Smart Dupline®
CO2, Temperature and Humidity Sensors w. RGB LED
Type SHSUXXXXL

- **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**
- **“Traffic light LED indication” for CO2 level**
- **Low current consumption**
- **Easy installation**
- **Smart Dupline® protocol**

Product Description

The SHSUXXXXL line are bus-powered room sensors for wall-mounting. They are available in different combinations of CO2, temperature and relative humidity. The sensors have a “traffic light” LED which is used to indicate the CO2 level in green, amber or red colour. 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 definition of CO2 threshold levels are performed over the bus by using the SBWEB/SHWEB PC-based programming tool.

Ordering Key

SH SU CO T H L

- **Smart Dupline®**
- **Sensor**
- **CO2**
- **Temperature**
- **Humidity**
- **LED 3-colour indication**

Type Selection

Module type	Indication	Supply: Bus-powered
CO2 + Temperature	RGB LED	SHSUCOTL
CO2 + Temperature + Humidity	RGB LED	SHSUCOTHL

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	
SHSUCOTL	10 mA
SHSUCOTHL	10 mA

RGB LED

By means of the SBWEB/SHWEB configuration tool it is possible to set the CO2 thresholds (green to yellow and yellow to red) to automatically light the LED in green, yellow or red colour depending on CO2 level.

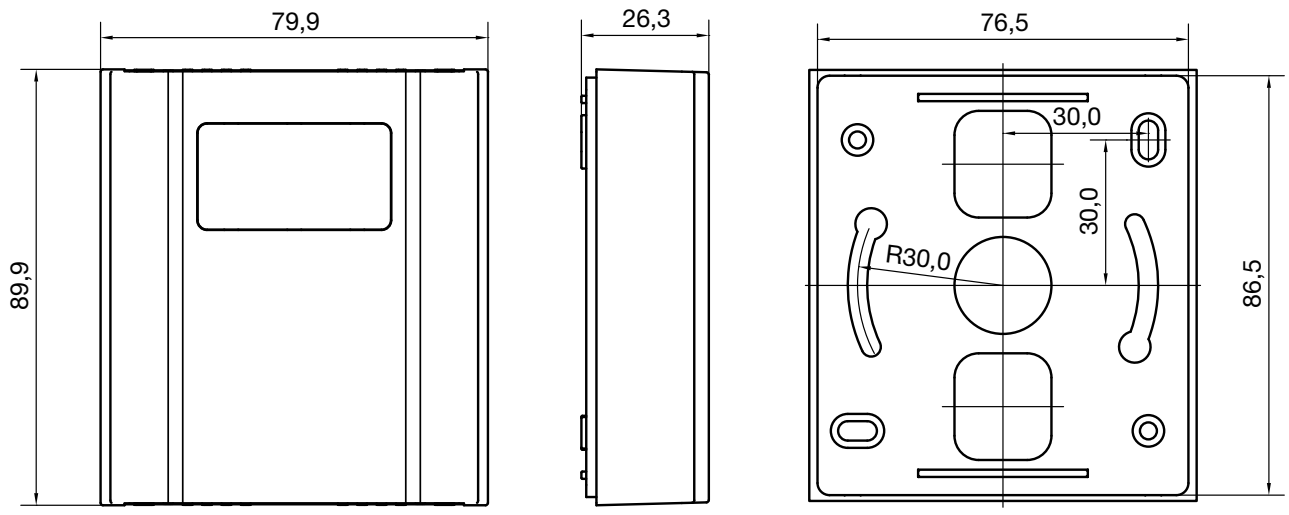
Input specifications

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

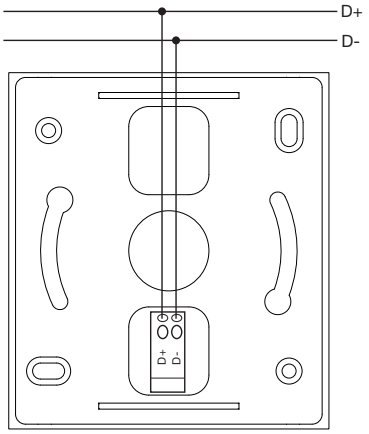
Environment	
Pollution degree	2(IEC 60664-1, par. 4.6.2)
Operating temperature	-20 to +50°C (-4 to +122°F)
Storage temperature	-40 to +70°C (-40 to + 158°F)
Humidity (non-condensing)	0 - 90% (not-condensing)
Housing	
Material	ABS
Colour	White matt
Dimensions (h x w x d)	80 x 90 x 26 mm
Protection degree	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



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