayed at www page.
SNMP:	In case of alarm creation warning message (trap) is sent to IP addresses defined by the user (maximum three addresses).
syslog:	Transmitter enables to send text messages to selected Syslog server after different events appear.

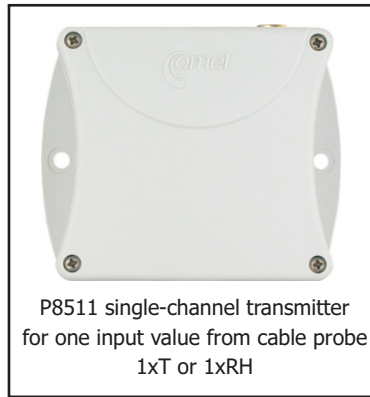
TECHNICAL PARAMETERS

Range and accuracy of thermometer P8510 :	-30 to +80°C, accuracy $\pm 0.8^\circ\text{C}$ above -10°C
Maximum input range for external temperature probes:	-55 to +80°C
Accuracy of precise external temperature probes DSTxxx:	$\pm 0.5^\circ\text{C}$ above -10°C , $\pm 2^\circ\text{C}$ below -10°C .
Range and accuracy of humidity measurement - DSRH probe:	0 to 100% RH not condensing, $\pm 3.5\%$ RH at 25°C
Range and accuracy of temperature measurement - DSRH probe:	0 to 50°C , $\pm 2.0^\circ\text{C}$
Resolution:	0.1°C , 1%RH
Measuring interval:	2 s
Operating temperature range:	-30 to +80°C
Protection:	IP30
Connector for temperature - humidity probes P8511, P8541:	connector CINCH
LAN connection:	connector RJ-45, 10Base-T or 100Base-TX
Power:	5Vdc, maximum consumption 1W
Power connector:	axial, diameter 5 x 2.1 mm
Mechanical dimensions of model P8510 :	88 x 126 x 39.5 mm (W x H x D)
Mechanical dimensions of P8511, P8541 :	88 x 74 x 39.5 mm (W x H x D)
Weight:	approximately 140 g

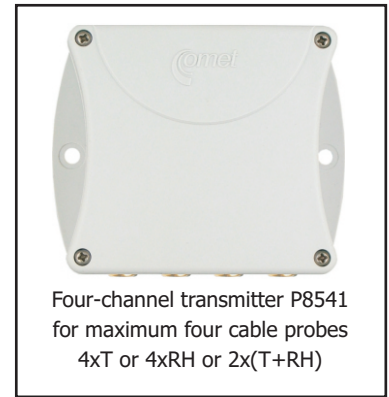
Available models:



P8510 thermometer with built-in temperature sensor



P8511 single-channel transmitter for one input value from cable probe 1xT or 1xRH



Four-channel transmitter P8541 for maximum four cable probes 4xT or 4xRH or 2x(T+RH)

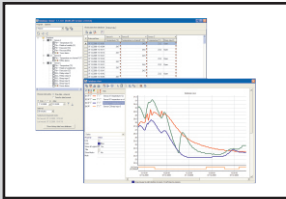
Included accessory:

Traceable calibration certificate from the manufacturer is based on requirements of EN ISO/IEC 17025 standard.

Free program TSensor for configuring of the transmitter is ready to download.

Free program SensorReader for logging values from one transmitter to a PC disk file is ready to download.

Optional accessory:



DBS Sensor Monitor

- database program for

online data acquisition and analysis from Comet sensors. It contains necessary components for monitoring of sensors, including a licence of DBV Database Viewer.



DSRH/C - humidity-temperature probe 0 to +50°C with digital output with Cinch connector for transmitters P8xx1.

Measured values: relative humidity and temperature (RH, °C, °F).

Range and accuracy of relative humidity measurement 0 to 100% RH not condensing, ±3.5% RH at 25°C.

Range and accuracy of temperature measurement 0 to 50°C, ±2.0°C.

Relative humidity is compensated at all temperature measuring range.

Diameter 18mm, length 88mm. PVC cable lengths 1,2 or 5 meters available.

It is possible to connect four DSRH probes to four-channel P8541 measuring only humidity (two DSRH probes measuring RH+temperature).

It is possible to connect one DSRH probe to single-channel P8511 measuring only humidity.



DSTR162/C - temperature probe -30 to +80°C with digital sensor Dallas DS18B20 with Cinch connector for transmitters P8xx1.

Accuracy of temperature measurement ±0.5°C from -10 to +80°C, ±2°C below -10°C.

Protection IP67 - protected against influence of temporary immersion into water.

Diameter 10mm, length 25mm. PVC cable lengths 1,2,5 or 10 meters available.



DSTGL40/C - temperature probe -30 to +80°C with digital sensor Dallas DS18B20 with Cinch connector for transmitters P8xx1. Stainless steel 17241 with PVC cable of specified length.

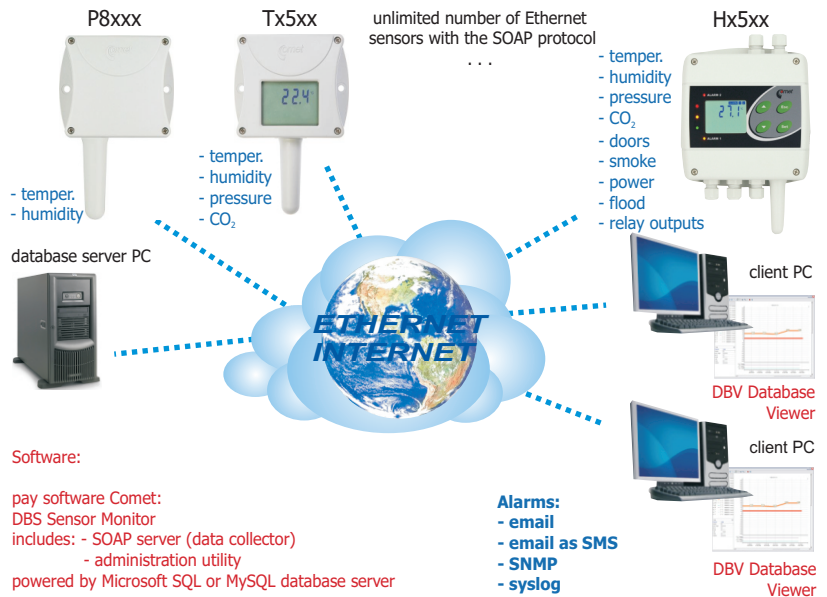
Accuracy of temperature measurement ±0.5°C from -10 to +80°C, ±2°C below -10°C.

Protection IP67 - protected against influence of temporary immersion into water.



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

For power over Ethernet any PoE splitter is necessary.





PRELIMINARY PARAMETERS

OPTIONAL ACCESSORIES FOR HUMIDITY TRANSMITTERS

<p>New - probe for compressed air</p>	<p>Order code</p>	
	<p>TxxxxP Hxxxx1P</p>	<p>Optional temperature, humidity, dew-point probe designed for compressed air measurement up to 25 bars. Cable lengths 1, 2 or 4m available. Length 110mm, diameter 18mm, G1/2 thread. Available with TxxxxP, HxxxxP transmitters.</p>
	<p>SH-PP</p>	<p>Flow chamber for compressed air measurement up to 25 bars - stainless steel DIN 1.430. Inlet and outlet connection - G1/8 thread. Humidity probe connection - G1/2 thread. Screw-coupling not included.</p>
	<p>TxxxxL HxxxxL</p>	<p>Transmitter version with watertight male connector IP67 Lumberg RSFM4 instead of cable gland for easy connection/disconnection of the output. Specify please your order with letter L behind model code - e.g. T3110L or H3020L</p>
	<p>K1427</p>	<p>Female connector ELKA 4012PG7 for TxxxxL, HxxxxL transmitters with male connector Lumberg for easy connection/disconnection of the output. Cable is easily connected to screw terminals of the connector. IP67 protection.</p>
	<p>without LCD</p>	<p>Transmitter version with blind lid without LCD. Specify please the requirement in your order.</p>
	<p>OEM</p>	<p>Transmitters are also available without Comet logo as OEM products. Specify please the requirement in your order. Minimum order of OEM transmitters without Comet logo is 100 pcs.</p>
	<p>F8000</p>	<p>Solar radiation shield for transmitters with T+RH probe on a cable.</p>

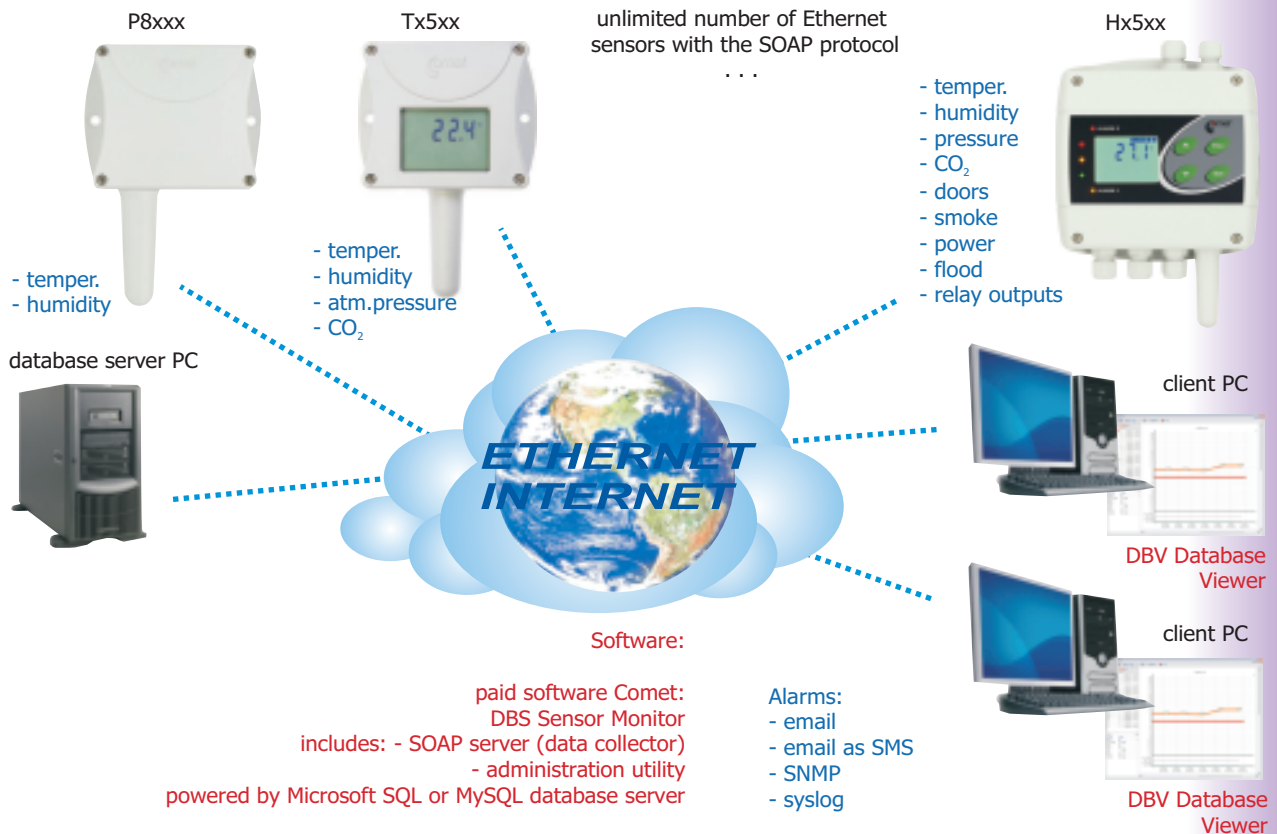
OPTIONAL ACCESSORIES FOR HUMIDITY TRANSMITTERS

	Order code	
	F5200	grey sensor cover with filter from stainless steel mesh, filtering ability 0,025mm
	F5200B	black sensor cover with filter from stainless steel mesh, filtering ability 0,025mm
	SP003	Cable for transmitter adjustment via USB port - for models Tx1xx, Tx2xx with analog outputs and models Hx0xx.
	PP4	flat plastic circular flange for duct mounting
	PP90	right-angled stain-less steel flange for wall mounting
	SP004	plastic gland for direct mounting of the humidity probe to a 29 mm diameter hole
	SP005	tool for easy wire connection to WAGO terminals Wago - for transmitters with current and voltage output
	SP006	tool for easy wire connection to WAGO terminals Wago - for Txxxx transmitters with serial output RS485 and RS232 and Hxxxx transmitters
	MD036	self adhesive Dual Lock for easy installation
	A1515	ac/dc adapter 230V-50Hz/12Vdc for Ethernet transmitters Tx5xx, Hx5xx - with co-axial connector
	A1510	ac/dc adapter 230V-50Hz/12Vdc for serial output Txxxx transmitters and Hxxxx transmitters - for connection to terminals
	MD046 HM023 HM024	<p>ACCESSORIES FOR EASY RELATIVE HUMIDITY CALIBRATION AND ADJUSTMENT</p> <p>anodized duraluminum vessel for relative humidity calibration and adjustment</p> <p>set of 5 humidity standards 10% RH with 5 application pads</p> <p>set of 5 humidity standards 80% RH with 5 application pads</p>

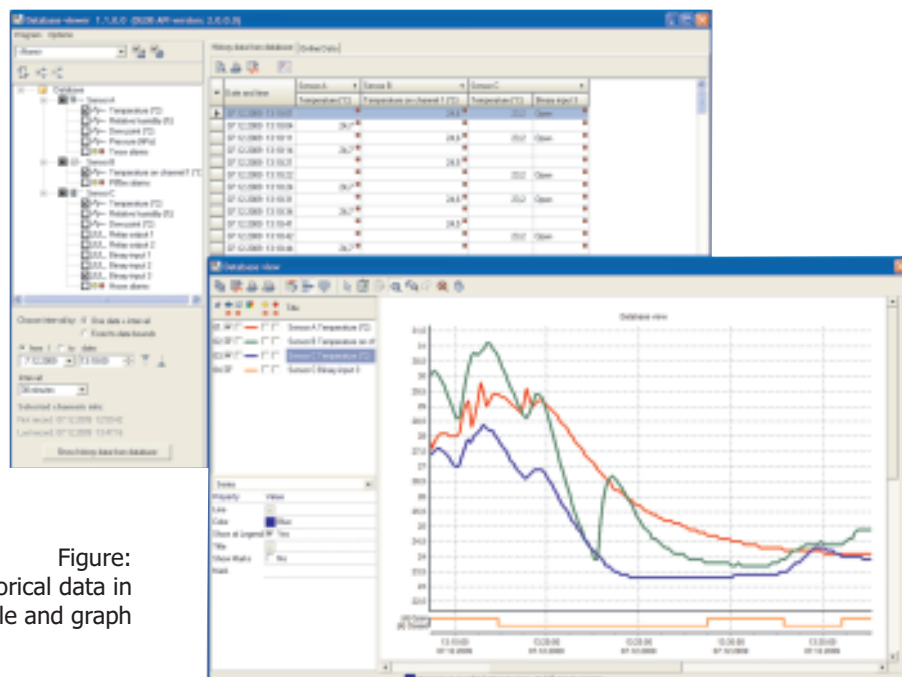
ONLINE MONITORING SYSTEM WITH SENSORS CONNECTED TO ETHERNET- DBS Sensor Monitor

New

Easy creation of online data acquisition system from Ethernet temperature, humidity, pressure sensors by using low cost database software Comet DBS Sensor Monitor.



Database program DBS Sensor Monitor for online data acquisition and analysis from Comet sensors is a client-server data acquisition system. It contains all necessary components for monitoring of sensors, incl. one licence of DBV Database Viewer.



System enables i.a.:

- * Data acquisition from Comet sensors connected to Ethernet network.
- * To view selected channels from any Comet sensor together with selected channels of other Comet sensors (i.e. comparing/monitoring of values from different measurement points).
- * Measurement from different Comet devices is possible to combine in one table or graph.
- * To present data (temperature, humidity, pressure, binary state, etc.), alarm status.
- * To choose any time interval for analysis.
- * Print, export to PDF - table and graph. Export to other formats for subsequent processing.
- * Online visualization of actual values and alarms.
- * Online graphic visualization of measurement in curves. I.e. graph presenting actual data e.g. for last hour. The length of history is selectable. Graph is automatically updated.
- * Compression of on-line data
 - optimizes data storing
 - in usual use reduces volume of recorded data down to 4%
 - speeds up recorded data viewing
 - database server is not overloaded even after long term operation

The advantage is a simple system expanding:

- * Connection of sensors is very easy thanks to the used communication protocol SOAP. Needed is only to enter server address and connect sensor to intranet/ethernet.
- * It is possible to build large data acquisition system. SOAP protocol is commonly used in internet. Data acquisition from sensors located anywhere in the world is enabled.
- * System can be expanded with other and other devices without any charge. Buying DBS Sensor Monitor enables to capture data from unlimited number of sensors - 2, 10 or 100 sensors.
- * Low cost browsers DBV Database Viewer can be bought in successive steps as necessary. It enables several **clients to view database from different places on network/internet.**

Administration of system enables i.a.:

- * To name device in database (e.g. „sensor at warehouse“).
- * To backup database.
- * To diagnose error states.
- * To administrate user accounts. DBV Database Viewers use for connection to database read-only accounts. Database is thus protected against damage by unauthorized person.

System is based on stable and world-wide popular freeware platform Microsoft SQL or MySQL.

System installation and administration is simple. Instruction Manual guides installation of the system step by step, including all needed freeware.

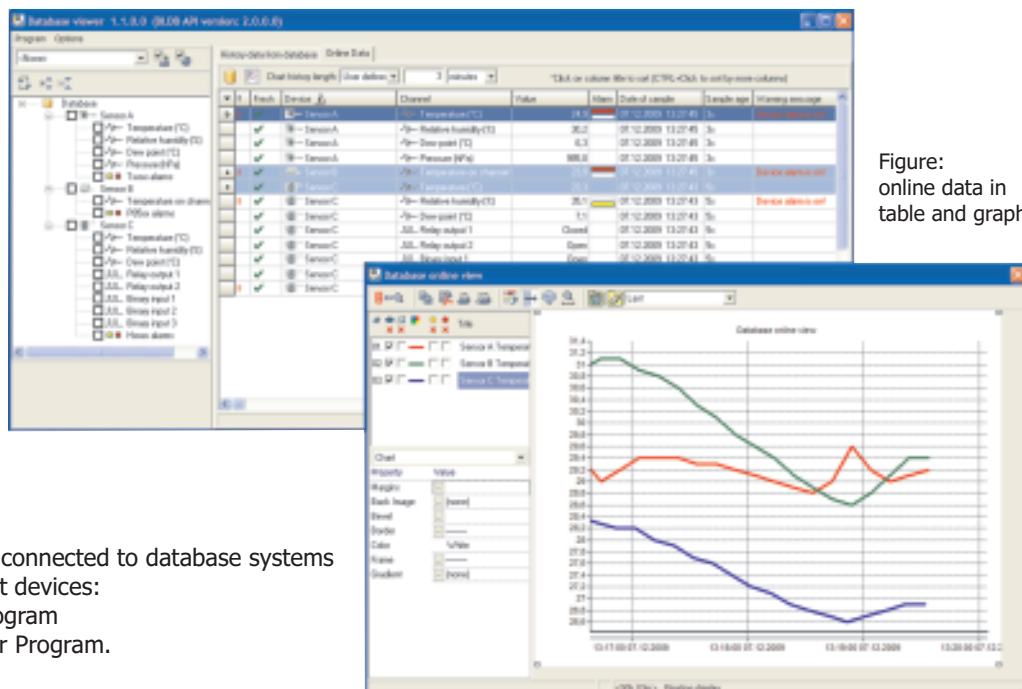


Figure: online data in table and graph

System can be connected to database systems for other Comet devices:
 DBL Logger Program
 DBM MS Logger Program.