

# Smart Dupline® CO<sub>2</sub>, Temperature and Humidity Sensors Type SHSUXXXX

CARLO GAVAZZI



- Bus-powered CO<sub>2</sub>, temperature and humidity sensors
- Wall mounting
- CO<sub>2</sub> measuring range: 0 to 2000 ppm
- Temperature measuring range: -20 to 50 °C
- Humidity measuring range: 0 to 100 %RH
- Low current consumption
- Easy installation
- Smart Dupline® protocol

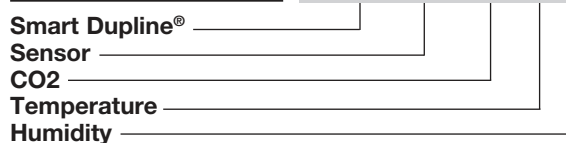
## Product Description

The SHSUXXXX line are bus-powered room sensors for wall-mounting. They are available in different combinations of CO<sub>2</sub>, temperature and relative humidity. The only connection needed for

the sensor is the Dupline® 2-wire cable. Several sensors can be multi-dropped via the same Dupline® 2-wire bus, thereby simplifying the wiring to the controller significantly.

## Ordering Key

SH SU CO T H



## Type Selection

Module type	Indication	Supply: Bus-powered
CO <sub>2</sub> + Temperature	None	SHSUCOT
CO <sub>2</sub> + Temperature + Humidity	None	SHSUCOTH
Temperature + Humidity	None	SHSUTH
Temperature	None	SHSUT

## Supply Specifications

Power Supply	Supplied by Dupline®
Power on delay	≤ 3 s

## Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	
SHSUCOT	10 mA
SHSUCOTH	10 mA
SHSUTH	2 mA
SHSUT	2 mA

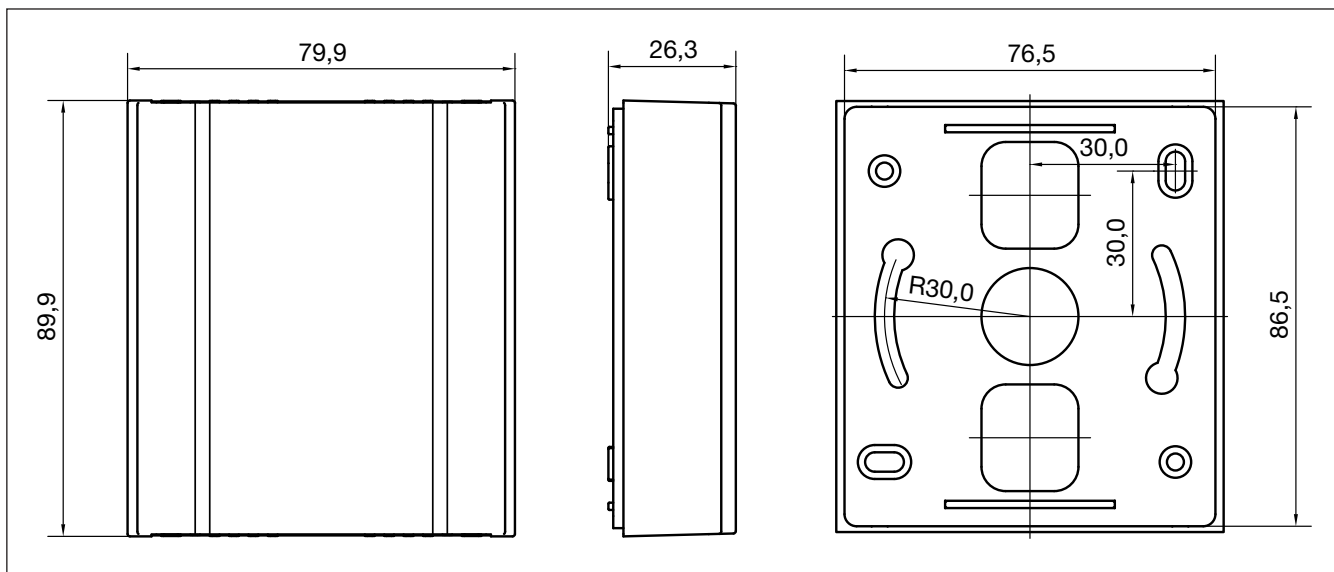
## Input specifications

<b>CO<sub>2</sub></b>	
Measurement principle	Non-Dispersive Infrared Technology (NDIR)
Sensing element	E+E Dual Source Infrared System
Signal range	0 to 2000 ppm
Accuracy	< ± (50ppm +2% of measuring value)
(@ 25°C and 1013mbar)	Typ 300 s
Response time	Typ. 2ppm CO <sub>2</sub> /°C (0...50°)
Temperature dependence	Typ. 20ppm / year
Long term stability	
<b>Temperature</b>	
Signal range	-20 to 50 °C
Inaccuracy	+/-0,5°C
Sample rate	5 s
<b>Humidity</b>	
Signal range	0 to 100 %RH
Inaccuracy	30%..70% : +/-3%
	0%..100%: +/-5%
Sample rate	5 s

## General Specifications

<b>Environment</b>			
Pollution degree	2(IEC 60664-1, par. 4.6.2)	- Burst immunity	EN61000-4-4
Operating temperature	-20 to +50°C (-4 to +122°F)	- Surge	EN61000-4-5
Storage temperature	-40 to +70°C (-40 to + 158°F)	- Conducted radiofrequency	EN61000-4-6
<b>Humidity</b> (non-condensing)	0 - 90% (not-condensing)	- Power frequency magnetic fields	EN61000-4-8
<b>Housing</b>		- Voltage dips, variations, interruptions	EN61000-4-11
Material	ABS	<b>Emission</b>	
Colour	White matt	- Conducted and radiated emissions	CISPR 22 (EN55022), cl.B
<b>Dimensions</b> (h x w x d)	80 x 90 x 26 mm	- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
<b>Protection degree</b>	IP20	- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)
<b>Terminal block</b>		<b>Approvals</b>	CE
Dupline® bus	2 x spring terminal		cULus according to
Cross-sectional area	Terminal: max. 1.5 mm <sup>2</sup>		UL60950
<b>EMC</b>			
Immunity	EN61000-6-2		
- Electrostatic discharge	EN61000-4-2		
- Radiated radiofrequency	EN61000-4-3		

## Dimensions



## Wiring Diagram

