

PROFESSIONAL MEASURING EQUIPMENT



Measuring
Recording
Online Monitoring
Regulation
Alarming

Temperature
Humidity
CO₂
Dew point
Atmospheric pressure
Analog signals
Two-state inputs
Pulses





Handheld for measuring and recording Commeter



- measuring and recording
 - temperature (probes Pt1000, Ni1000)
 - humidity
 - dew point
 - atmospheric pressure
- accurate measurement of up to two probes
- version of the device with memory and without memory
- audible and visual indication alarm conditions
- analytical software Comet Vision 2.0 for data processing and configuration
- the possibility of setting through a keypad
- USB communication interface
- backlit display



Dataloggers

product catalog





Battery operated 16 input-channel datalogger with Ethernet interface Multilogger



- up to 6 hardware inputs for measuring and recording, 16 virtual channels
 - temperature (Pt1000, thermocouples)
 - humidity
 - dew point
 - atmospheric pressure
 - current 0 - 20 mA and voltage 0 - 10 V (-60 to 140 mV)
 - two-state events
 - pulses
 - CO₂
- memory for 1 million values
- indication of alarm conditions via
 - e-mail
 - SMS
 - integrated acoustic siren
 - LEDs
 - stwo-state output to control other devices
- analytical software for data processing and configuration - Comet Vision 2.0
- communication interfaces - USB, RS232 and Ethernet (SNMPv1 and XML)

4 inputs.

Alarm indication by LEDs or graphical display.

Measured values are stored internally in non-volatile memory.

Battery and mains power supply.

Temperature/relative humidity probe DigiS/M.

Temperature/relative humidity probe DigiL/M on the cable.

Removable probe holder.

Measured values are shown on the graphical screen with backlight option and the ability to change the size of displayed digits.

Optional cable length 1, 2, 5, 10, 15 metres.

The device can be set from the keypad. You can set a password to prevent unauthorized access to the device settings.

Built-in audio alarm.

Internal atmospheric pressure and / or CO₂ concentration sensors.

To communicate with a PC and other systems, the device is equipped with a USB port (located on the side of the device), RS232 and Ethernet.

- send an e-mail when an alarm state starts or ends
- use DATALINK: display current values or download values from device memory to your PC
- view current measured values using your web browser
- third-party applications to read the actual measured values using universal protocols SNMPv1 and XML
- send data to COMET Database software which contains many useful tools for data analysis - graphs, tables, statistics, etc.

product catalog



MS
MONITORING
SYSTEM

Variable 16 input-channel datalogger Monitoring system

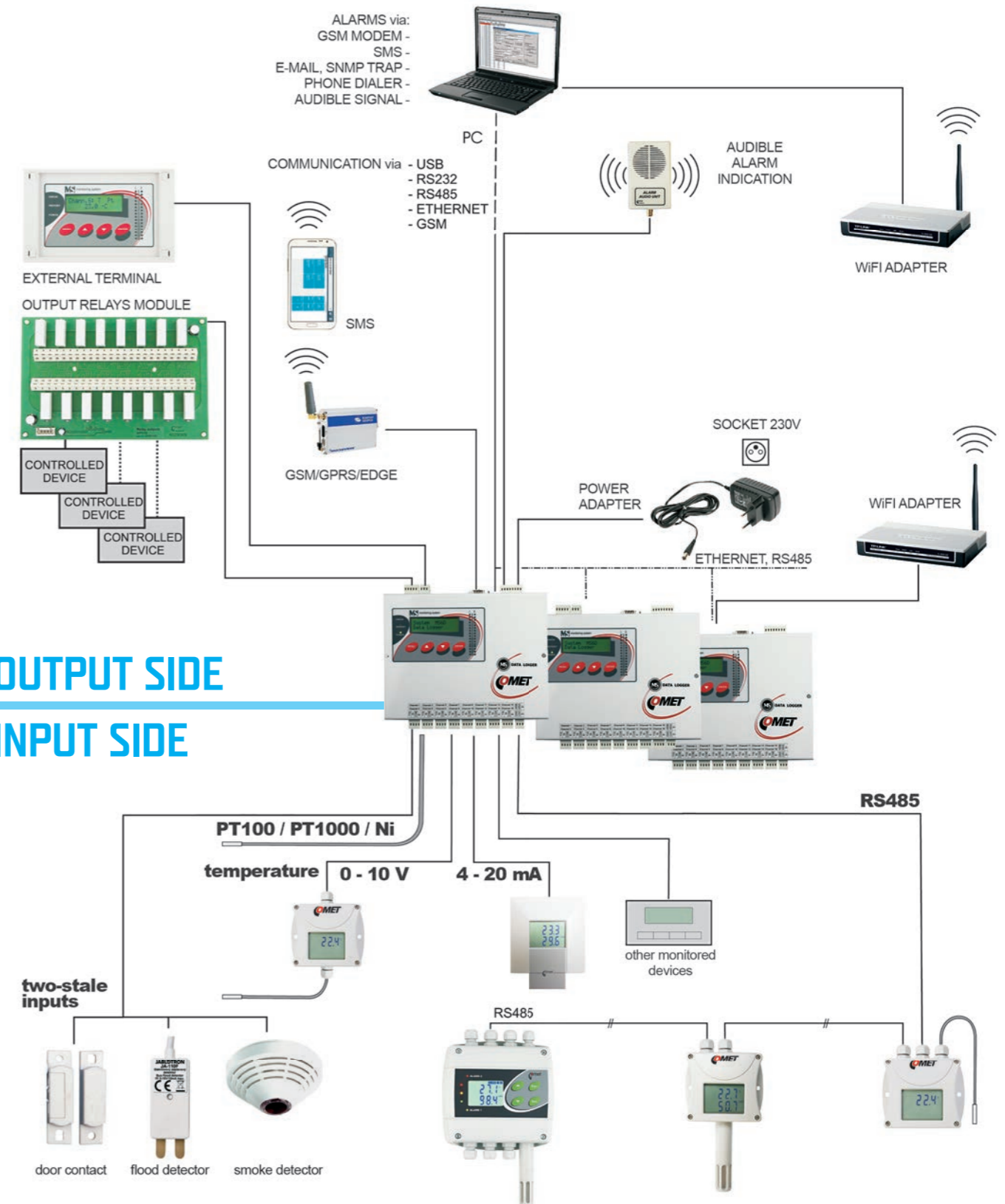
COMET DATABASE
SOFTWARE



- T
- RH
- DP
- ATM. PRESSURE
- A
- 0/1 TWO-STATE
- PULSES
- FREQUENCY
- RESISTANCE

- software configurable or modular inputs for
 - temperature sensors Pt and Ni
 - thermocouples and thermistors
 - voltage and current
 - two-state events
 - frequency and pulses
 - resistance
 - sensors with RS485 output
- memory for 500 000 records with automatic downloading to PC
- alarm indication via integrated siren, e-mail, SMS and two-state output to control other devices
- software for data analysis on PC
- communication interface USB, RS232, relays, RS485 (Modbus RTU), ETHERNET (Modbus TCP, SOAP, etc.)

OUTPUT SIDE INPUT SIDE



product catalog





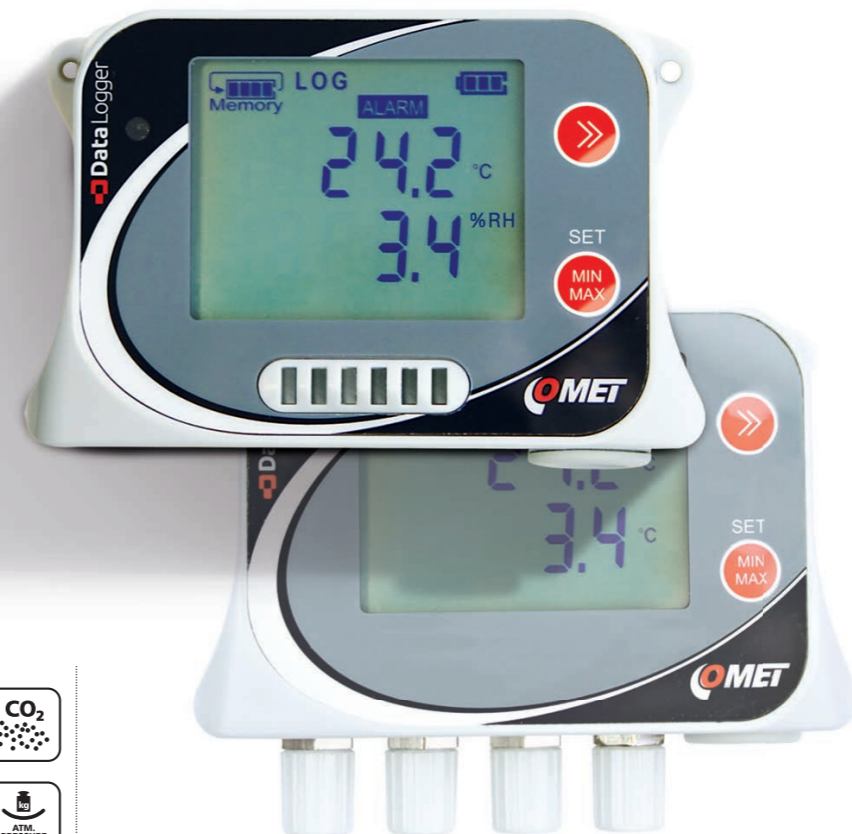
Dataloggers with built-in printer Battery-operated economical datalogger



- accurate measurement of
 - temperature
 - humidity
 - dew point
 - events
- nonvolatile memory for 32 000 values
- indication of alarm conditions via, SMS or visually
- software Comet Vision 2.0 for data analysis
- built-in printer (for selected models)
- communication interfaces - USB, RS232, GSM modem
- rugged design with protection up to IP67
- battery life up to 7 years (model S3120E)



Battery operated recorders Premium Dataloggers



- accurate measurement of
 - CO₂
 - atmospheric pressure
 - temperature
 - humidity
 - dew point
 - current (4 - 20 mA)
 - voltage (0 - 5 V, 0 - 10 V)
 - pulses
 - events
- nonvolatile memory for 500 000 records
- visual and acoustic indication of alarm
- easy to use software Comet Vision 2.0 for data analysis
- USB-C communication interface
- rugged design
- long battery life up to 6 years
- logger deployment down to -40°C

product catalog

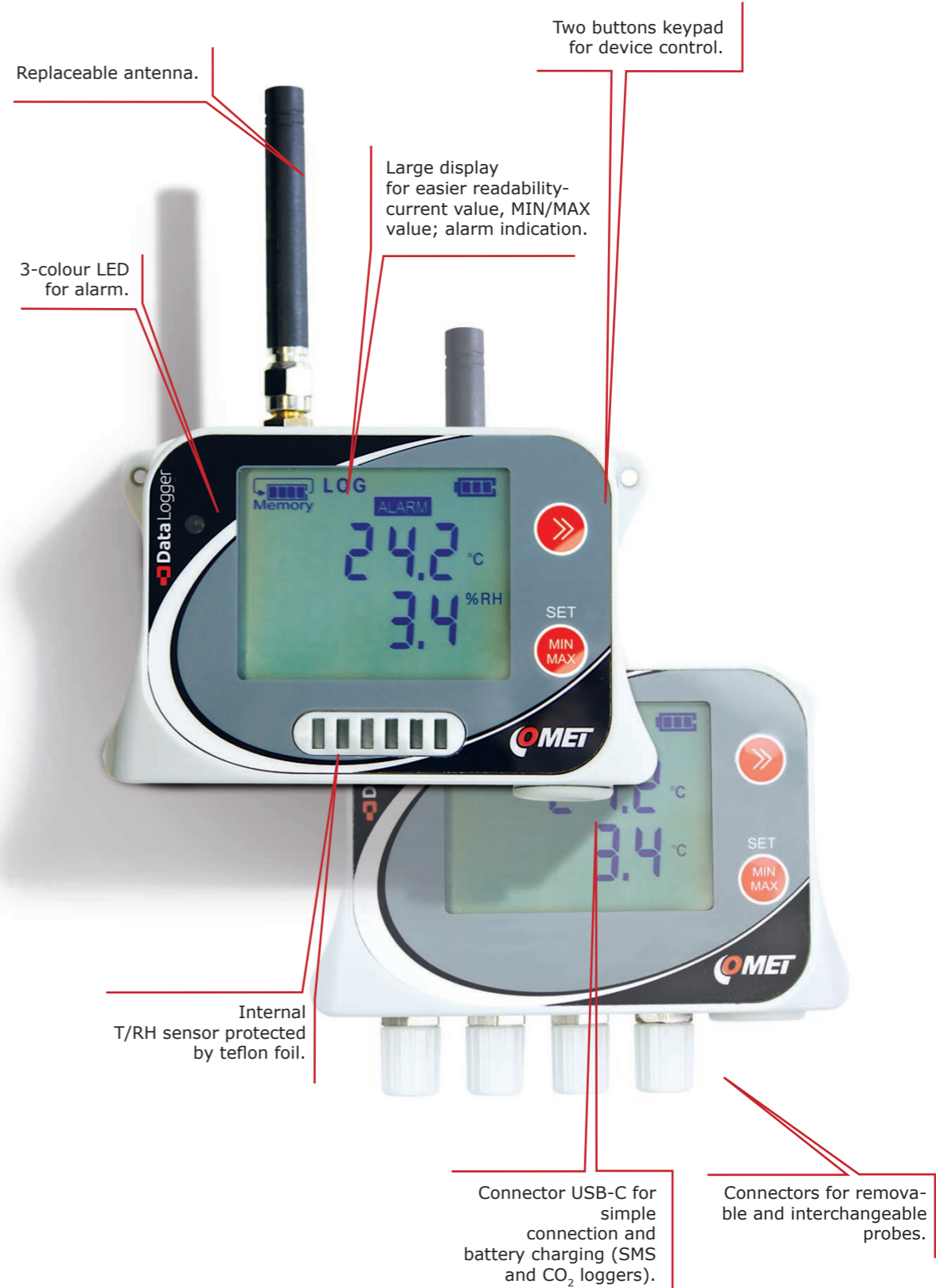




Battery operated 2G and 4G modems Mobile Dataloggers



- accurate measurement of
 - CO₂
 - atmospheric pressure
 - temperature
 - humidity
 - dew point
 - events
 - current (4 – 20 mA)
 - pulses
- nonvolatile memory for 500 000 records
- indication of alarm via text message, 3-colour LEDs, speaker
- easy to use software Comet Vision 2.0 for data analysis
- communication interfaces - USB-C and GSM modem
- rugged design
- long battery life up to 6 years
- logger deployment down to -20°C



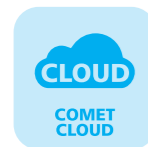
product catalog



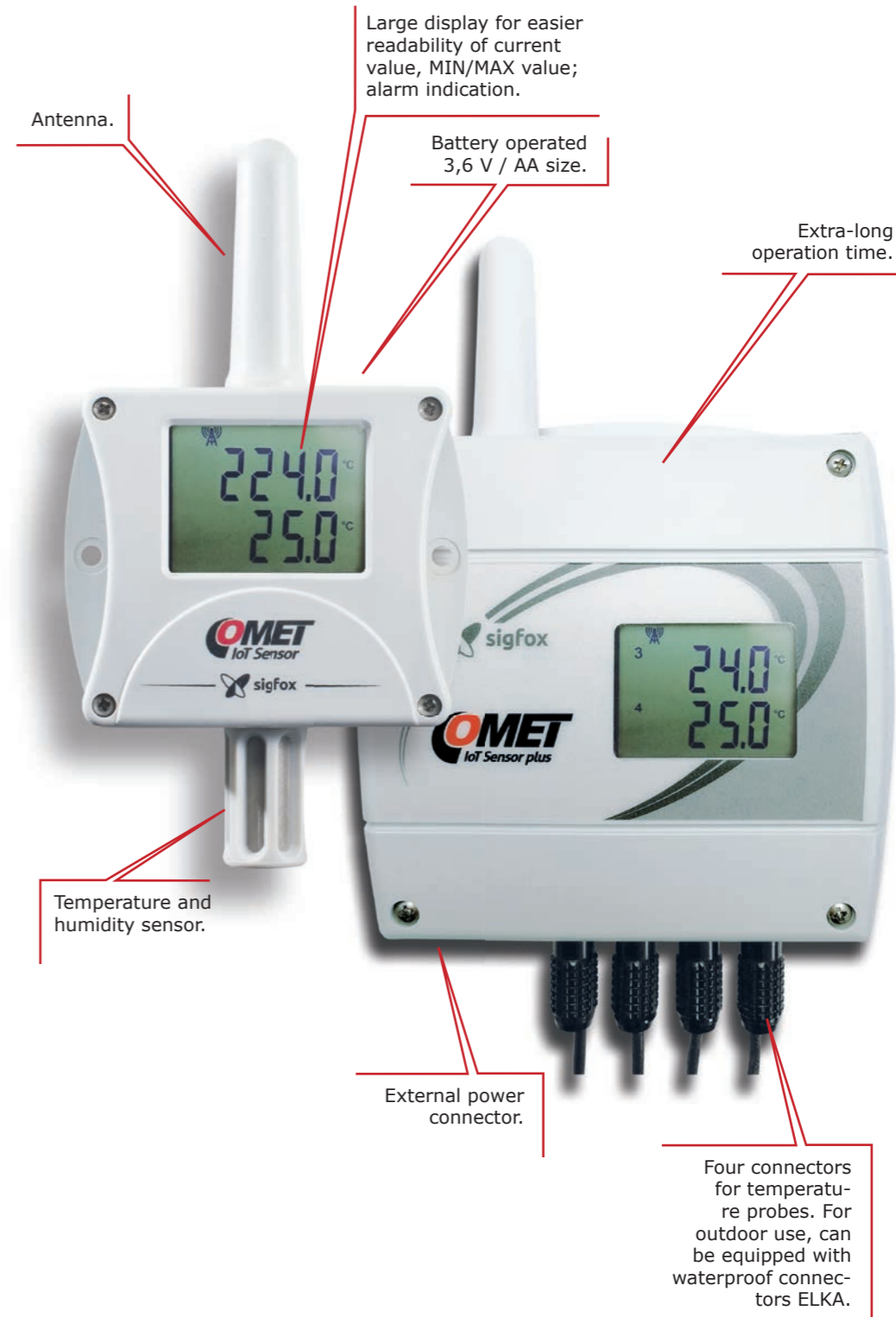
For more information visit www.cometsystem.com



Internet of things sensors IoT-operated by Sigfox network

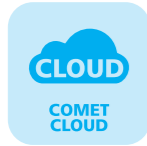


- accurate measurement of
 - temperature
 - humidity
 - barometric pressure
 - events
 - CO₂
- cheap wireless communication for long distances
- indication of alarm via e-mail
- data storage in the COMET Cloud
- rugged design
- long battery life up to 10 years





2.4 GHz WiFi network for wireless measuring and monitoring Sensors with WiFi interface



No limits for router selection

With conventional communication based on 2.4GHz IEEE 802.11b/g/n WiFi radio



- accurate measuring
 - temperature
 - humidity
 - dew point
 - atmospheric pressure
 - CO₂
- communication protocols
 - Modbus TCP
 - XML
 - JSON
- indication of alarm
 - e-mail
 - LED diod
 - speaker
- wireless communication
- data processing in COMET Cloud, COMET Database software
- durable design



Device communication to third party systems



Devices use Modbus TCP protocol version. Two Modbus clients can be connected to the device at one moment.



Webserver to display values, it supports also https.



JSON protocol for sending data to COMET Cloud or to own server.



Alarm e-mails with encrypted communication support (i.e. sending via G-mail SMTP server), support of text and html emails.

product catalog



For more information visit www.cometsystem.com



Outputs 4 - 20 mA, 0 - 10 V, RS232, RS485 and relays Sensors and regulators



look at the zener barrier for ATEX applications on page 23.



- accurate measurement of
 - temperature
 - humidity
 - dew point
 - atmospheric pressure
 - two-state events
 - CO₂
- industrial design with protection up to IP65
 - integrated sensors
 - with external probe
 - duct mount design
- interior design
- ATEX design for potentially explosive atmospheres (zone 2) on selected models
- relays output 250Vac / 8A or 50 V on selected models

product catalog for analogue sensors



product catalog for digital sensors



Terminal for power and signal RS485/RS232 – for more details please see electrical wiring below on the page.

Relay - the device is equipped with two relay outputs for alarming or controlling of external devices. It is possible to assign any input value to each relay, to set comparing limit, delay, hysteresis, acoustic alarm or change its status by means of Modbus communication protocol.

LED signalization - visualization of binary inputs is done by three LED diodes. Other two diodes signed as ALARM 1 and 2 show alarm state and relay status.

Keypad - two output relays can be configured by means of keypad. Then any input value can be assigned, set comparing limits, hysteresis, delay or audible alarm.

Acoustic alarm – triggered alarm can be deactivated by pressing "ESC". This possibility can be disabled and the acoustic alarm is active for the duration alarm condition.

Design - measuring elements can be integrated into the body of device or may be on the cable with lengths of up to four meters. External probe may be designed for pressure of 25 bar.

Three binary inputs – these inputs are not galvanic isolated, connection terminals +U are internally connected to the device power supply i.e. the +U terminals provide the same voltage level as power supply.

For more information visit www.cometsystem.com

Sensors with Ethernet output Web Sensors



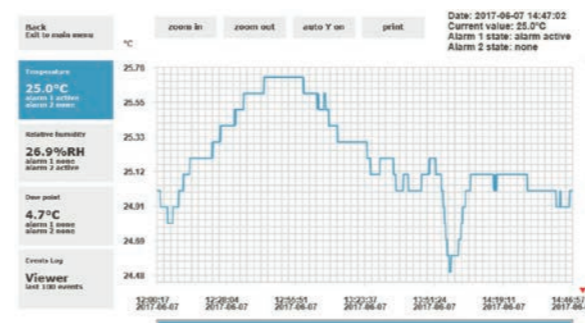
- Temperature
- Humidity
- Dew point
- Humidex
- Atmospheric pressure
- Two-state
- CO₂

- accurate measurement of
 - temperature
 - humidity
 - dew point
 - humidex
 - atmospheric pressure
 - two-state events
 - CO₂
- communication protocols
 - SNMP
 - Modbus TCP
 - SOAP
 - XML
- webserver to display current and the recorded values
- alarm indication via e-mail
- PoE on selected models
- data analysis software COMET Database

product catalog for web sensors

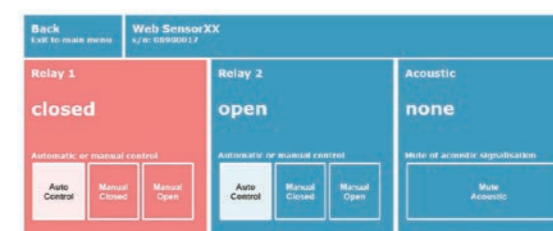


Chart with historical value



Graphs of actual values can also be displayed through a Web browser. You can display up to one thousand measured values.

Remote controlling of relay via internet

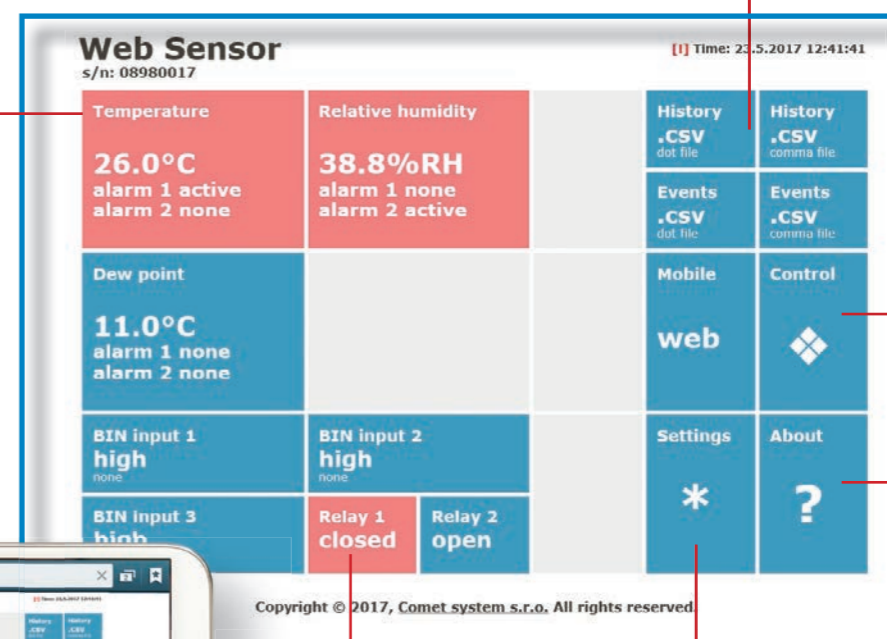


Current measured values and sensor settings can be accessed directly through the web interface from your web browser.

Export measured value to file

Web browser interface

Current measured values are available on-line directly on a web browser from anywhere, all you need to do is enter the IP address. Alarms are indicated by a red field.



Sensor settings can also be done directly in a web browser in your PC, smartphone or tablet. All you need to do is enter the IP address of the sensor, open Settings and set up everything from communication to alarm e-mails.

Recorded events

	all	value	binary	relay	Events .xml dot	Events .csv comma
Temperature 25.2°C alarm 1 active alarm 2 none	14:15:50	2017-05-29	Relay1	Closed		
	14:15:49	2017-05-29	Relay1	Open		
	14:15:35	2017-05-29	Relay2	Open		
	14:15:32	2017-05-29	Relay2	Closed		
Relative humidity 28.2%RH alarm 1 none alarm 2 active	14:15:30	2017-05-29	Relay2	Open		
	14:15:29	2017-05-29	Relay2	Closed		
	14:15:26	2017-05-29	Relay2	Open		
	14:15:25	2017-05-29	Relay2	Closed		
Dew point 5.5°C alarm 1 none alarm 2 none	14:13:33	2017-05-29	Relay2	Open		
	14:13:32	2017-05-29	Relay2	Closed		

Software development kit available for

- SNMPv1 protocol
- ModbusTCP protocol
- XML file values.xml
- SOAP protocol
- Syslog list

product catalog for web sensors with relay





COMET Cloud

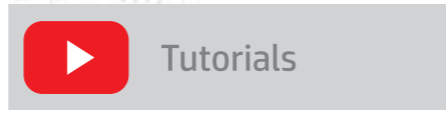
Measured data where you need. COMET Cloud is the internet storage of data measured by COMET sensors. The data is accessible in the internet and displayed in an internet browser.

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webový prohlížeč pro zobrazení

- unlimited space for data
- management and organization of
 - equipments
 - measured points
 - users and their access rights
- e-mail alarming when
 - exceeding alarm limits with the option define recipients according to the level of exceedance
 - a fault occurs (connection, measurement error)
- easy report creating
- device setup from COMET Cloud (only once a day)



- How to** create account
- How to** add device
- How to** set role – administrator/user
- How to** create measured place

Try GUEST access at <https://cometsystem.cloud/device/list>



Storage place for all COMET devices COMET Database software

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For users of COMET products exists a solution for data collection to one central place. It is software solution based on MS SQL and installed on customer's server or personal computer.

- 24 - hour supervision
- unlimited data storage
- simple and clear access to your measured values
- single repository for all devices COMET
- alarm SMS texts and e-mails
- acoustic and visual signalization of alarms



Analytic and configuration software COMET Vision 2.0

- device setting
- download
- analyse
- present data
- print out reports



Recorded data

Date and time	Temperature °C	RH %	DewPoint °C
17/02/2018 12:45:13 PM	28.3	62.3	13.9
17/02/2018 12:45:20 PM	28.3	62.4	13.9
17/02/2018 12:45:25 PM	28.2	62.4	13.9
17/02/2018 12:45:30 PM	28.3	62.4	13.9
17/02/2018 12:45:35 PM	27.7	62.4	13.8
17/02/2018 12:45:40 PM	27.4	62.4	13.8
17/02/2018 12:45:45 PM	27.8	62.4	13.8
17/02/2018 12:45:50 PM	28.3	62.4	13.8
17/02/2018 12:45:55 PM	28.3	62.4	13.8
17/02/2018 12:46:00 PM	28.2	62.4	13.8
17/02/2018 12:46:05 PM	28.3	62.4	13.8
17/02/2018 12:46:10 PM	28.4	62.4	13.8
17/02/2018 12:46:15 PM	28.4	62.4	13.8
17/02/2018 12:46:20 PM	32.0	62.4	13.8
17/02/2018 12:46:25 PM	32.0	62.4	13.8
17/02/2018 12:46:30 PM	32.0	62.4	13.8
17/02/2018 12:46:35 PM	32.0	62.4	13.8
17/02/2018 12:46:40 PM	32.0	62.4	13.8
17/02/2018 12:46:45 PM	32.0	62.4	13.8
17/02/2018 12:46:50 PM	28.3	62.4	13.8
17/02/2018 12:46:55 PM	28.3	62.4	13.8
17/02/2018 12:47:00 PM	28.3	62.4	13.8
17/02/2018 12:47:05 PM	30.2	62.4	13.8
17/02/2018 12:47:10 PM	30.4	62.4	13.8
17/02/2018 12:47:15 PM	30.4	62.4	13.8
17/02/2018 12:47:20 PM	30.4	62.4	13.8
17/02/2018 12:47:25 PM	30.4	62.4	13.8
17/02/2018 12:47:30 PM	30.4	62.4	13.8
17/02/2018 12:47:35 PM	30.3	62.4	13.8
17/02/2018 12:47:40 PM	30.2	62.4	13.8
17/02/2018 12:47:45 PM	30.2	62.4	13.8
17/02/2018 12:47:50 PM	30.2	62.4	13.8
17/02/2018 12:47:55 PM	30.2	62.4	13.8





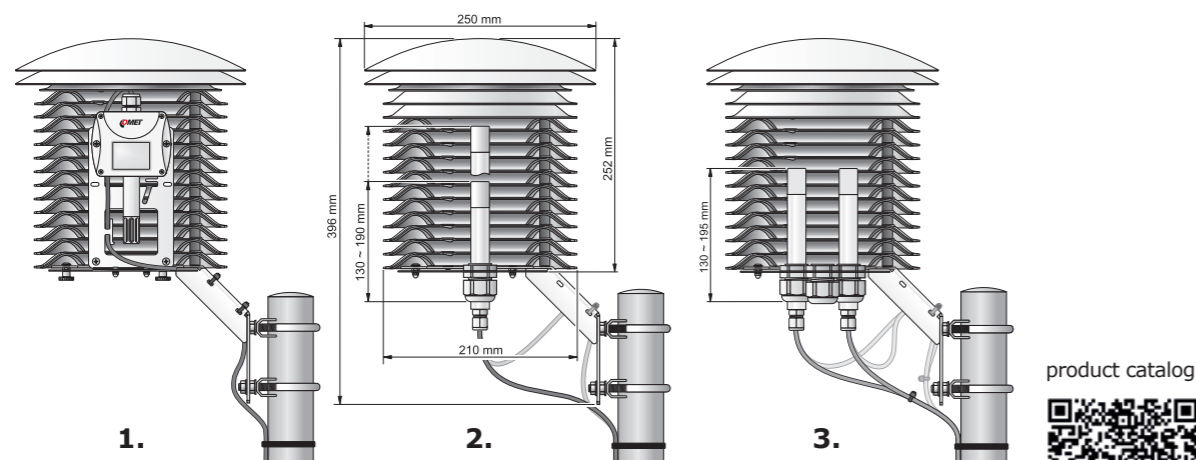
Cometeo - professional solar shield

The Multi-plate radiation shield is used to protect weather monitor systems and provides the most accurate climate measurement results. The uniquely designed screen minimizes solar radiation reaching the sensor, minimizes radiation absorbed by the screen, and maximizes ambient airflow around the weather station sensor. The surface exposed to sunlight is made of highly reflective UV and long-term stable ASA plastic. The inner surfaces of the screen are made of matt black plastic to minimize internal reflections. A large 210mm diameter of 14 plates is designed to provide full protection for the measuring sensor.

1. Cometeo F8000 has a large diameter of lamels 210 mm and provides full protection of the measuring devices that can be located inside the cylindrical space with a diameter of 110 mm.
2. F8001 - Universal naturally ventilated weather cover any measuring probes with a diameter of 133 to 18 mm before weather effects. As required a weather cover can be provided for another size mounting bushings for the probe.
3. F8004 - version with four bushings

Version 2 and 3 can be used with most devices and probes, e.g. Vaisala, Rotronic.

Operating temperature range -40 to +65 °C



product catalog



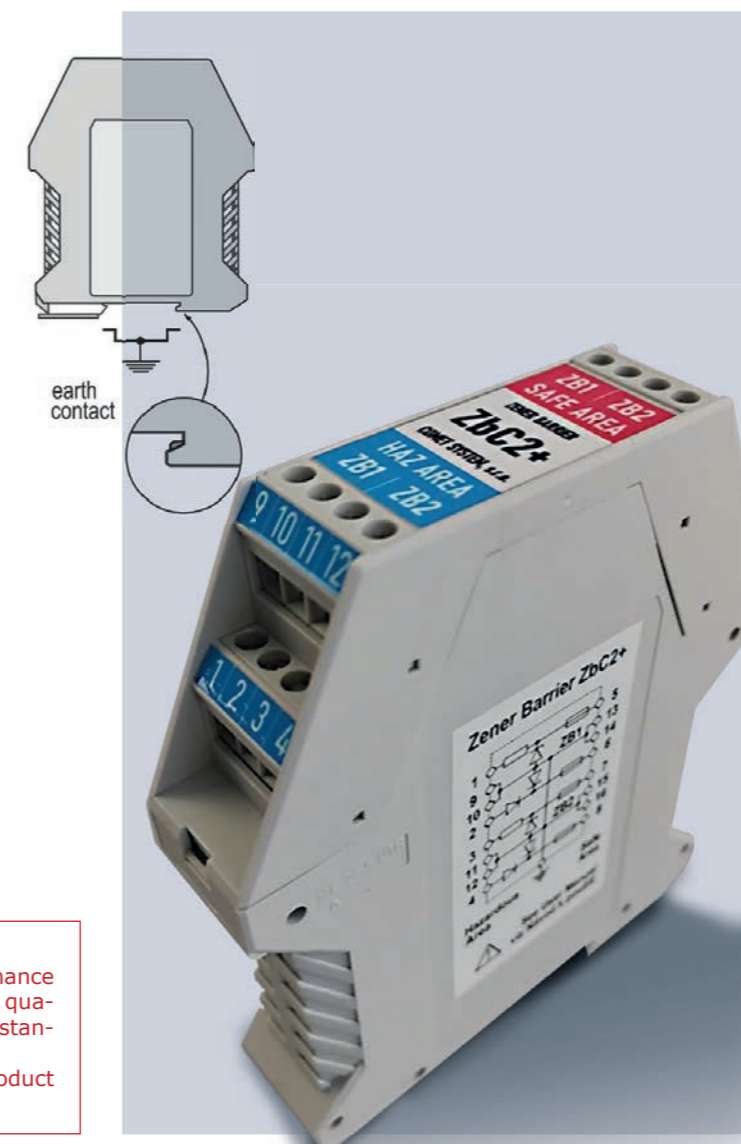
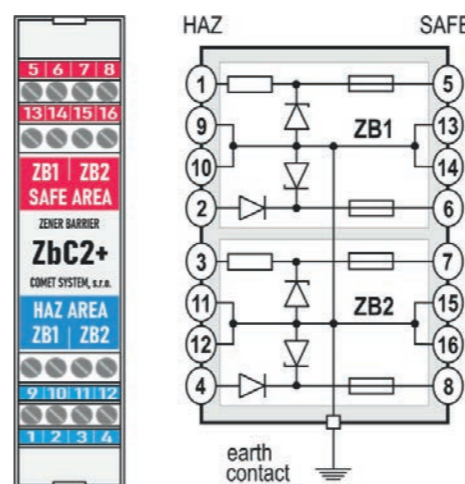
Zener barrier ZbC2 + Two in one, this is Zener's barrier from Comet

- Voltage U_0 29,4 V
- Current I_0 95mA
- Resistance R_{omin} 306 Ω

The Zener barrier is a certified intrinsically safe interface. It is used to connect a certified intrinsically safe device located in a potentially explosive atmosphere (Hazardous area) to a non-certified device that is in a safe area.

Key features

- Two identical Zener barriers ZB1 and ZB2 in the common housing
- Positive polarity with return diode
- Series resistance
- Series resistance $R_{s1} = \text{max. } 348 \Omega$ (terminals 1-5, terminals 3-7)
 $R_{s2} = \text{max. } 34 \Omega$ (terminals 2-6, terminals 4-8)
- Fuse rating
- DIN rail mounting in a safe area



Two identical Zener barriers ZB1 and ZB2 in a common case.

NOTICE!
Installation, commissioning, and maintenance may only be carried out by personnel with qualifications by applicable regulations and standards.
To complete the information in the product user manual.

Measuring
Recording
Online Monitoring
Regulation
Alarming

