

# Smart Dupline® CO<sub>2</sub>, Temperature and Humidity Sensors w. Display Type SHSUXXXD



- 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
- LCD Display for showing measured values
- Touch function to activate back-lighting and change signal type
- Low current consumption
- Easy installation
- Smart Dupline® protocol

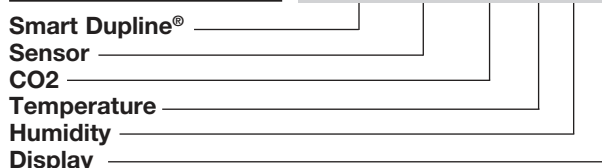
## Product Description

The SHSUXXXD 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 sensors have a LCD display for showing the measured values. By activating the touch button in the front the LED backlight is turned on and the signal type to be shown can be changed. 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. The address assignment and the setup of the display operating mode are performed over the bus by using the SBWEB/SHWEB PC-based programming tool.

## Ordering Key

**SH SU CO T H D**



## Type Selection

Module type	Indication	Supply: Bus-powered
CO <sub>2</sub> + Temperature	Display	SHSUCOTD
CO <sub>2</sub> + Temperature + Humidity	Display	SHSUCOTH D
Temperature + Humidity	Display	SHSUTH D
Temperature	Display	SHSUTD

## 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	
SHSUCOTD	10 mA
SHSUCOTH D	10 mA
SHSUTH D	5 mA
SHSUTD	5 mA

## Input specifications

CO <sub>2</sub>	
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 CO <sub>2</sub> /°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

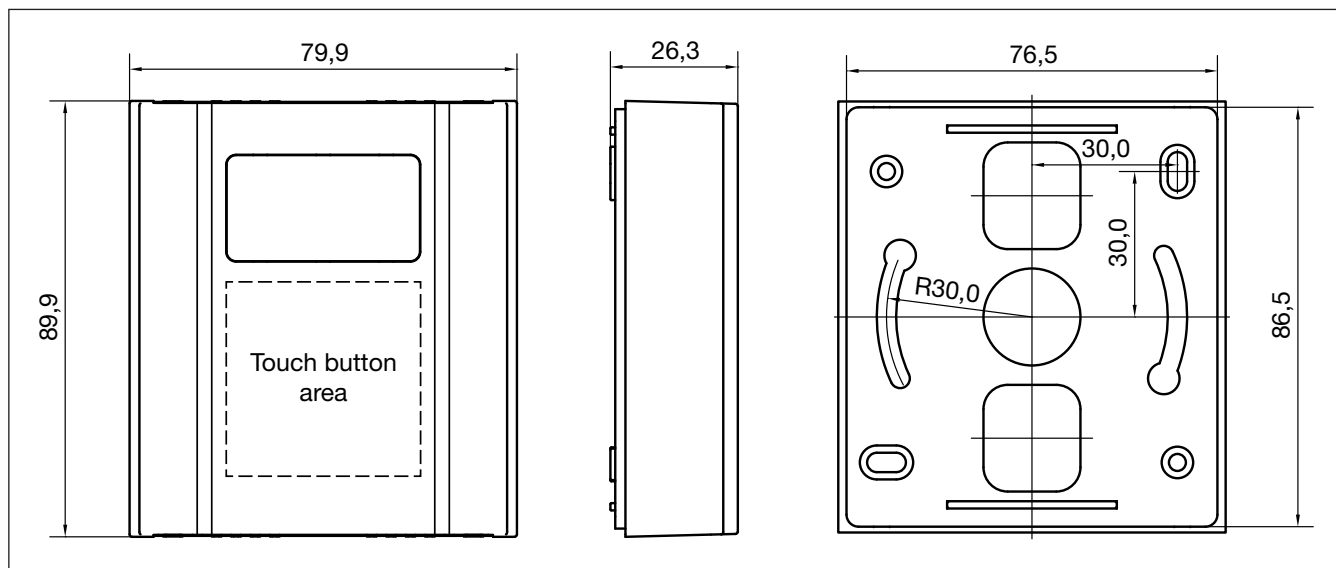
## Touch button

- When the touch button in the front is activated the LCD display turns on with backlighting.
- When activated again the display changes to show the next signal.
- Backlighting switches off after 30s without activations and the home variable is shown.
- The “home signal” is selectable by configuration tool
- The time-out period is selectable by configuration tool

## General Specifications

<b>Environment</b>		<ul style="list-style-type: none"> <li>- Burst immunity</li> <li>- Surge</li> <li>- Conducted radiofrequency</li> <li>- Power frequency magnetic fields</li> <li>- Voltage dips, variations, interruptions</li> </ul>	EN61000-4-4 EN61000-4-5 EN61000-4-6  EN61000-4-8  EN61000-4-11
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)	Emission <ul style="list-style-type: none"> <li>- Conducted and radiated emissions</li> <li>- Conducted emissions</li> <li>- Radiated emissions</li> </ul>	CISPR 22 (EN55022), cl.B CISPR 16-2-1 (EN55016-2-1) CISPR 16-2-3 (EN55016-2-3)
<b>Humidity</b> (non-condensing)	0 - 90% (not-condensing)		
<b>Housing</b>		<b>Approvals</b>	
Material	ABS	CE	
Colour	White matt	cULus according to UL60950	
<b>Dimensions</b> (h x w x d)	80 x 90 x 26 mm		
<b>Protection degree</b>	IP20		
<b>Terminal block</b>			
Dupline® bus	2 x spring terminal		
Cross-sectional area	Terminal: max. 1.5 mm <sup>2</sup>		
<b>EMC</b>			
Immunity	EN61000-6-2		
- Electrostatic discharge	EN61000-4-2		
- Radiated radiofrequency	EN61000-4-3		

## Dimensions



## Wiring Diagram

