



X-SENS-VOC



TEMPERATURE SENSOR



MOTION DETECTOR



AIR QUALITY SENSOR



DEW POINT MONITOR

## X-SENS

### SENSORS FOR X-AIRCONTROL ZONE MODULES AND OTHER EQUIPMENT

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

- Combined temperature and humidity sensor
- Dew point monitor
- Air quality sensor
- Motion detector
- Splitter

## Application



### Application

- Type X-SENS sensors for use with X-AIRCONTROL and other control systems
- Can be connected to X-AIR-ZMO zone modules and X-AIR-ZMAS master modules
- Duct temperature sensor for supply and extract air
- Combined temperature and humidity sensor for extract air ducts
- Air quality sensor used as a duct sensor for measuring the concentration of volatile organic compounds (VOC)
- Air quality sensor for measuring the CO<sub>2</sub> content in the room air and, when used as a room sensor, for measuring the humidity
- Dew point monitor for chilled ceilings etc.
- Motion detector (occupancy)
- Four-way splitter for the connection of four sensors or control panels (Modbus)

## Description



### Variants

- TEMP-RH-EXH: Combined temperature and humidity sensor for extract air
- TEMP-PT1000: Duct temperature sensor (PT1000)
- VOC: Air quality sensor (VOC)
- CO2-RH: Combined CO<sub>2</sub> and humidity sensor
- DEWPT: Dew point monitor
- PIR-SM: 180° motion detector
- PIR-FM: 360° motion detector
- SPLITTER: Four-way splitter for the connection of four sensors or control panels (Modbus)

### Maintenance

- Maintenance-free as construction and materials are not subject to wear
- Checking and cleaning is recommended, in particular if the device is used in a room or in an extract air duct
- Regular cleaning from dust is recommended

## INFORMACIÓN TÉCNICA

### Function, Technical data, Specification text, Order code



#### Combined temperature and humidity sensor

##### Functional description

X-SENS-TEMP-RH-EXH sensors are control components for integration with control systems such as X-AIRCONTROL.

The sensor consists of two sensor heads for measuring temperature and relative humidity. The duct sensor variant is intended for use in circular or rectangular extract air ducts.

Measuring ranges are -40 to 120 °C and 0 to 100% relative humidity.

A Modbus RTU data interface is used to transmit measured values to the control system.

A plug-in connection cable with an RJ12 plug simplifies installation.

The zone module automatically recognises the sensor (plug and play).

#### Duct temperature sensor (PT1000)

##### Functional description

X-SENS-TEMP-PT1000 temperature sensors are control components for integration with control systems such as X-AIRCONTROL.

The temperature sensor is a PT1000 sensor. The duct sensor variant is intended for use in circular or rectangular supply air ducts, or preferably in extract air ducts, as an alternative to a room temperature sensor.

Measuring range: -40 to 85 °C.

The zone module automatically recognises the temperature sensor (plug and play).

#### Air quality sensor (VOC)

##### Functional description

X-SENS-VOC air quality sensors are control components for integration with control systems such as X-AIRCONTROL.

The air quality sensor measures the concentration of volatile organic compounds such as alcohols, aldehydes, ketones, esters, terpenes, aromatic compounds, and alkenes. The duct sensor variant is intended for use in circular or rectangular extract air ducts.

Measuring range: 450 to 2000 ppm.

A Modbus RTU data interface is used to transmit measured values to the control system.

A plug-in connection cable with an RJ12 plug simplifies installation.

The zone module automatically recognises the sensor (plug and play).

## **Combined CO<sub>2</sub> and humidity sensor**

### **Functional description**

X-SENS-CO2-RH sensors are control components for integration with control systems such as X-AIRCONTROL.

The sensor consists of two sensor heads for measuring CO<sub>2</sub> concentration and relative humidity. The room sensor variant is intended for use in a room. The precision of CO<sub>2</sub> concentration measurements is maintained by cyclical self calibration.

Measuring ranges are 0 to 2000 ppm and 0 to 100% relative humidity.

Measured values are transmitted to the control system via 0 – 10 V DC analogue signals.

The zone module automatically recognises the sensor (plug and play).

## **180° motion detector**

### **Functional description**

X-SENS-PIR-SM motion detectors are control components for integration with control systems such as X-AIRCONTROL.

The motion detector includes a PIR sensor (passive infrared) for detection of people in a room, i.e. occupancy. The flush mounted variant for mounting on a wall has an operational range of 180°.

The condition (i.e. if the room is occupied or not) is transmitted to the control system via a volt-free digital output.

## **360° motion detector**

### **Functional description**

X-SENS-PIR-FM motion detectors are control components for integration with control systems such as X-AIRCONTROL.

The motion detector includes a PIR sensor (passive infrared) for detection of people in a room, i.e. occupancy. The surface mounted variant for mounting on a ceiling has an operational range of 360°.

The condition (i.e. if the room is occupied or not) is transmitted to the control system via a volt-free digital output.

## **Dew point monitor**

### **Functional description**

X-SENS-DEWPT dew point monitors are control components for integration with control systems such as X-AIRCONTROL.

The dew point monitor contains a humidity sensor for measuring the relative humidity near the dew point (100% rh). The goal is to ensure that the dew point is not reached, i.e. that condensation is avoided.

The condition is transmitted to the control system via a volt-free digital output.

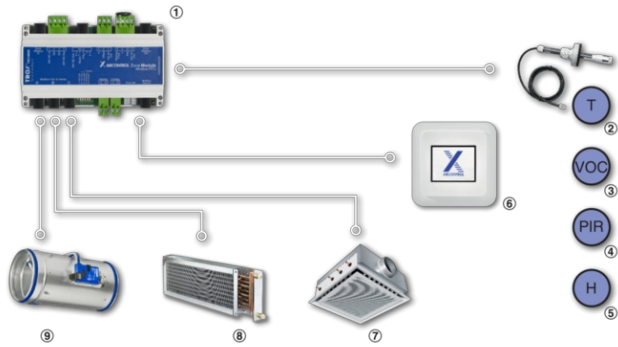
## **Four-way splitter**

### **Functional description**

X-SENS-SPLITTER four-way splitters are used to connect up to three sensors and actuators to an interface, e.g. to an interface of a zone module within X-AIRCONTROL.

The four-way splitter can also serve as an adapter to connect air quality and temperature sensors to terminals in case the connection cables have bare wire ends. The actual connection to the zone modules is done with RJ12 plugs.

## **X-AIRCONTROL zone**



- ① Zone module
- ② Temperature sensor
- ③ Air quality sensor
- ④ Motion detector
- ⑤ Humidity sensor
- ⑥ Control panel
- ⑦ Cooling, e.g. with an active chilled beam
- ⑧ Heating, e.g. with a heating coil
- ⑨ Volume flow control

#### X-SENS-TEMP-RH-EXH

Supply voltage	24 V DC $\pm$ 25%, from the zone module
Power rating	0.22 W
	Temperature measurement
Measuring range	-40 to 120 °C
Measurement error	0.25 K (15 – 40 °C)
	Humidity measurement
Measuring range	0 – 100% rh
Measurement error	<5% rh, <2% rh (10 – 90% rh)
Long term drift	0.5% rh per year
Installed length	50 – 250 mm
Operating temperature	- 20 to 50 °C
Max. humidity	5 – 95% rh, no condensation
IEC protection class	III (protective extra-low voltage)
Protection level	IP 54 (sensor head IP 32)
Connecting cable	7 m, with RJ12 plug
Installation location	Circular and rectangular ducts
Weight	250 g

**X-SENS-TEMP-PT1000**

<b>Sensor</b>	PT1000
<b>Resistance</b>	1000 $\Omega$ at 0 °C
<b>Measurement error</b>	0.5 K (-40 to 15 °C) 0.725 K (40 to 85 °C)
<b>Installed length</b>	116 mm
<b>Operating temperature</b>	- 40 to 100 °C
<b>Max. humidity</b>	5 – 95% rh, no condensation
<b>IEC protection class</b>	III (protective extra-low voltage)
<b>Protection level</b>	IP 32
<b>Connecting cable</b>	4 m, bare wire ends
<b>Installation location</b>	Circular and rectangular ducts
<b>Weight</b>	250 g

**X-SENS-VOC**

<b>Supply voltage</b>	24 V DC $\pm$ 25%, from the zone module
<b>Power rating</b>	0.46 W
<b>Measuring range</b>	450 – 2000 ppm
<b>Measurement error</b>	<150 ppm
<b>Start-up time</b>	15 min
<b>Response time</b>	5 min
<b>Installed length</b>	65 – 105 mm
<b>Operating temperature</b>	0 – 50 °C
<b>Max. humidity</b>	5 – 95% rh, no condensation
<b>IEC protection class</b>	III (protective extra-low voltage)
<b>Protection level</b>	IP 54 (sensor head IP 20)
<b>Connecting cable</b>	7 m, with RJ12 plug
<b>Installation location</b>	Circular and rectangular ducts
<b>Weight</b>	175 g

**X-SENS-CO2-RH**

<b>Supply voltage</b>	24 V AC/DC, from the zone module
<b>Power rating</b>	1.2 W
	CO <sub>2</sub> measurement
<b>Measuring range</b>	0 – 2000 ppm
<b>Measurement error</b>	±30 ppm
<b>Start-up time</b>	10 min
	Humidity measurement
<b>Measuring range</b>	0 – 100% rh
<b>Measurement error</b>	3% rh (20 – 80% rh)
<b>Long term drift</b>	<10% rh per year
<b>Operating temperature</b>	0 – 50 °C
<b>Max. humidity</b>	5 – 95% rh, no condensation
<b>IEC protection class</b>	III (protective extra-low voltage)
<b>Protection level</b>	IP 30
<b>Colour</b>	RAL 9010, pure white
<b>Installation location</b>	Wall installation
<b>Dimensions</b>	80 × 105 × 23.5 mm
<b>Weight</b>	69 g

X-SENS-PIR-SM

Supply voltage	24 V AC/DC $\pm$ 10%, from the zone module
Sensor	PIR (passive infrared)
Operational range	180°
Detection range	8 m; 4 m with people sitting
Installation, distance from floor	1.1 to 2.2 m (4 m max.)
Operating temperature	- 25 to 55 °C
Max. humidity	5 – 95% rh, no condensation
IEC protection class	III (protective extra-low voltage)
Protection level	IP 30
Connection	Screw terminals
Colour	RAL 9010, pure white
Installation location	Wall installation on a $\varnothing$ 60 mm junction box
Dimensions	88 × 88 × 64 mm
Weight	98 g

#### X-SENS-PIR-FM

Supply voltage	24 V AC/DC $\pm$ 10%, from the zone module
Sensor	PIR (passive infrared)
Operational range	360°
Detection range	8 m; 4 m with people sitting
Installation, distance from floor	2.5 to 3.0 m (10 m max.)
Operating temperature	- 25 to 55 °C
Max. humidity	5 – 95% rh, no condensation
IEC protection class	III (protective extra-low voltage)
Protection level	IP 30
Connection	Screw terminals
Colour	RAL 9010, pure white
Installation location	Wall installation
Dimensions	98 mm, 48 mm protruding beyond the surface
Weight	104 g

#### X-SENS-DEWPT

Supply voltage	24 V AC/DC $\pm$ 20%, from the zone module
Power rating	1.0 VA
Switching point	92 $\pm$ 4% rh at 25 °C
Hysteresis	5% rh
Response time	3 minutes max.
Exposure to condensation	30 minutes max.
Switch output	Volt-free contact, 230 V AC max., 1 A max.
Operating temperature	0 – 50 °C
IEC protection class	III (protective extra-low voltage)
Protection level	IP 30
Installation location	Casing suitable for installation on a wall or ceiling, sensor casing suitable for chilled surfaces
Weight	85 g

#### X-SENS-SPLITTER

Operating temperature	0 to 50 °C
IEC protection class	III (protective extra-low voltage)
Protection level	IP 20
Connection	4 RJ12 sockets and 8 spring-loaded terminals, 1.5 mm <sup>2</sup>
Installation location	Switch cabinet, wall or ceiling
Fixing	On a mounting rail
Dimensions	46 × 78 × 45
Weight	60 g

#### Combined temperature and humidity sensor

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Combined temperature and humidity sensor for rectangular and circular extract air ducts.

Ready-to-operate sensor which consists of a casing with flange, a protective tube with two sensor heads, and a connecting cable with RJ12 plug.

Modbus RTU data interface for the transmission of measured values to the control system.

The zone module automatically recognises the sensor (plug and play).

#### Materials and surfaces

- Plastic casing

#### Technical data

- Supply voltage: 24 V DC  $\pm$  25%, from the zone module
- Power rating: 0.22 VA



#### Temperature measurement

- Measuring range: –40 to 120 °C
- Measurement error: 0.25 K (15 to 40 °C)

#### Humidity measurement

- Measuring range: 0 to 100% rh
- Measurement error: <5 % rh, <2 % rh (10 to 90% rh)
- Long term drift: 0.5% rh per year
  
- Installed length: 50 to 250 mm
- Operating temperature: –20 to 50 °C
- Max. humidity: 5 to 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 54 (sensor head IP 32)
- Connecting cable: 7 m, with RJ12 plug
- Installation location: Circular and rectangular ducts

#### Duct temperature sensor (PT1000)

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Temperature sensor for rectangular and circular extract air ducts.

Ready-to-operate sensor which consists of a protective tube with flange, a sensor head and a connecting cable.

The zone module automatically recognises the temperature sensor (plug and play).

#### Materials and surfaces

- Protective tube made of plastic

#### Technical data

- Supply voltage from the zone module
- Sensor: PT1000
- Resistance: 1000 Ω at 0 °C
- Measurement error: 0.5 K (–40 to 15 °C), 0.725 K (40 to 85 °C)
- Installed length: 116 mm
- Operating temperature: –40 to 100 °C
- Max. humidity: 5 to 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 32
- Connecting cable: 4 m, bare wire ends
- Installation location: Circular and rectangular ducts

#### Air quality sensor (VOC)

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Sensor for measuring the concentration of volatile organic compounds in rectangular and circular supply or extract air ducts.

Ready-to-operate sensor which consists of a protective tube with flange, a sensor head, and a connecting cable with RJ12 plug.

Modbus RTU data interface for the transmission of measured values to the control system.

The zone module automatically recognises the temperature sensor (plug and play).

#### Materials and surfaces

- Plastic casing

#### Technical data

- Supply voltage: 24 V DC ± 25%, from the zone module
- Power rating: 0.46 VA
- Measuring range: 450 to 2000 ppm
- Measurement error: <150 ppm

- Start-up time: 15 minutes
- Response time: 5 minutes
- Installed length: 65 to 105 mm
- Operating temperature: 0 to 50 °C
- Max. humidity: 5 – 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 54 (sensor head IP 20)
- Connecting cable: 7 m, with RJ12 plug
- Installation location: Circular and rectangular ducts

### Combined CO<sub>2</sub> and humidity sensor

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Sensor for measuring the CO<sub>2</sub> concentration and humidity in rooms.

Ready-to-operate sensor which consists of a casing with two sensor heads and connection terminals.

The zone module automatically recognises the sensor (plug and play).

### Materials and surfaces

- Plastic casing

### Technical data

- Supply voltage: 24 V AC/DC, from the zone module
- Power rating: 1.2 VA

### CO<sub>2</sub> measurement

- Measuring range: 0 to 2000 ppm
- Measurement error: 30 ppm
- Start-up time: 10 minutes

### Humidity measurement

- Measuring range: 0 to 100% rh
- Measurement error: 3% rh (20 to 80% rh)
- Long term drift: <10% rh per year
- Operating temperature: 0 to 50 °C
- Max. humidity: 5 to 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 30
- Colour: RAL 9010, pure white
- Installation location: Wall
- Dimensions: 80 × 105 × 23.5 mm

### 180° motion detector

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Motion detector (occupancy).

Ready-to-operate detector which consists of a casing and a PIR sensor (passive infrared).

Switch output (volt-free contact) for the transmission of the detected condition (occupied or not occupied) to the control system.

### Materials and surfaces

- White plastic casing

### Technical data

- Supply voltage: 24 V AC/DC ± 10%, from the zone module
- Sensor: PIR (passive infrared)
- Operational range: 180°
- Detection range: 8 m; 4 m with people sitting

- Installation location: Preferably 1.1 to 2.2 m above the floor (4 m max.)
- Operating temperature: -25 to 55 °C
- Max. humidity: 5 to 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 30
- Connection: Screw terminals
- Colour: RAL 9010, pure white
- Installation location: Wall installation on a Ø60 mm junction box
- Dimensions: 88 × 88 × 64 mm

### 360° motion detector

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Motion detector (occupancy).

Ready-to-operate detector which consists of a casing and a PIR sensor (passive infrared).

Switch output (volt-free contact) for the transmission of the detected condition (occupied or not occupied) to the control system.

#### Materials and surfaces

- White plastic casing

#### Technical data

- Supply voltage: 24 V AC/DC ± 10%, from the zone module
- Sensor: PIR (passive infrared)
- Operational range: 360°
- Detection range: 8 m; 4 m with people sitting
- Installation location: Preferably 2.5 to 3.0 m above the floor (10 m max.)
- Operating temperature: -25 to 55 °C
- Max. humidity: 5 to 95% rh, no condensation
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 30
- Connection: Screw terminals
- Colour: RAL 9010, pure white
- Installation location: Wall
- Dimensions: 98 mm, 48 mm protruding beyond the surface

### Dew point monitor

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Sensor for monitoring the dew point on chilled surfaces.

Ready-to-operate sensor which consists of a casing and a sensor head in a separate casing.

Switch output (volt-free contact) for the transmission of the detected condition (occupied or not occupied) to the control system.

#### Materials and surfaces

- Plastic casing

#### Technical data

- Supply voltage: 24 V AC/DC ± 20%, from the zone module
- Power rating: 1.0 VA
- Switching point: 92 ± 4% rh at 25 °C
- Hysteresis: 5% rh
- Response time: 3 minutes max.
- Exposure to condensation: 30 minutes max.
- Switch output: Volt-free, 230 V AC max. 1 A max.
- Installation location: Casing suitable for installation on a wall or ceiling, sensor casing suitable for chilled surfaces

### Four-way splitter

Components for the measurement and recording of various quantities and conditions in systems for single room control and centralised control – such as X-AIRCONTROL

Four-way splitter for the connection of four sensors or control panels (Modbus).

The four-way splitter can also serve as an adapter to connect air quality and temperature sensors to terminals in case the connection cables have bare wire ends. The actual connection to the zone modules is done with RJ12 plugs.

#### Materials and surfaces

- Plastic casing

#### Technical data

- Operating temperature: 0 to 50 °C
- IEC protection class: III (protective extra-low voltage)
- Protection level: IP 20
- Connection: 4 RJ12 sockets and 8 spring-loaded terminals, 1.5 mm<sup>2</sup>
- Installation location: Switch cabinet, wall or ceiling
- Fixing: On a mounting rail
- Dimensions: 46 × 78 × 45 mm

# X-SENS – VOC



#### 1 Type

X-SENS Sensor

#### 2 Variant

**TEMP-RH-EXH** Combined temperature and humidity sensor for extract air  
**TEMP-PT1000** Duct temperature sensor (PT1000)  
**VOC** Air quality sensor (VOC)  
**CO2-RH** Combined CO<sub>2</sub> and humidity sensor  
**DEWPT** Dew point monitor  
**PIR-SM** 180° motion detector  
**PIR-FM** 360° motion detector  
**SPLITTER** Four-way splitter for the connection of four sensors or control panels (Modbus)

Temperature sensor, Air quality sensor, Motion detector, Other



#### X-SENS-TEMP-RH-EXH

##### Application

- X-SENS-TEMP-RH-EXH temperature and humidity sensor to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- Temperature and relative humidity measurement
- Sensor for rectangular and circular extract air ducts
- Measuring ranges –40 to 120 °C and 0 to 100 % rh
- Plug-in connection for supply voltage and for communication with the zone module
- The zone module automatically recognises the sensor (plug and play)

##### Parts and characteristics

- Casing with flange to be screw-fixed to the installation surface

- Protective tube with sensor heads, for installation into a duct
- Plug-in cable
- Modbus RTU data interface

#### Materials and surfaces

- Plastic casing

#### X-SENS-TEMP-PT1000

##### Application

- X-SENS-TEMP-PT1000 temperature sensor to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- Temperature measurement
- Sensor for rectangular and circular extract air ducts
- Measuring range  $-40$  to  $85$  °C
- The zone module automatically recognises the temperature sensor (plug and play)

##### Parts and characteristics

- Protective tube with sensor head and flange to be screw-fixed to the installation surface
- Connecting cable

#### Materials and surfaces

- Protective tube made of plastic

#### X-SENS-TEMP-EXH



#### X-SENS-TEMP-PT1000



## X-SENS-VOC

### Application

- X-SENS-VOC air quality sensor to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- Measurement of the concentration of volatile organic compounds
- Sensor for rectangular and circular extract air ducts
- Measuring range: 450 to 2000 ppm
- Plug-in connection for supply voltage and for communication with the zone module
- The zone module automatically recognises the air quality sensor (plug and play)

### Parts and characteristics

- Casing with flange to be screw-fixed to the installation surface
- Protective tube with sensor head, for installation into a duct
- Plug-in cable
- Modbus RTU data interface

### Materials and surfaces

- Plastic casing

## X-SENS-CO2-RH

### Application

- X-SENS-CO2-RH combination sensor to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- Measurement of the CO<sub>2</sub> concentration and relative humidity
- Room sensor for use inside a room
- Measuring ranges 0 to 2000 ppm and 0 to 100% rh
- The zone module automatically recognises the sensor (plug and play)

### Parts and characteristics

- Casing with sensors for surface mounting on walls
- 0 – 10 V DC analogue signals

### Materials and surfaces

- Plastic casing

## X-SENS-VOC



## X-SENS-CO2-RH



## X-SENS-PIR-SM

### Application

- X-SENS-PIR-SM motion detectors to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- For detecting if there are people in a room (occupancy)
- 180° operational range
- Casing to be flush mounted into walls

### Parts and characteristics

- Casing with PIR sensor, to be flush mounted into walls
- Volt-free digital output

### Materials and surfaces

- White plastic casing

## X-SENS-PIR-FM

### Application

- X-SENS-PIR-SM motion detectors to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules
- For detecting if there are people in a room (occupancy)
- 360° operational range
- Casing to be surface mounted on ceilings

### Parts and characteristics

- Casing with PIR sensor to be surface mounted on ceilings
- Volt-free digital output

### Materials and surfaces

- White plastic casing

## X-SENS-PIR-SM



X-SENS-PIR-FM



X-SENS-DEWPT

**Application**

- X-SENS-DEWPT dew point monitor to be used for X-AIRCONTROL or other systems; can be connected to X-AIR-ZMO zone modules



- Dew point temperature monitoring
- Sensor head for chilled ceilings
- Switching point: 92% rh

#### Parts and characteristics

- Casing to be surface mounted on walls
- Separate sensor casing for chilled surfaces
- Volt-free digital output

#### Materials and surfaces

- Plastic casing

#### X-SENS-SPLITTER

##### Application

- X-SENS-SPLITTER four-way splitter to be used with X-AIRCONTROL or other systems; used to connect sensors and control panels via Modbus
- Adapter used to connect up to four components to terminals in case the connection cables have bare wire ends; also to connect RJ12 plugs.

#### Materials and surfaces

- Plastic casing

#### X-SENS-DEWPT



#### X-SENS-SPLITTER



## Installation details, Basic information and nomenclature



### Installation and commissioning

X-SENS-TEMP-RH-EXH, X-SENS-TEMP-PT1000

- Choose a suitable place for the sensor to mount it inside a duct
- Use the cable to connect the sensor to the zone module
- The zone module automatically recognises the sensor (plug and play)

X-SENS-VOC

- Choose a suitable place for the air quality sensor to mount it inside a duct
- Use the cable to connect the sensor to the zone module
- The zone module automatically recognises the air quality sensor (plug and play)

X-SENS-CO2-RH

- Mount the lower part of the casing to a junction box or to the wall
- Connect the wires
- Attach the upper part of the casing
- The zone module automatically recognises the air quality sensor (plug and play)

X-SENS-PIR-SM

- Ensure that the installation location is suitable for the 180° operational range and for the detection range

- Wall installation: Preferably 1.1 to 2.2 m above the floor (4 m max.)
- Connect the wires
- Mount the lower part of the casing to a junction box or to the wall
- Put the cover on
- Configure the 'motion detector' function on the zone module

#### X-SENS-PIR-FM

- Ensure that the installation location is suitable for the 360° operational range and for the detection range
- Ceiling installation: Preferably 2.5 to 3.0 m above the floor (10 m max.)
- Connect the wires
- Fix the lower part of the casing to the ceiling
- Attach the upper part of the casing and the cover plate
- Configure the 'motion detector' function on the zone module

#### X-SENS-DEWPT

- The sensor casing should be fixed in the coldest area of the chilled surface (measurement location)
- The installation area may be flat or curved (chilled ceiling or circular duct)
- Fix the casing to the wall
- Connect the wires
- Configure the 'dew point monitor' function on the zone module

#### X-SENS-SPLITTER

- Mount the splitter onto a mounting rail
- Plug in the data cable to the zone module (RJ12 plug)
- Plug in the data cables to the sensors and actuators and to the control panel (RJ12)
- The maximum cable length is 30 m.