

Smart Dupline® CO₂, Temperature and Humidity Sensors w. Display Type SHSUXXXD

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

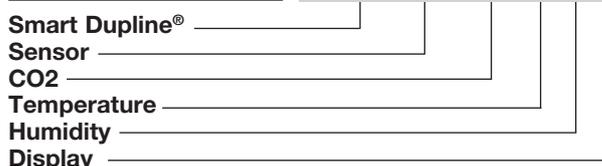
Product Description

The SHSUXXXD line are bus-powered room sensors for wall-mounting. They are available in different combinations of CO₂, 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 ₂ + Temperature | Display | SHSUCOTD |
| CO ₂ + 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

| | |
|--------------------------------|---|
| 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 CO ₂ /°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 |

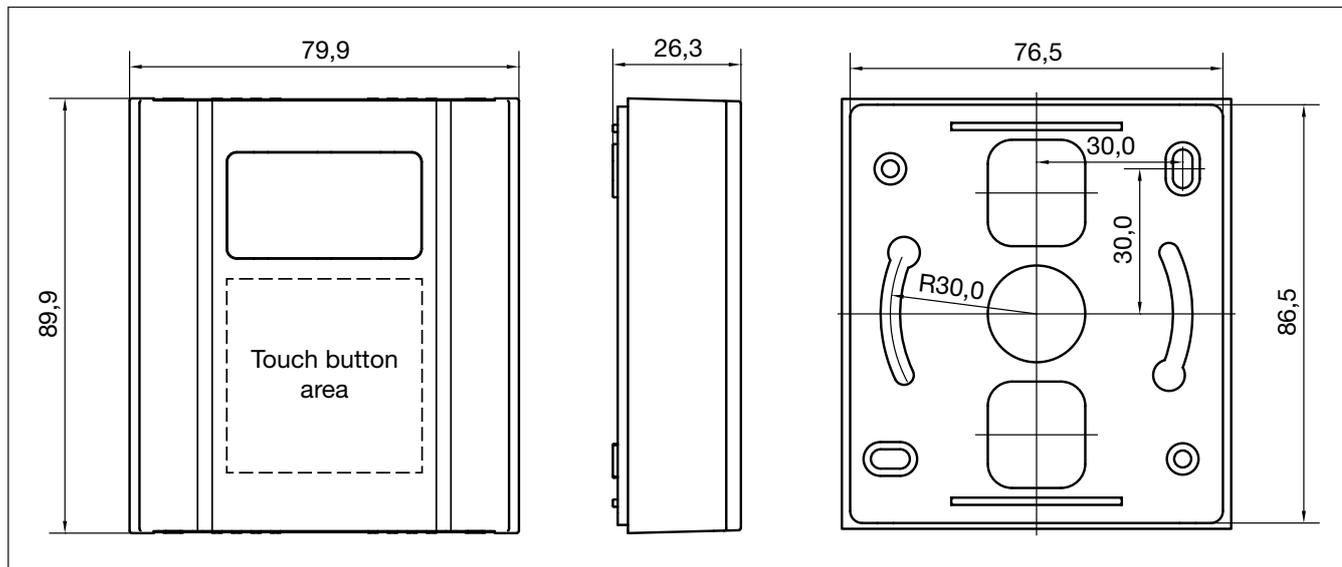
Touch button

- 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

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

Dimensions



Wiring Diagram

