

# Monitor your space

A complement to any room, the Reliable Controls® SMART-Sensor™ (SS) is a very versatile room sensor that communicates digitally, saving hard inputs in the host controller.

## SMART-Sensor™

#### Tech Specs

#### Supply Voltages (from controller)

- SS 5 VDC @ 5 mA
- -IO option adds 10 mA
- -CO2 option adds 2 mA
- -OC option adds 0.2 mA

#### **Temperature Specifications**

- 12-bit A/D converter
- User calibrated to ± 0.1 °C (0.18 °F) accuracy
- Range, SS: -40 °C to 40 °C (-40 °F to 185 °F)
- Range, SS-IO: -40 °C to 120 °C (-40 °F to 250 °F)
- Range, SS-P: 0 °C to 50 °C (32 °F to 122 °F)

#### CO2 Sensor (for -CO2 models)

- Non Dispersive Infrared Optical Sensor
- 0-2000 ppm range
- Accuracy ±50 ppm
- Automatic calibration built in
- Non Linearity < 1% of full scale
- Power: adds 2 mA to the base SS

#### Humidity Range (for -H models)

- 10-90% range
- ± 1.8%RH accuracy

#### Inputs

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

#### Outputs (for -IO models)

- 2 on/off TRIAC
- 24 VAC @ 0.5 A

#### Occupancy Sensor (for -OC models)

- Passive Infrared Radiation (PIR) sensor
- 64 detection zones
- 100° horizontal range / 82° vertical
- 5 m (16.4 ft.) max. detection distance

#### **Buttons**

- 2 custom silicone rubber buttons for up/down adjust (-UD models)
- UD buttons not available on model with setpoint slider (-S models)
- 1 custom silicone rubber button for override (-O models)
- 1 custom brass button for override (-P-O model)

#### Wiring Terminals

- 14 to 26AWG (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 2.4 cm H (4 3/4" L x 2 3/4" W x 15/16" H)

#### CO2 model:

12 cm L x 7 cm W x 3.2 cm H (4 <sup>3</sup>/<sub>4</sub>" L x 2 <sup>3</sup>/<sub>4</sub>" W x 1 <sup>1</sup>/<sub>4</sub>" H)

#### Plate Model:

11.4 cm L x 7 cm W x 0.4 cm H (4 <sup>1</sup>/<sub>2</sub>" L x 2 <sup>3</sup>/<sub>4</sub>" W x <sup>3</sup>/<sub>16</sub>" H)

#### Weight

- SS: 0.086 kg (0.19 lb.)
- SS-P: 0.073 kg (0.16 lb.)

#### **Features**

#### **Aesthetic Design**

- Smooth contoured lines
- Slim profile

#### **Easy Programming**

Simply drag and drop points from the host controller onto the SS worksheet to configure

#### Connection & Addressing

- Configure network address of SS using 4 pole DIP switch
- Valid addresses are 1-16
- Four wire connection to SS-P
- Four or six wire connection
  - (six wire required for use with X-Port-2™)

#### **Network Access**

An RJ-11 connector on the bottom provides access to the host network (X-Port-2 required, not available on -S, -P models)

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

0-2000 ppm ±50 ppm NDIR sensor

#### **Optional Humidity**

Accurate onboard humidity sensor

#### Optional I/O

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

#### **Optional Override Button**

Use to override unoccupied mode

#### **Optional Occupancy**

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

#### **Optional Setpoint Slider**

Linear potentiometer with warm/ cool decal

#### **Optional Up/Down Buttons**

Use up/down buttons to adjust setpoint

#### **Plate Model**

Mounts to a standard single electrical device box

#### Warranty

- 5 years
- 1 year for humidity sensor and CO, sensor

#### Certification

FCC CFR 47 Part 15/B

#### Ordering

#### SS (base model)

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

#### **Options for SS**

- -CO2 adds CO<sub>2</sub> sensor
- -H adds humidity sensor
- -IO adds 2 inputs and 2 TRIAC ouputs
- -O adds override button
- -OC adds occupancy sensor
- -S adds setpoint slider
- -UD adds setpoint up and down buttons
- /W for white enclosure (eg.SS-H/W)

#### SS-P (plate model)

SMART-Sensor with dedicated 10k thermistor onboard. tamper-proof stainless steel design

#### **Options for SS-P**

-O adds override button

### Accessories

#### SSX

SMART-Sensor Expansion

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

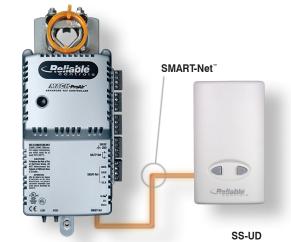
#### **Ambient Limits**

SS:

- Operating: -40 °C to 40 °C (-40 °F to 104 °F)
- Shipping: -40 °C to 60 °C (-40 °F to 140 °F)

APPLICATION DIAGRAMS

- SS-P: Operating: 0 °C to 50 °C (32 °F to 122 °F)
- Shipping: 0 °C to 50 °C (32 °F to 122 °F)



MACH-ProAir™ Controller

## SMART-Net" (4) Reliable (4)

MACH-ProZone™ Controller

SS-P

Dealer Information: