SIEMENS

1961P01

Room air quality sensors QPA10x4

- **Maintenance-free CO_2 sensing element based on optical infrared absorption measurement (NDIR = non dispersive infrared)**
- **No recalibrations required**

Use

In ventilation and air conditioning plants to enhance room comfort and optimize energy consumption by providing demand-controlled ventilation. The sensor acquires CO_2 concentrations and temperature.

Important!

The sensors may not be deployed as safety devices, e.g. as gas or smoke warning devices!

Type summary

Type	*Order number*	*Designation*
QPA1004	S55720-S453	Room sensor CO_2
QPA1064	S55720-S454	Room sensor CO_2/T

Engineering notes

The sensor must be powered by a transformer for safety extra low-voltage (SELV) with separate windings, suited for 100 % duty.

Cable routing and cable selection	On applications with EMC problems, use shielded cables. For secondary power lines and signal lines, use twisted-pair cables.

Mounting notes

Mounting location	Inner wall of the room to be ventilated, not in niches, not behind curtains, not above or near heat sources, and not exposed to direct light from spot lights. Do not expose the sensor to direct solar radiation. Seal the end of the conduit at the sensor to prevent false measurements due to drafts through the conduit.
Mounting instructions	Mounting instructions are enclosed in the package.

Disposal

The device is considered an electronics device for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic garbage.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Technical data

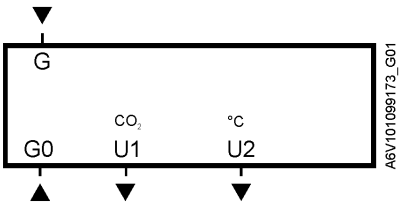
Power supply	Operating voltage	AC 24 V ±20 % or DC 15…35 V (SELV) or AC/DC 24 V class 2 (US)
	Frequency	50/60 Hz at AC 24 V
	External supply line protection (EU)	Fuse slow max. 10 A or Circuit breaker max. 13 A Characteristic B, C, D according to EN 60898 or Power source with current limitation of max. 10 A
	Power consumption	<1.7 VA, typ. <0.5 VA
Cable lengths for measuring signal	Measuring range	0...2000 ppm
Functional data "CO_2"	Measuring accuracy at 23 °C and 1013 hPa	≤± (60 ppm + 4 % of measured value)
	Long time drift	≤±7 % of measuring range / 5 years (typically)
	Output signal, linear (terminal U1)	DC 0...10 V ≙ 0...2000 ppm, max. ±1 mA
	Recalibration free	8 years
Functional data "Temperature" with QPA1064	Measuring range	0...50 °C
	Measuring accuracy at AC 24 V and 23 °C	±0.5 K
	Output signal, linear (terminal U2)	DC 0...10 V ≙ 0...50 °C, max. ±1 mA
Degree of protection	Protection degree of housing	IP30 according to EN 60529
	Protection class	III according to EN 60730-1
Electrical connections	Screw terminals for	1× 2.5 mm^2 or 2× 1.5 mm^2
Environmental conditions	Operation to	IEC 60721-3-3
	Climatic conditions	Class 3K3
	Temperature (housing incl. electronics)	0...50 °C
	Humidity	0…95 % r. F (non condensing)
	Mechanical conditions	Class 3M2
	Transport to	IEC 60721-3-2
	Climatic conditions	Class 2K3
	Temperature	−25...+70 °C
	Humidity	<95 % r. F.
	Mechanical conditions	Class 2M2

Materials and colors	Cover	ASA + PC, NCS S 0502-G (white) equates to RAL9010
	Housing	ASA + PC, NCS 2801-Y43R (grey) equates to RAL7035
	Mounting plate	PC, NCS 2801-Y43R (grey) equates to RAL7035
	Sensor (complete)	Silicone free
	Packaging	Corrugated cardboard
Directives and Standards	Product standard	EN 60730-1 Automatic electrical controls for household and similar use
	Electromagnetic compatibility (Applications)	For use in residential, commerce, light-industrial and industrial environments
	EU Conformity (CE)	CE1T1961xx *)
	RCM Conformity	CE1T1961en_C1 *)
	UL	UL 873, http://ul.com/database
Environmental compatibility	The product environmental declaration CE1E1961*) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).	
Weight	Incl. packaging	Approx. 0.10 kg

*) The documents can be downloaded from http://siemens.com/bt/download.

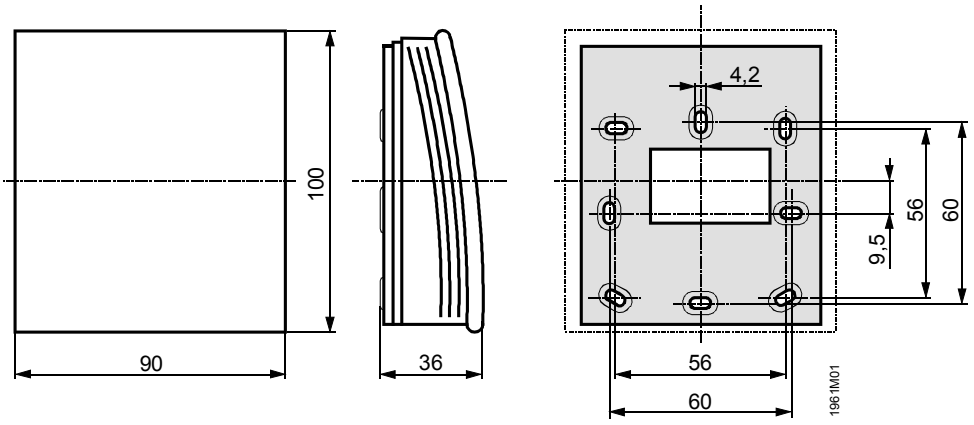
Connection terminals

QPA10x4



G	System potential AC 24 V (SELV) or DC 15...35 V
G0	System neutral and measuring neutral
U1, U2	Signal output DC 0...10 V

Dimensions



Dimensions in mm

Drilling plan

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