Smart Dupline®
CO2, Temperature and Humidity Sensors
Type SHSUXXXX

- **Bus-powered CO2, temperature and humidity sensors**
- **Wall mounting**
- **CO2 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 CO2, 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

- **Smart Dupline®**
- **Sensor**
- **CO2**
- **Temperature**
- **Humidity**

Type Selection

Module type	Indication	Supply: Bus-powered
CO2 + Temperature	None	SHSUCOT
CO2 + 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

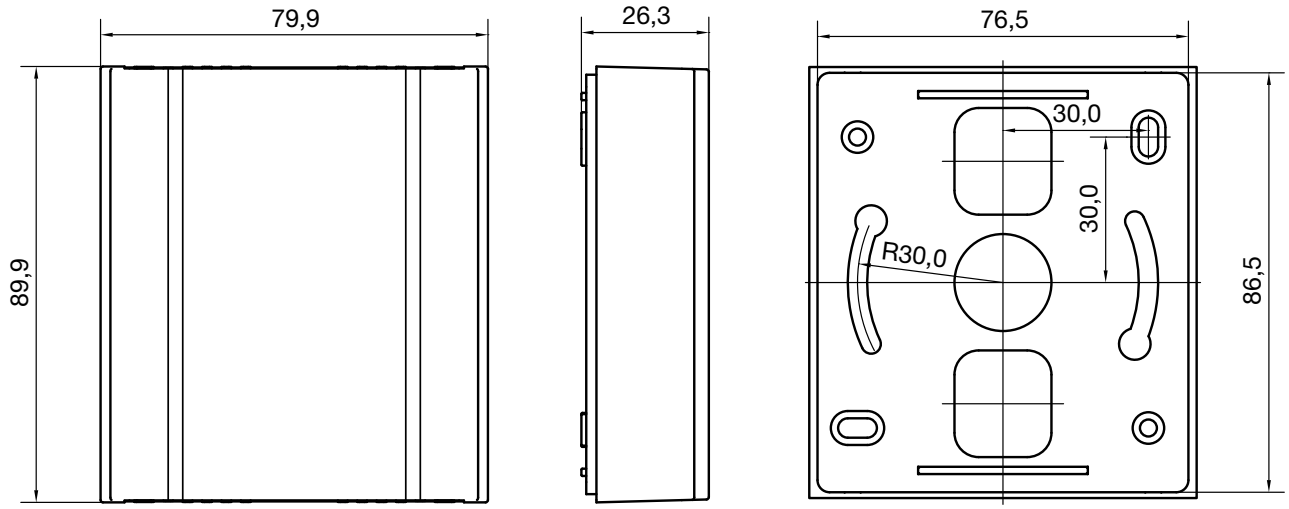
Input specifications

CO2	
Measurement principle	Non-Dispersive Infrared Technology (NDIR)
Sensing element	E+E Dual Source Infrared System
Signal range	0 to 2000 ppm
Accuracy (@ 25°C and 1013mbar)	< ± (50ppm +2% of measuring value)
Response time	Typ 300 s
Temperature dependence	Typ. 2ppm CO2/°C (0...50°)
Long term stability	Typ. 20ppm / year
Temperature	
Signal range	-20 to 50 °C
Inaccuracy	+/-0,5°C
Sample rate	5 s
Humidity	
Signal range	0 to 100 %RH
Inaccuracy	30%..70% : +/-3% 0%..100%: +/-5%
Sample rate	5 s

General Specifications

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

Dimensions



Wiring Diagram

Module seen from the flipside