



SMART-Sensor™ EPD

Programmable Sensor

## Monitor your space

A complement to any room, the Reliable Controls SMART-Sensor (SS3-E) Electronic Paper Display (EPD) delivers a modern, networked sensor solution that allows you to connect with up to ten configurable parameters related to your space.



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Better by design

[www.reliablecontrols.com/SS3-E](http://www.reliablecontrols.com/SS3-E)

## Tech Specs

### Supply Voltages (from controller)

- SS3-E - 5 VDC @ 15 mA
- -CO2 option adds 10 mA
- -FL option adds 4 mA
- -IO option adds 10 mA
- -OC option adds 0.2 mA

### Temperature Specifications

- 12-bit A/D converter
- User calibrated to  $\pm 0.1^\circ\text{C}$  ( $0.18^\circ\text{F}$ ) accuracy
- Range, SS3-E:  $0^\circ\text{C}$  to  $50^\circ\text{C}$  ( $32^\circ\text{F}$  to  $122^\circ\text{F}$ )
- Range, SS3-E-IO:  $-40^\circ\text{C}$  to  $120^\circ\text{C}$  ( $-40^\circ\text{F}$  to  $250^\circ\text{F}$ )

### Display

- 200 x 200 pixel
- 23 mm x 23 mm ( $1\frac{5}{16}"$  x  $1\frac{5}{16}"$ )
- Black and White

### Multi-Language Support

- Supports seven different languages

### CO<sub>2</sub> Sensor (for -CO2 models)

- Automatic background calibration period of 8 days
- Non dispersive infrared optical sensor
- 0–3276 ppm range
- Accuracy  $\pm 50$  ppm
- Non Linearity < 1% of full scale
- Power: adds 10 mA to the base SS3-E

### Front Light (for-FL models)

- White LED front light (4 mA)

### Humidity Sensor (for -H models)

- 10–90% range
- $\pm 3\%$  RH max from 20 to 80%,  $\pm 2\%$  typical, see table

### Inputs

- Dedicated temperature sensor
- 2 thermistor or dry contact (on -IO models)

### Outputs (for -IO models)

- 2 digital MOSFET relays
- 24 VAC @ 0.5 A

### Occupancy Sensor (for -OC models)

- Passive infrared radiation (PIR) sensor
- 64 detection zones
- $94^\circ$  horizontal range /  $82^\circ$  vertical range
- 5 m (16.4 ft.) max. detection distance

### Wiring Terminals

- 14 to 26 AWG (2.08 mm<sup>2</sup> to 0.13 mm<sup>2</sup>)
- Stranded or solid core
- Copper conductors only

### Dimensions

#### Base model:

- 12 cm L x 7 cm W x 1.9 cm H ( $4\frac{3}{4}"$  L x  $2\frac{3}{4}"$  W x  $\frac{3}{4}"$  H)

#### CO2 model:

- 12 cm L x 7 cm W x 2.5 cm H ( $4\frac{3}{4}"$  L x  $2\frac{3}{4}"$  W x 1" H)

### Weight

- 0.086 kg (0.19 lb.)

### Ambient Limits

- Operating:  $0^\circ\text{C}$  to  $50^\circ\text{C}$  ( $32^\circ\text{F}$  to  $122^\circ\text{F}$ )
- Shipping:  $-25^\circ\text{C}$  to  $60^\circ\text{C}$  ( $-13^\circ\text{F}$  to  $140^\circ\text{F}$ )
- Humidity: 10% to 90% RH non-condensing

## Features

### Aesthetic Design

- Slim profile
- Installs into standard electrical box

### Multiple Screen Styles

- Home screen for default space conditions
- List screen for viewing all programmed objects
- Accessibility screen displays all values and state icons in large format

### Easy Programming

- 10 programmable display objects (e.g. inputs, outputs, or values)
- Object values can be programmed for adjustment by the user, or as display only
- SS3-E objects can be configured to display on the home screen
- Icons for display: On, Off, Auto, Manual, Cool, Heat, Occupancy, Fan, and Fan Speed
- Up to 7 objects can be displayed simultaneously

### Connection & Addressing

- Configure network address of SS3-E using customized button combination
- Valid addresses are 1–16
- Four wire connection

### Built-in Configuration Tools

- User enabled configuration tools allow access to MSet Tool, Flow Tool, and Diagnostics Tool

### Language Library - The SMART-

Sensor EPD hosts an onboard language library containing over 90 common industry words and phrases in seven different languages. Users can select from the following:

- English
- French
- Spanish
- Portuguese
- German
- Italian
- Simplified Chinese

### Optional CO<sub>2</sub>

- 0–3276 ppm  $\pm 50$  ppm NDIR sensor

### Optional Front Light

- EPD screen glows faintly in low light (night) conditions while in use, then turns off after 10 seconds of inactivity

### Optional Humidity

- Accurate onboard humidity sensor

### Optional I/O

- Up to 2 thermistor or dry contact inputs, and up to 2 digital MOSFET outputs

### Optional Occupancy

- Compact sensor, ideal for detecting the motion of a person up to 5 m (16 ft.) away

### Warranty

- 5 years

### Certification

- CE
- FCC CFR 47 Part 15/B
- ICES-3 (B)
- UL 916 Listed

## Ordering

### SS3-E (base model)

- SMART-Sensor with dedicated 10k thermistor onboard, warm gray color

### Options

- CO2 adds CO<sub>2</sub> sensor
- FL adds front light
- H adds humidity sensor
- IO adds 2 inputs and 2 MOS-FET outputs
- OC adds occupancy sensor /W for white enclosure (eg.SS3-E-H/W)

### Mounting Hardware Included

- 2 X 6-32 X 1" Wafer head Phillips drive screws with #6 star washer
- 2 X  $\frac{1}{16}"$  hex drive 6-32 X  $\frac{5}{16}"$  set screws

### Accessories

#### SSX

- SMART-Sensor Expansion

#### SS3-EP

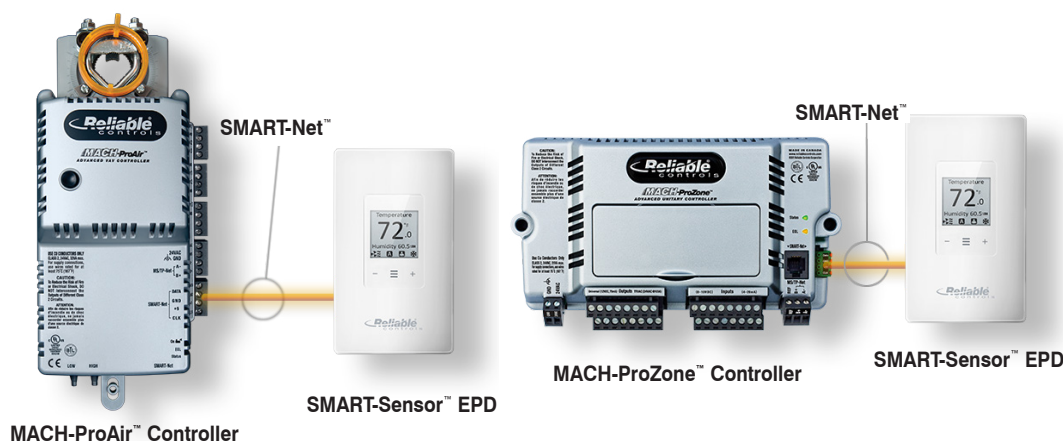
- SS3 Extender Plate, warm gray color

#### SS3-EP/W

- SS3 Extender Plate, white color

Not all options are available together.  
See submittal sheet for valid combinations.

## APPLICATION DIAGRAM



SMART-Sensor Setup

Name: Sensor # 1

Display Mode: Normal (default)

Language: English

Time Format: 12 Hours

Secondary Point

☐ Enable

Worksheet Row: 3

Abbreviation:

☐ Auto Blanking  
☐ Disable Dealer Menu  
☐ Display C/F Switch

Calibration

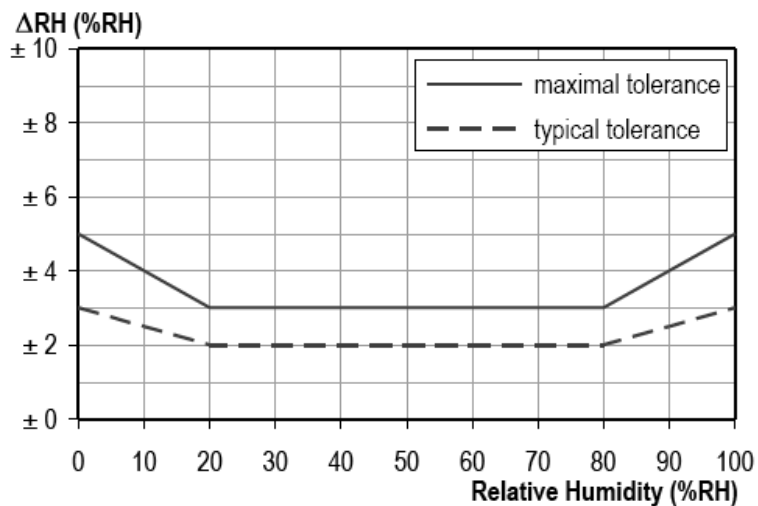
Temperature: 0

Humidity: 0

OK

CANCEL

SMART-Sensor Setup



Dealer Information: