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H5521 - remote CO2 concentration with Ethernet interface and two relays

code: H5521
CO2 level transmitter with two output relays.

The CO_2 measurement is based on a 2-source, 2-beam process. CO_2 measurement with long-term stability is guaranteed thanks to the proven non-dispersive infrared (NDIR) CO_2 measurement cell. The unique patented auto-calibration procedure compensates for aging of the infrared source and guarantees high reliability, long term stability and eliminates the need of periodical recalibration in the field.
The device is supplied with CO2 probe with 1m cable. Cable lengths 2, 4 or 10 meters available optionally.
Included in delivery:
• H5521 sensor
• Traceable calibration certificate
• Quick start manual
• Technical support at discussion forum

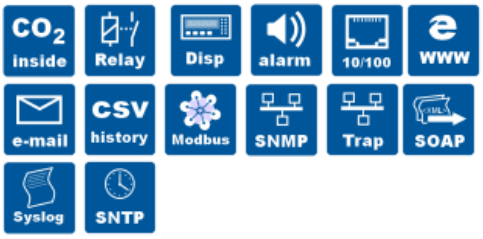
Features

APPLICATIONS:

• **Building management**
The CO_2 - carbon dioxide level is recently regarded as an important parameter that substantially determines the quality of the interior climate. Especially in buildings where many people gather, such meeting rooms, hospitals, schools, cinemas, theatres and care centres. With the help of CO_2 sensor engineers, technical advisors, environmental experts and health specialists can optimize the ventilation for creation of a healthy interior climate.
CO_2 monitoring of buildings, history data to Comet Database, remote alarm by email or SMS

• **Warehouses**
CO_2 monitoring of storage, history data to Comet Database or 3rd party SCADA system

• **Factories and manufacturing**
CO_2 monitoring for food processing industry, pharmaceutical industry, etc.



SOFTWARE:

• **Comet Database**
Complex solution for data acquisition and analysing. Easy to use and high flexible database software for Comet Sensors.

• **T-Sensor software**
Free configuration utility for COMET sensor.

• **SensorReader software**
Basic data acquisition utility for COMET Sensors. Software is free for download.

• **3rd party software**
Cacti, InTouch, ControlWeb, EasyView, LabVIEW. Support for this software is provided by the 3rd party companies.

FEATURES:

CO_2 concentration

Method of CO_2 sensor multipoint calibration leads to an excellent accuracy measurements of CO_2 in the entire of operating temperature range. With this sensor is the device able to meet the demanding requirements for outdoor use. The measurement principle is based on the NDIR principle with dual wavelength, which automatically compensates for aging of the sensor. The sensor is resistant against the pollution and provides maintenance-free operation and excellent long-term stability.

Releay outputs

Two relay output for alarming or external device control. It is possible to assign any input value to each relay. Relay can be remotely controlled using ModbusTCP communication protocol.

Dual line LCD

Large dual line LCD for simultaneous display of CO_2. Displayed values are user selectable. Display can be switched off.

Acoustic alarms

Acoustic signalisation can be activated after exceeding set limits. Alarm can be confirmed (deactivated) from device keyboard.

Ethernet interface

10Base-T/100Base-TX Ethernet interface via standard RJ45 connector. IP address can be obtain automatically from DHCP server or set manually. Internet protocol version 4 is supported only.

WWW server

Current values are available via embedded web server. Design of the web pages is can be changed according user requirements.

Email

Warning email are sent when measured value exceed selected limits. SMTP authentication is supported, but SSL not.

History export to CSV

History values can be exported for next processing by the CSV file. CSV file can be processed inside spreadsheet application like Microsoft Excel or OpenOffice Calc. Two formats of CSV file are supported - dot and comma decimal point separators. Timestamps inside CSV file are shown when device time is synchronised by the SNTP server.

ModbusTCP protocol

Modbus protocol for communication with SCADA systems or third party software. Device use Modbus TCP protocol version.

SNMP protocol

SNMP version 1 protocol for IT infrastructure. Using SNMP protocol you can read actual measured values, alarm status and alarm parameters. MIB tables with OID description are available.

SNMP Trap

SNMP Trap for IT infrastructure. The device allows sending Traps to selected Trap receiver server. Traps are sent in case of alarm on channel or at error states.

SOAP protocol

The device allows to send currently measured values via SOAP v1.1 protocol. The device sends values in XML format to the web server. The advantage of this protocol is that communication is initialized by the device side. Due to it is not necessary use port forwarding.

Syslog protocol

Syslog protocol for IT infrastructure monitoring systems. The device allows sending text message to selected Syslog server. Messages are sent in case of alarm on channel or at error states.

SNTP protocol - time synchronization

Time synchronisation with SNTP server. Actual time is shown at web pages and is necessary for timestamps inside CSV files.

Technical Data

Technical parameters	Value
Output	Ethernet
Measured Value	CO2
Construction Type	For External Probes
Design	Industrial
Temperature Measuring Range	to °C

Relay Output	Yes
Two-State Input	No
Lcd Display	Yes
PoE	No
Range of CO_2 concentration measurement	0 to 10000ppm
Accuracy of CO_2 concentration measurement	±(100ppm +5% from reading) at 25°C and 1013hPa
Resolution	1ppm
Measuring interval	15s
Temperature operating range	-30 to +60°C
IP protection	IP30
Number of relay outputs	2
Maximum switching voltage, current and power of relay output	50V, 2A, 60VA
Audible alarm	built-in beeper - switchable
LAN connection	RJ-45 connector, 10Base-T or 100Base-TX
Communication protocols	WWW, ModbusTCP, SNMPv1, SOAP
Alarm protocols	E-mail (SMTP authentication is supported), SNMP Trap, Syslog
Configuration	T-Sensor, Telnet, keyboard
Power	9 to 30Vdc, power consumption approximately 1W
Power connector	co-axial, diameter 5.5 x 2.1mm
Dimensions	136 x 150 x 45mm (W x H x D)
Weight	approximately 320g
Warranty	3 years