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H6020 Temperature, humidity, CO2 transmitter with two relay outputs

code: H6020
Temperature, humidity, CO2 level sensor with two output relays.



Included in delivery:

- Traceable calibration certificate
- Quick start manual
- Free program TSensor for configuring of the transmitter is ready to [Download](#)

Transmitter is also equipped with three alarm LEDs:

Green LED shines - CO2 concentration 0 to 1000 ppm

Yellow LED shines - CO2 concentration 1001 to 1200 ppm

Red LED shines - CO2 concentration 1201 ppm and more

Features

The CO₂ - 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 CO₂ sensor engineers, technical advisors, environmental experts and health specialists can optimize the ventilation for creation of a healthy interior climate.

Method of CO₂ sensor multipoint calibration leads to an excellent accuracy measurements of CO₂ 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.

Measured temperature and relative humidity values are also converted to other humidity interpretation - dew point temperature, absolute humidity, specific humidity, mixing ratio or specific enthalpy. Degrees Celsius and Fahrenheit are user selectable.

APPLICATIONS - measuring of temperature, humidity and CO₂ level at:

- building HVAC management
- climate technology
- schools, universities
- meeting rooms, hospitals, cinemas, theatres
- weather stations

Transmitter is equipped with two relay outputs for alarm indication or control of external devices. Each relay can be assigned to any measured or computed value. For each relay setting of delay, hysteresis, audible alarm is enabled. Parameters are easy adjustable from regulator keyboard or from the computer.

Transmitter contains a microprocessor based control circuitry in a durable plastic case with connection terminals and temperature and relative humidity sensors in a filter with stainless steel mesh. The CO₂ concentration sensor is built inside the case.

Large dual line LCD is an advantage. Display is possible to switch off. Computerized design ensures maximum long term stability and failure indication.

State-of-the-art capacitive polymer sensor ensures excellent calibration long term stability, inertia against water and condensation. Transmitter is designed for use in non-aggressive environment.

Technical Data

Technical parameters	Value
Output	None
Measured Value	CO ₂ + Temperature + Relative Humidity
Construction Type	Ambient Air
Design	Industrial
Temperature Measuring Range	-30 to 60 °C
Relay Output	Yes
Two-State Input	No
Lcd Display	Yes
PoE	No
Maximum switching voltage, current, power of relay output	50V, 2A, 60VA
Audible alarm	from built-in beeper - switchable
Range of CO ₂ concentration measurement	0 to 2000ppm
Accuracy of CO ₂ concentration measurement	±(50ppm +2% from reading) at 25°C and 1013hPa
Optional range of CO ₂ concentration measurement	0 to 10000ppm ±(100ppm +5% from reading) at 25°C and 1013hPa
Relative humidity range	0 to 100%
Accuracy of relative humidity measurement	±2.5% relative humidity from 5 to 95% at 23°C
Accuracy of temperature output	±0.4°C
Available temperature units	degrees Celsius, Fahrenheit
Accuracy and range of dew point temperature output - for more details see graphs	±1.5°C at ambient temperature T<25°C and RH>30% range -60 to +80 °C

Accuracy and range of absolute humidity output	$\pm 1.5\text{g/m}^3$ at ambient temperature $T < 25^\circ\text{C}$ range 0 to 400 g/m ³
Accuracy and range of specific humidity output	$\pm 2\text{g/kg}$ at ambient temperature $T < 35^\circ\text{C}$ range 0 to 550 g/kg
Accuracy and range of mixing ratio output	$\pm 2\text{g/kg}$ at ambient temperature $T < 35^\circ\text{C}$ range 0 to 995 g/kg
Accuracy and range of specific enthalpy output	$\pm 3\text{kJ/kg}$ at ambient temperature $T < 25^\circ\text{C}$ range: 0 to 995 kJ/kg
Measuring interval of CO ₂	15s
Temperature operating range	-30 to +60°C
Filtering ability of sensor cover	0.025mm - filter with stainless steel mesh
IP protection	IP30 electronics, IP40 sensors
Power	9-30Vdc, power consumption approximately 1W
Dimensions	136 x 213 x 45 mm (W x H x D), stem length 75 mm
Weight	approximately 360g
Warranty	3 years