SENSORS
2021

The power behind **your mission**

Johnson Controls

SENSORS

INDEX

CD-2xx-E00-00

WALL MOUNT - CO$_2$ + TEMPERATURE TRANSMITTER

Johnson Controls offers a Carbon Dioxide (CO$_2$) and temperature wall mount transmitter for measuring the CO$_2$ levels and the relevant temperature. Optional with humidity measurment (CD-3xx-E00-00).

Typical applications are schools, office buildings, hotels, cinemas or similar. This new CO$_2$ transmitter is easy to install and requires no maintenance or field calibration.

The CD-xxx Series incorporates a single beam dual wavelength NDIR CO$_2$ sensor, which compensates for ageing effects, is highly. The SCD Transmitter is available with up to 3 x 0-10V outputs (CO$_2$, Temperature and relative humidity).

FEATURES

- Power Supply 15..35 V = or 19..29 V ~ SELV

- Model: active, 2x 0..10 V or 2x 4..20 mA, temperature + CO$_2$ / active, 3x 0..10V, CO2 + temperature + relative humidity

- Measuring range: CO$_2$: 0..2000 ppm

- Accuracy CO$_2$: ±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)

- Connection electrical: tool-free mountable spring terminal, max. 1,5 mm²

- Calibration: self-calibration, Dual Channel

- Optional with LCD Display
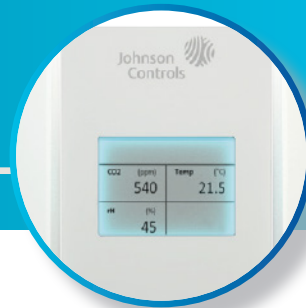
CARBON DIOXIDE

CD-2xx-E00-00 WALL MOUNT - CO$_2$ + TEMPERATURE TRANSMITTER

DIMENSIONS *(in mm)*
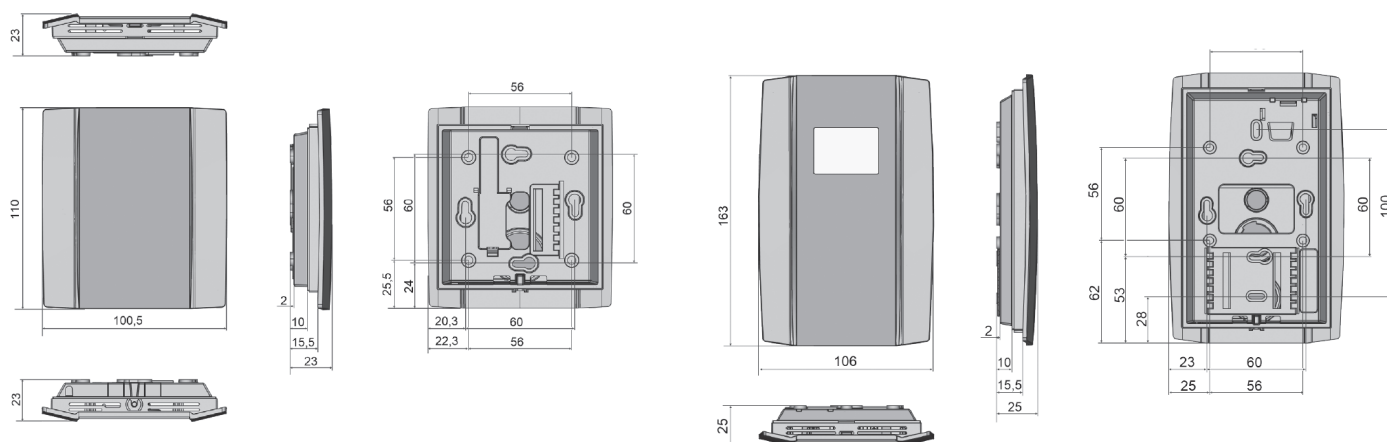
SCD-200-E00-00 / SCD-220-E00-00

SCD-201-E00-00 / SCD-221-E00-00

ORDERING INFORMATION

CODES	MEASURING	TYPE	DISPLAY	ACCURACY CO$_2$	ACCURACY TEMPERATURE	PROTECTION CLASS	POWER SUPPLY	ANALOGUE OUTPUT
SCD-200-E00-00	CO$_2$ + temperature	ROOM	--	±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)	±0,5K (typ. at 21°C)	IP20 according to EN 60529	15..35 V = or 19..29 V ~ SELV	2x 0..10 V, min. load 10 kΩ
SCD-201-E00-00			LCD 29x35 mm with RGB backlight					
SCD-220-E00-00			--				15..35 V = SELV	2x 4..20 mA, max load 500 Ω
SCD-221-E00-00			LCD 29x35 mm with RGB backlight					2x 4..20 mA, max load 500 Ω

CARBON DIOXIDE

CD-3xx-E00-00

WALL MOUNT - CO$_2$ + TEMPERATURE + RELATIVE HUMIDITY TRANSMITTER

Johnson Controls offers a Carbon Dioxide (CO$_2$) and temperature wall mount transmitter for measuring the CO$_2$ levels, relevant temperature and humidity.

Typical applications are schools, office buildings, hotels, cinemas or similar. This new CO$_2$ transmitter is easy to install and requires no maintenance or field calibration.

The CD-cxx Series incorporates a single beam dual wavelength NDIR CO$_2$ sensor, which compensates for ageing effects, is highly The SCD Transmitter is available with up to 3 0-10 V outputs (CO$_2$, Temperature and rel. humidity).

FEATURES

- Power Supply 15..35 V = or 19..29 V ~ SELV
- Model: active, 2x 0..10V, temperature + CO$_2$ / active, 3x 0..10V, CO2 + temperature + relative humidity
- Measuring range CO$_2$: 0..2000 ppm
- Accuracy CO$_2$: ±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)
- Connection electrical: tool-free mountable spring terminal, max. 1,5 mm²
- Calibration: self-calibration, Dual Channel
- Optional with LCD Display

SENSORS
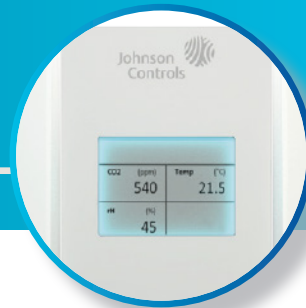
CARBON DIOXIDE

CD-3xx-E00-00 WALL MOUNT - CO2 + TEMPERATURE + RELATIVE HUMIDITY TRANSMITTER

DIMENSIONS *(in mm)*
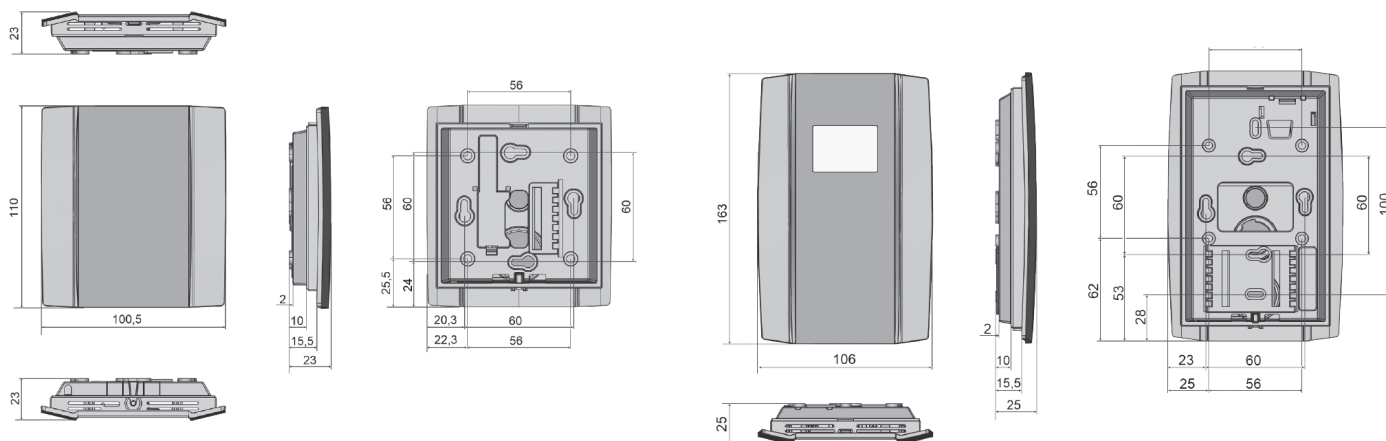
SCD-310-E00-00

SCD-311-E00-00

ORDERING INFORMATION

CODES	MEASURING	TYPE	DISPLAY	ACCURACY CO2	ACCURACY TEMPERATURE	ACCURACY HUMIDITY	PROTECTION CLASS	POWER SUPPLY	ANALOGUE OUTPUT
SCD-310-E00-00	CO₂ + temperature + relative humidity	ROOM	--	±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)	±0,5K (typ. at 21°C)	±2% between 10..90% rH (typ. at 21°C)	IP20 according to EN 60529	15..35 V = or 19..29 V ~ SELV	3x 0..10 V, min. load 10 kΩ
SCD-311-E00-00			LCD 29x35 mm with RGB backlight						

Johnson Controls

SENSORS

CARBON DIOXIDE

CD-Px000

DUCT SENSOR FOR AIR QUALITY

Carbon dioxide gas (CO_2) is a component of the earth's atmosphere.
Although carbon dioxide is invisible and odorless, an increased CO_2 content in the
indoor air leads to fatigue and reduced concentration for humans.

In rooms with high occupancy, such as conference rooms and theatres, the negative effects on humans becomes all the more evident.

The SCD-P series duct mount transmitters are designed for the measurement of Carbon Dioxide (CO_2) in Heating Ventilating and Air Conditioning applications where Demand Control Ventilation (DCV), fresh air and indoor Air Quality (IAQ), and rooftop air handling economizer control systems are often required.

The SCD-Pxxxx sensors incorporate the a dual wavelength NDIR CO_2 sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability.

The SCD-Pxxxx Transmitter is available with CO_2 output 0-10 V or 2x 0..10 V (CO_2 + temperature), optional with passive temperature sensor.

FEATURES

- Dual wavelength non-dispersive infrared technology (NDIR)
- Measuring range 0...2000 ppm
- Accuracy CO_2: ±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)
- Air Speed min. 0,3m/s, max. 12m/s
- Power Supply: 15..35 V = or 19..29 V ~ SELV
- Enclosure: PC, pure white, UV resistant
- Protection class enclosure: IP65 according to EN 60529
- Ambient condition: 0..+50°C, max. 85%, short term condensation

Johnson Controls

SENSORS

CARBON DIOXIDE

CD-Px000 DUCT SENSOR FOR AIR QUALITY

DIMENSIONS *(in mm)*
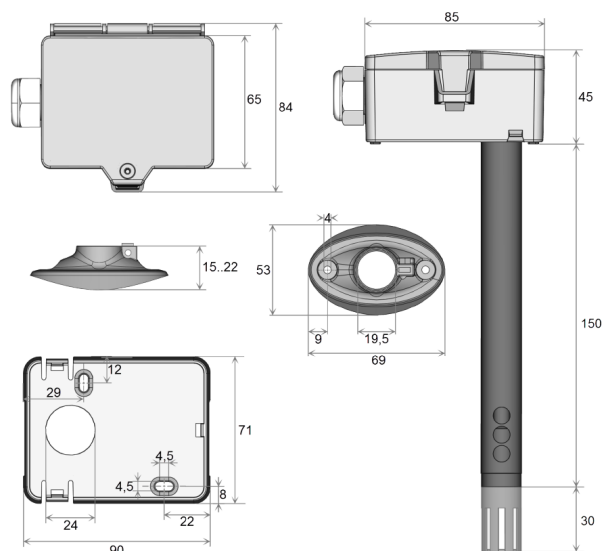
ORDERING INFORMATION

CODES	MEASURING	TYPE	ELEMENT	ACCURACY CO2	ACCURACY TEMPERATURE	PROTECTION CLASS	POWER SUPPLY	ANALOGUE OUTPUT	CO_2 SENSOR
SCD-P1000-00-00	CO_2	DUCT	---	±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)	---	IP65 according to EN 60529	15..35 V = or 19..29 V ~ SELV	1x 0..10 V, min. load 10 kΩ	NDIR (non-dispersive, infrared) with self-calibration, Dual Channel
SCD-P2016-00-00	CO_2 + temperature		PT1000		±0,3°C / 0°C acc. IEC 751 | EN 60751 Class B			2x 0..10 V, min. load 10 kΩ	
SCD-P2010-00-00			---		±0,5 K (typ. at 21°C)				
SCD-P2017-00-00			NTC 10k		±0,22°C / 25°C				

Johnson Controls

SENSORS

CARBON DIOXIDE MODBUS

CD-PxM0

DUCT SENSOR FOR AIR QUALITY - MODBUS

Carbon dioxide gas (CO_2) is a component of the earth's atmosphere. Although carbon dioxide is invisible and odorless, an increased CO_2 content in the indoor air leads to fatigue and reduced concentration for humans.

In rooms with high occupancy, such as conference rooms and theatres, the negative effects on humans becomes all the more evident.

The SCD-P series duct mount transmitters are designed for the measurement of Carbon Dioxide (CO_2) in Heating Ventilating and Air Conditioning applications where Demand Control Ventilation (DCV), fresh air and indoor Air Quality (IAQ), and rooftop air handling economizer control systems are often required.

The SCD-Pxxxx sensors incorporate the a dual wavelength NDIR CO_2 sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability.

The SCD-PxM0 transducer with Modbus interface has 2 additional analogue 0..10 V outputs. Depending on the type, CO_2, VOC, temperature and relative humidity are available as measured variables.

FEATURES

- **Support demand control ventilation**
  Offer potential for 10 to 70% energy savings

- **Single beam dual wavelength NDIR CO2 sensor**
  Highly insensitive to pollution and outstanding long term stability

- **Easy mounting and service**
  No expertise required, the hinged lid housing, the removable cable entry and the removable plug-in terminal reduce installation time and costs

- **High protection grade**
  The IP65 enclosure make it suitable for several environments

Johnson Controls

CARBON DIOXIDE

CD-PxM00 DUCT SENSOR FOR AIR QUALITY - MODBUS
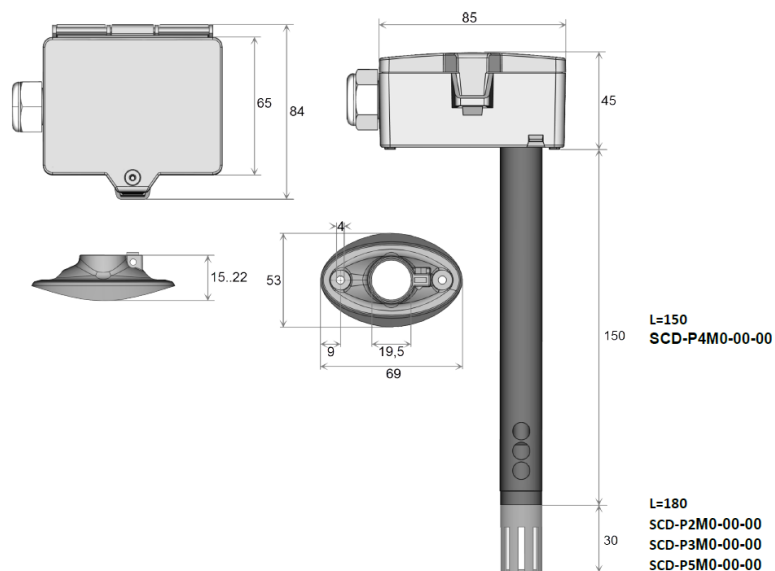
DIMENSIONS *(in mm)*

L=150
SCD-P4M0-00-00

L=180
SCD-P2M0-00-00
SCD-P3M0-00-00
SCD-P5M0-00-00

ORDERING INFORMATION

CODES	MEASURING	TYPE	ACCURACY CO$_2$	ACCURACY TEMPERATURE	ACCURACY RH	PROTECTION CLASS	POWER SUPPLY	NETWORK TECHNOLOGY	CO$_2$ SENSOR	VOC SENSOR
SCD-P2M0-00-00	CO$_2$, Temperature	DUCT	±(50 ppm +3% of measured value) (typ. @ 21°C, 50% rH)	±0,5 K (typ. at 21°C)	---	IP65 according to EN 60529	15..35 V = / 19..29 V ~ SELV	RS485 Modbus	NDIR (non-dispersive, infrared) with self-calibration, Dual Channel	---
SCD-P3M0-00-00	CO$_2$, Temperature, relative humidity				±2% between 10..90% rH (typ. at 21°C)					
SCD-P4M0-00-00	CO$_2$, VOC			--	---					
SCD-P5M0-00-00	CO$_2$, VOC, Temperature, relative humidity			±0,5 K (typ. at 21°C)	±2% between 10..90% rH (typ. at 21°C)					VOC sensor (heated metal oxide semiconductor)

Johnson Controls

SENSORS

CARBON DIOXIDE
MODBUS

CD-xMx-E00-00

WALL MOUNT SENSOR FOR AIR QUALITY - MODBUS

Johnson Controls offers a Carbon Dioxide (CO_2) and temperature wall mount transmitter for measuring the CO_2 levels and the relevant temperature. Optional with humidity measurement.

Typical applications are schools, office buildings, hotels, cinemas or similar. This new CO_2 transmitter is easy to install and requires no maintenance or field calibration.

The SCD series incorporates a single beam dual wavelength NDIR CO_2 sensor, which compensates for ageing effects, is highly insensitive to pollution and offers outstanding long term stability.

The SCD-xM0 series with RS485 Modbus interface is available with up to 4 measuring values (CO_2, VOC, Temperature and rel. humidity).

FEATURES

- **Support demand control ventilation**
  Offer potential for 10 to 70% energy savings
- **Power Supply 15..35 VDC or 19..29 VAC**
  Flexible application
- **Flexible applications**
  CO_2, VOC, Temperature and humidity output suitable for a wider range of applications
- **Snap-on Enclosure**
  Allows a quick and easy mounting of the device and saves installation costs
- **Outstanding long-term stability**
  No maintenance is required.
- **Single beam dual wavelength NDIR CO_2 sensor**
  Highly insensitive to pollution and outstanding long term stability

Johnson Controls

CARBON DIOXIDE

CD-xMx-E00-00 WALL MOUNT SENSOR FOR AIR QUALITY - MODBUS
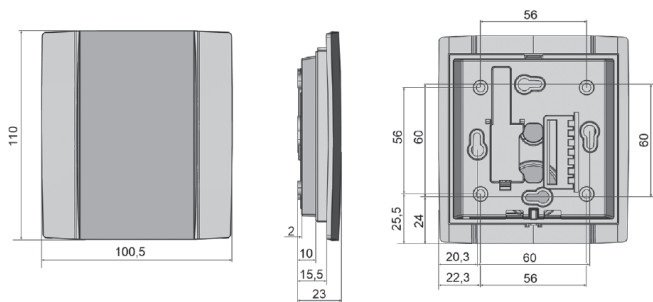
DIMENSIONS *(in mm)*

ORDERING INFORMATION

CODES	MEASURING	TYPE	ACCURACY CO2	ACCURACY TEMPERATURE	ACCURACY RH	PROTECTION CLASS	POWER SUPPLY	NETWORK TECHNOLOGY	SENSOR	VOC SENSOR
SCD-3M0-E00-00	Temperature+ relative humidity +CO_2	ROOM	±50 ppm +3% of measured value (typ. @ 21°C, 50% rH)	±0,5K (typ. at 21°C)	±2% between 10..90% rH (typ. at 21°C)	IP20 according to DIN EN 60529	15..35 V = / 19..29 V ~ SELV	RS485 Modbus	NDIR (non-dispersive, infrared) with self-calibration, Dual Channel	---
SCD-4M0-E00-00	Temperature+ relative humidity +CO_2 + VOC									VOC sensor (heated metal oxide semiconductor)
SCD-5M0-E00-00	CO_2 + VOC									

Johnson Controls

DEW
POINT

HX-9100

DEW POINT SENSOR

The HX-9100 dew point sensor provides warning signal in case of condensation on surfaces such as cold water pipes, cool ceilings and windows.

The HX-9100 can be powered at 15 VDC or 24 VAC, it detects the dew point condition providing an on/off signal to an analog or a digital input of the controller that will override functions in order to prevent the condensation on cooled surfaces.

FEATURES

- Supply voltage: 15 VDC ±10% or 24 VAC ±15%
- Action: 0 to 10 VDC or ON/OFF
- Hysteresis: 1%
- Output: 0.5 VDC max @ RH>90%
- Protection class: IP44

DIMENSIONS *(in mm)*

10
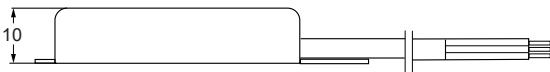
HX-9100-9024 / HX-9100-9A24:
Cable Lenght 1.5 m

50

15
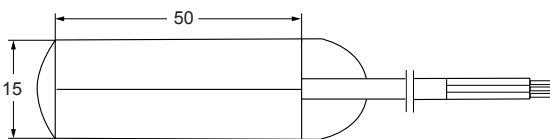
HX-9100-9324:
Cable Lenght 3 m

ORDERING INFORMATION

CODES	ACTION	OUTPUT AT CONDENSATION	CABLE LENGHT	POWER SUPPLY
HX-9100-9A24	0...10 VDC	≤ +0.5 VDC @ RH >90%	1.5 m	15 VDC ±10% or 24 VAC ±15% 24 VDC ±15%
HX-9100-9024	ON/OFF	Open collector closed, 0.5 VDC max @ RH >90%		
HX-9100-9324	ON/OFF	Open collector closed, 0.5 VDC max @ RH >90%	3 m	

Johnson
Controls

DP TRANSMITTERS

FIELD ADJUSTABLE, MULTI-RANGE DIFFERENTIAL PRESSURE TRANSMITTERS

The Delta Pressure transmitter series of Johnson Controls, with its models SDP7000, SDP2500 and SDP2050, offers an accurate and cost-effective solution to monitor the pressure of the air, or non-aggressive gases, in the HVAC applications.

For the best accuracy, each SDP device has field selectable pressure setting within its full range. The pressure measured by the device can be transmitted to the HVAC controller through a proportional output signal.

FEATURES

- Eight field selectable measurement range settings
- Optional display, with field selectable units
- Voltage output signals (0–10 V) or two Proportional output signals, in voltage (0–10 V) or current (4–20 mA)
- Zero calibration, manual or automatic
- Response time setting
- Prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715
- Protection class: IP65
- Factory Calibration Certificate available on request

Johnson Controls

SENSORS

DIFFERENTIAL PRESSURE

DP TRANSMITTERS FIELD ADJUSTABLE, MULTI-RANGE DIFFERENTIAL PRESSURE TRANSMITTERS

ORDERING INFORMATION

CODES	CALIBRATION CERTIFICATE	MEASURING RANGE PRESSURE	ANALOGUE OUTPUT	ACCURACY PRESSURE	CALIBRATION	DISPLAY
SDP0250-C2-AZ-D	0, +25, +50Pa	0..+25 | 0..+50 | 0..+100 | 0..+250 | -25..+25 | -50..+50 | -100..+100 | -150..+150 Pa	1x 0..5 V/0..10 V, min. load 10 kΩ, 1x 4..20 mA, max. load 500 Ω	deviation compared to the reference device ±1 Pa at range <250 Pa measuring range ≤500 Pa: ±5 Pa, measuring range 500..2000 Pa: ±10 Pa ±25 Pa at range >2000 Pa	automatic zero-point calibration	LCD 37,5x31,6 mm, measured values: Pa
SDP0250-C3-AZ-D	0, +50, +100Pa					
SDP0250-C4-AZ-D	0, +125, +250Pa					
SDP0250-C5-AZ-D	-25, 0, +25Pa					
SDP0250-C6-AZ-D	-50, 0, +50Pa					
SDP0250-C7-AZ-D	-100, 0, +100Pa					
SDP2500-C4-AZ-D	0, +250, +500Pa	-100..+100 | 0..+100 | 0..+250 | 0..+500 | 0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 Pa (default)	1x 0..10 V, min. load 10 Ω	deviation compared to the reference device measuring range ≤500 Pa: ±5 Pa, measuring range >500 Pa: ±10 Pa		LCD 37,5x31,6 mm, measured values: Pa
SDP2500-C5-AZ	0, +500, +1000Pa					---
SDP2500-C5-AZ-D	0, +500, +1000Pa					LCD 37,5x31,6 mm, measured values: Pa
SDP2500-C6-AZ-D	0, +750, +1000Pa					
SDP2500-C8-AZ	0, +1250, +2500					---
SDP7000-C8-AZ	0, +3500, +7000Pa	0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 | 0..+3000 | 0..+4000 |	1x 0..5 V/0..10 V, min. load 10 kΩ, 1x 4..20 mA, max. load 500 Ω	deviation compared to the reference device ±1 Pa at range <250 Pa measuring range ≤500 Pa: ±5 Pa, measuring range 500..2000 Pa: ±10 Pa ±25 Pa at range >2000 Pa		---

Johnson Controls

DIFFERENTIAL PRESSURE

DP TRANSMITTERS – FIELD ADJUSTABLE, MULTI-RANGE DIFFERENTIAL PRESSURE TRANSMITTERS

ORDERING INFORMATION

CODES	CALIBRATION CERTIFICATE	MEASURING RANGE PRESSURE	ANALOGUE OUTPUT	ACCURACY PRESSURE	CALIBRATION	DISPLAY
SDP0250-R8-AZ	---	0..+25 | 0..+50 | 0..+100 | 0..+250 | -25..+25 | -50..+50 | -100..+100 | -150..+150 Pa	1x 0..5 V/0..10 V, min. load 10 kΩ, 1x 4..20 mA, max. load 500	deviation compared to the reference device ±1 Pa at range <250 Pa measuring range ≤500 Pa: ±5 Pa, measuring range 500..2000 Pa: ±10 Pa ±25 Pa at range >2000 Pa	automatic zero-point calibration	---
SDP0250-R8-AZ-D						LCD 37,5x31,6 mm, measured values: Pa
SDP2500-R8	---	-100..+100 | 0..+100 | 0..+250 | 0..+500 | 0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 Pa (default) 0..+2000 | 0..+2500 Pa	1x 0..10 V, min. load 10 kΩ	deviation compared to the reference device measuring range ≤500 Pa: ±5 Pa, measuring range >500 Pa: ±10 Pa	---	---
SDP2500-R8-AZ					automatic zero-point calibration	---
SDP2500-R8-AZ-D						LCD 37,5x31,6 mm, measured values: Pa
SDP2500-VA-AZ			1x 0..5 V/0..10 V, min. load 10 kΩ, 1x 4..20 mA, max. load 500			---
SDP2500-R8-D			1x 0..10 V, min. load 10 kΩ		---	LCD 37,5x31,6 mm, measured values: Pa
SDP2500-R8-VA					---	
SDP7000-R8		0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 | 0..+3000 | 0..+4000 | 0..+5000 | 0..+7000 Pa	1x 0..5 V/0..10 V, min. load 10 kΩ, 1x 4..20 mA, max. load 500	deviation compared to the reference device ±1 Pa at range <250 Pa measuring range ≤500 Pa: ±5 Pa, measuring range 500..2000 Pa: ±10 Pa ±25 Pa at range >2000 Pa	---	
SDP7000-R8-AZ					automatic zero-point calibration	
SDP7000-R8-AZ-D						LCD 37,5x31,6 mm, measured values: Pa
SDP7000-R8-D					---	

ACCESSORY (INCLUDED)

- 2 plastic duct flanges
- 4 mounting screws 4x20
- 2 m PVC connection tube

Johnson Controls

SENSORS

DP TRANSMITTERS FIELD ADJUSTABLE, MULTI-RANGE DIFFERENTIAL PRESSURE TRANSMITTERS

DIMENSIONS *(in mm)*
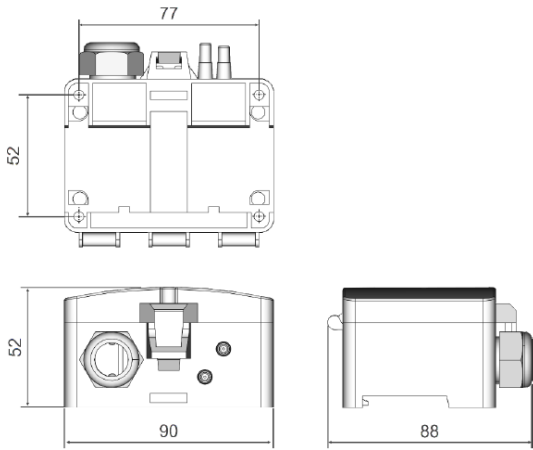
SDP2500-R8
SDP2500-R8-AZ
SDP2500-R8-D
SDP2500-R8-AZ-D
SDP2500-C4-AZ-D

SDP2500-C5-AZ
SDP2500-C5-AZ-D
SDP2500-C6-AZ-D
SDP2500-C8-AZ
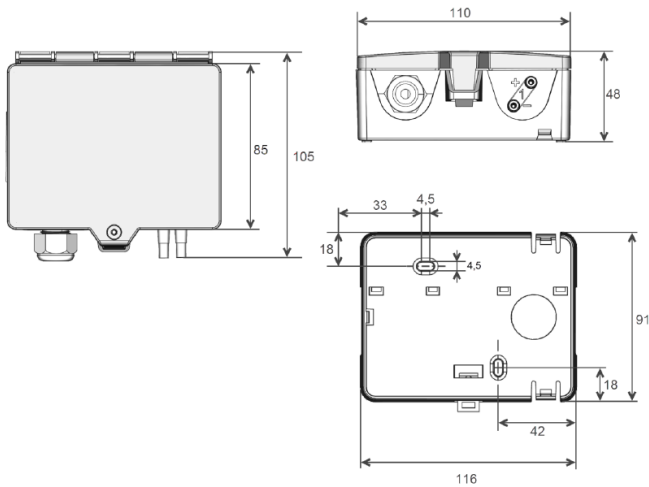
SDP0250-Cx-AZ-D
SDP0250-C2-AZ-D
SDP0250-C3-AZ-D
SDP0250-C4-AZ-D
SDP0250-C5-AZ-D
SDP0250-C6-AZ-D
SDP0250-C7-AZ-D
SDP7000-C8-AZ
SDP0250-R8-AZ

SDP0250-R8-AZ-D
SDP2500-R8-01
SDP2500-R8-AZ-01
SDP7000-R8
SDP7000-R8-AZ
SDP7000-R8-D
SDP7000-R8-AZ-D 0

DIFFERENTIAL PRESSURE

DP TRANSMITTERS M

DIFFERENTIAL PRESSURE TRANSMITTER - MODBUS

The Delta Pressure modbus transmitter series of Johnson Controls, with its models SDP7000, SDP2500 and SDP2050, offers an accurate and cost-effective solution to monitor the pressure of the air, or non-aggressive gases, in the HVAC applications.

The DP series devices can measure pressure from -150 Pa up to 7000 Pa. For the best accuracy, each SDP device has field selectable pressure setting within its full range. The pressure measured by the device, either in differential or static mode, can be transmitted to the HVAC controller through a proportional output signal.

FEATURES

- **Eight field selectable measurement ranges in one device**
  Allow the selection of best measurement range for the application during the commissioning and servicing.

- **Optional backlit display with field selectable pressure units**
  Shows measured pressure for clear local indication in Pa or inchWC.

- **AZ option for automatic zero point calibration**
  Ensure long term accuracy eliminating the need for periodic manual zeroing.

- **Response time selectable**
  Covers customer applications where fast response is required.

- **Easy mounting and service**
  No expertise required, the accessory mounting kits and the field selectable options reduce time and cost.

- **High protection grade**
  IP65 make it suitable for several environments

Johnson Controls

DIFFERENTIAL PRESSURE

DP TRANSMITTER M DIFFERENTIAL PRESSURE TRANSMITTER – MODBUS

DIMENSIONS *(in mm)*
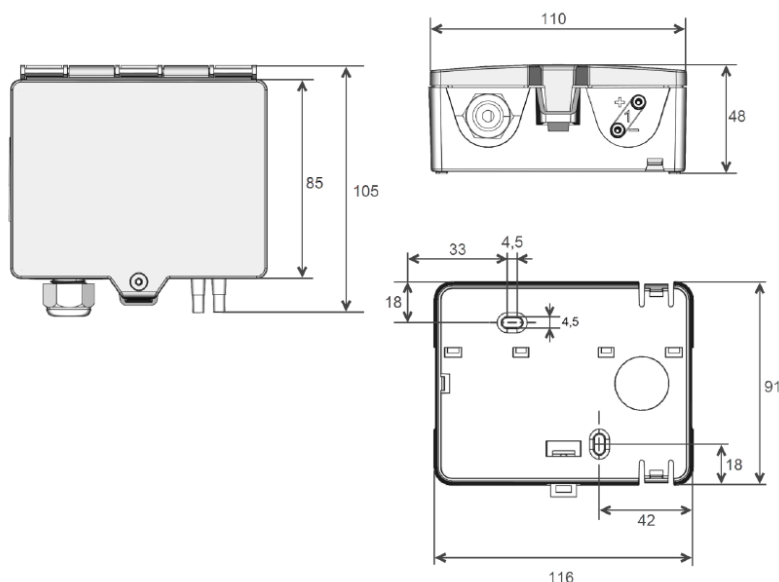
ORDERING INFORMATION

CODES	TYPE	MEASURING RANGE PRESSURE	ANALOGUE OUTPUT	ACCURACY PRESSURE	CALIBRATION	DISPLAY	NETWORK TECHNOLOGY
SDP0250-AZ-D-M	Duct	0..+25 | 0..+50 | 0..+100 | 0..+250 | –25..+25 | –50..+50 | –100..+100 | –150..+150 Pa	2x 0..5 V/0..10 V, min. load 10 kΩ	deviation compared to the reference device ±1 Pa at range <250 Pa measuring range ≤500 Pa: ±5 Pa, measuring range 500..2000 Pa: ±10 Pa ±25 Pa at range >2000 Pa	automatic	LCD 37,5x31,6 mm, measured values: Pa	Modbus
SDP0250-AZ-M							
SDP0250-M					---	---	
SDP2500-AZ-DM		–100..+100 | 0..+100 | 0..+250 | 0..+500 | 0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 Pa			automatic	LCD 37,5x31,6 mm, measured values: Pa	
SDP2500-AZ-M							
SDP2500-M					---	---	
SDP7000-AZ-D-M		0..+1000 | 0..+1500 | 0..+2000 | 0..+2500 | 0..+3000 | 0..+4000 | 0..+5000 | 0..+7000 Pa			automatic	LCD 37,5x31,6 mm, measured values: Pa	
SDP7000-AZ-M							
SDP7000-M					---	---	

Johnson Controls

HT-1300

DUCT HUMIDITY AND TEMPERATURE SENSOR

Specifically designed for HVAC application, the SHT-130x-UD1 sensor is a highly accurate and reliable for measuring relative air humidity and temperature.

The enclosure minimizes installation cost and provides outstanding protection against contamination and condensation, thus ensuring flawless operation. The SHT-130x-UD1 employs the new humidity/temperature sensor with excellent long-term stability and resistance to pollutants. Long term performance is granted by the stainless steel wire mesh fitted in the protection cap, suitable for most common HVAC applications. In combination with a long calibration experience, the HT-130x-UDx provides a humidity measurement accuracy of ±2%.

FEATURES

- Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)
- Humidity Accuracy 2% RH from 10 to 90% RH
- Additional temperature output + optional passive
- Snap-on Enclosure
- SHT-130x-UD1 Duct probes length 140 mm
- SHT-130x-UD1 Protection Class IP65

DIMENSIONS *(in mm)*

PLANT HUMIDITY

HT-1300 DUCT HUMIDITY AND TEMPERATURE SENSOR

SHT-1300-CAP-SG

ORDERING INFORMATION

CODES	ANALOGUE OUTPUTS	ACCURACY RH	TEMPERATURE WORKING RANGE	PASSIVE	SUPPLY VOLTAGE
SHT-1301-UD1	2x 0..10 V (Temperature +rH)	±2% between 10..90% rH	–20..+70°C	---	15..24 V = (±10%) or 24 V ~ (±10%)
SHT-1303-UD1				NTC2,252k	
SHT-1305-UD1				PT100	
SHT-1306-UD1				PT1000	

ACCESSORIES

CODES	DESCRIPTION
SHT-1300-CAP-SG	protective cap + stainless steel wire mesh

Johnson Controls

PLANT
HUMIDITY

HT-130M

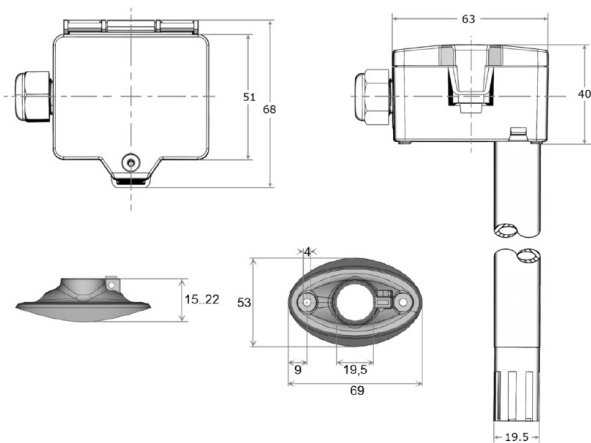DUCT HUMIDITY AND TEMPERATURE SENSOR - MODBUS

Specifically designed for HVAC application, the SHT-130M-UDx modbus sensor is a highly accurate and reliable for measuring relative air humidity and temperature.

The enclosure minimizes installation cost and provides outstanding protection against contamination and condensation, thus ensuring flawless operation. The SHT-130M-UDx employs the new humidity/temperature sensor with excellent long-term stability and resistance to pollutants.

Long term performance is granted by the stainless steel wire mesh fitted in the protection cap, suitable for most common HVAC applications. In combination with a long calibration experience, the SHT-130x-UDx provides a humidity measurement accuracy of ±2%.

FEATURES

- **Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)**
  Flexible application

- **Humidity Accuracy 2% RH from 10 to 90% RH**
  Suitable for a wider range of applications

- **Additional temperature output**
  Suitable for any field controllers

- **Snap-on Enclosure**
  Allows a quick and easy mounting of the device and saves installation costs

- **HT-130M-UDx Duct probes length 140/270 mm**
  Easy to install. No expert required

- **HT-130M-UDx Protection Class IP65**
  It can be mounted in several environments

PLANT HUMIDITY

HT-130M DUCT HUMIDITY AND TEMPERATURE SENSOR - MODBUS

DIMENSIONS *(in mm)*

ORDERING INFORMATION

CODES	TYPE	ANALOGUE OUTPUTS	ACCURACY HUMIDITY	ACCURACY TEMPERATURE	TEMPERATURE WORKING RANGE	NETWORK TECHNOLOGY
SHT-130M-UD1	pipe length 140 mm	2x 0..10 V / 0..5 V, configurable via jumper, min. load 5 kΩ, humidity output configurable to: · relative humidity · enthalpy · absolute humidity · dew point"	±2% between 10..90% rH (typ. at 21°C)	±0,5 K (typ. at 21°C within default measuring range)	default setting: −20..+80°C, adjustable via Modbus"	RS485-Modbus
SHT-130M-UD2	pipe length 270 mm					

Johnson Controls

HT-130M

OUTDOOR HUMIDITY AND TEMPERATURE SENSOR - MODBUS

The SHT-130M-UO sensor with Modbus interface is a highly accurate and reliable sensor for measuring relative humidity and temperature outdoors.

The housing minimises installation costs and provides excellent protection against dirt and condensation, ensuring flawless operation.

The SHT-130M-UO uses the new humidity/temperature sensor with excellent long-term stability and resistance to pollutants. Long-term performance is ensured by the stainless steel wire mesh incorporated into the protective cap, which is suitable for most common HVAC applications.

Combined with long calibration experience, the SHT-130M-UO provides humidity measurement accuracy of ±2%.

FEATURES

- **Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)**
  Flexible application

- **Humidity Accuracy 2% RH from 10 to 90% RH**
  Suitable for a wider range of applications

- **Additional temperature output**
  Suitable for any field controllers

- **Snap-on Enclosur**e
  Allows a quick and easy mounting of the device and saves installation costs

- **SHT-130M Protection Class IP65**
  It can be mounted in several environments

Johnson Controls

PLANT HUMIDITY

HT-130M OUTDOOR HUMIDITY AND TEMPERATURE SENSOR - MODBUS

SHT-1300-CAP-SG

DIMENSIONS *(in mm)*

ORDERING INFORMATION

CODES	TYPE	ANALOGUE OUTPUTS	ACCURACY HUMIDITY	ACCURACY TEMPERATURE	TEMPERATURE WORKING RANGE	NETWORK TECHNOLOGY
SHT-130M-UO	Outdoor	2x 0..10 V / 0..5 V, configurable via jumper, min. load 5 kΩ, humidity output configurable to: · relative humidity · enthalpy · absolute humidity · dew point	±2% between 10..90% rH (typ. at 21°C)	±0,5 K (typ. at 21 °C within default measuring range)	default setting: -20..+80°C, adjustable via Modbus	RS485-Modbus

ACCESSORIES

CODES	DESCRIPTION
SHT-1300-CAP-SG	protective cap + stainless steel wire mesh

Johnson Controls

SENSORS

PLANT
TEMPERATURE

TS-6300

PLANT TEMPERATURE SENSOR

The TS-6300 series temperature sensors provide a passive signal that corresponds to the air or water temperature Heating, Ventilation and Air Conditioning (HVAC) applications.

They are passive resistive signal NTC K2, NTC K10, Pt100 or Pt1000 related to the sensed temperature.

The TS-6300 temperature sensor series has been designed to work as a part of any HVAC control system.

FEATURES

- Wide range of mounting types and signal outputs
- Different length of tubes and wells for duct and immersion applications
- Bayonet mounting system
- For immersion applications, well can be mounted before duct sensor is mounted
- IP54 ingress protection (except cable sensor)
- IP67 ingress protection for cable sensor

Johnson Controls

PLANT TEMPERATURE

TS-6300 PLANT TEMPERATURE SENSOR

DIMENSIONS *(in mm)*

95 mm
79.3 mm
53.2 mm
85 mm
Ø 5 mm
L

L = For this dimensions please refer to the "Ordering information" (next page)

DUCT AND CEILING

95 mm
79.3 mm
53.2 mm
85 mm
Ø 5 mm
20 - 90 mm

STRAP-ON

95 mm
79.3 mm
53.2 mm
Ø 5 mm
1.5 m
85 mm

REMOTE

95 mm
79.3 mm
53.2 mm
85 mm
Ø 5 mm

OUTDOOR

50 mm
Ø 6.0 mm
1.5 m Cable

CABLE

Johnson Controls

PLANT TEMPERATURE

TS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

CODES	OUTPUT	MOUNTING TYPE	LENGHT (mm)	TEMPERATURE RANGE
TS-6370D-A11	0...10 VDC	Duct / immersion	138	-40 to 50°C
TS-6370D-B11			192	
TS-6370D-C11			290	
TS-6370D-D11			446	
TS-6370D-A12			138	-20 to 40°C
TS-6370D-B12			192	
TS-6370D-C12			290	
TS-6370D-D12			446	
TS-6370D-A13			138	0 to 40°C
TS-6370D-B13			192	
TS-6370D-C13			290	
TS-6370D-D13			446	
TS-6370D-A14			138	0 to 100°C
TS-6370D-B14			192	
TS-6370D-C14			290	
TS-6370D-D14			446	
TS-6330D-A10	2K2 NTC	Duct / immersion	138	-40 to 120°C
TS-6330D-B10			192	
TS-6330D-C10			290	
TS-6330D-D10			446	
TS-6340D-A10	10K NTC		138	
TS-6340D-B10			192	
TS-6340D-C10			290	
TS-6340D-D10			446	
TS-6350D-A10	Pt100		138	
TS-6350D-B10			192	
TS-6350D-C10			290	
TS-6350D-D10			446	
TS-6360D-A10	Pt1000		138	
TS-6360D-B10			192	
TS-6360D-C10			290	
TS-6360D-D10			446	

Johnson Controls

PLANT TEMPERATURE

TS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

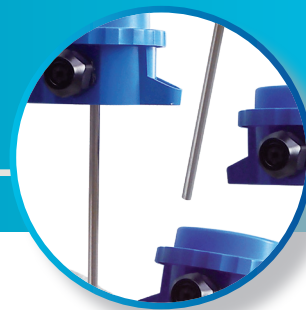| CODES	OUTPUT	MOUNTING TYPE	LENGHT *(mm)*	TEMPERATURE RANGE
TS-6370R-F01	0...10 VDC	Remote sensor	1.5 m cable lenght	-40 to 50°C
TS-6370R-F03				0 to 40°C
TS-6370R-F04				0 to 100°C
TS-6330K-F00	2K2 NTC	Cable sensor		-40 to 100°C
TS-6340K-F00	10K NTC			
TS-6360K-F00	Pt1000			
TS-6370E-001	0...10 VDC	Outdoor	---	-40 to 50°C
TS-6370E-002				-20 to 40°C
TS-6330E-000	2K2 NTC	Outdoor		-40 to 70°C
TS-6340E-000	10K NTC			
TS-6350E-000	Pt100			
TS-6360E-000	Pt1000			
TS-6370S-002	0...10 VDC	Strap-on		-20 to 40°C
TS-6370S-004				0 to 100°C
TS-6330S-000	2K2 NTC	Strap-on		-40 to 100°C
TS-6340S-000	10K NTC			
TS-6350S-000	Pt100			
TS-6360S-000	Pt1000			
TS-6370C-E13	0...10 VDC	Ceiling	36	0 to 40°C
TS-6330C-E10	2K2 NTC	Ceiling		-40 to 70°C
TS-6340C-E10	10K NTC			
TS-6350C-E10	Pt100			
TS-6360C-E10	Pt1000			

Johnson Controls
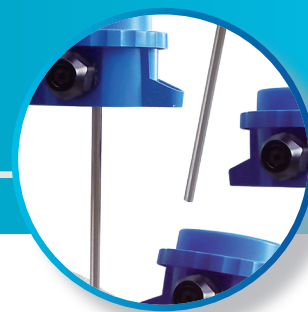
PLANT TEMPERATURE

TS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

OUTDOOR SENSOR GREY

CODES	OUTPUT	MOUNTING TYPE	OPERATING RANGE
TS-6330E-050	2K2 NTC	Outdoor grey enclosure	-40 to 70°C
TS-6340E-050	10K NTC		
TS-6350E-050	Pt100		
TS-6360E-050	Pt1000		
TS-6370E-051	0...10 VDC		-40 to 50°C
TS-6370E-052			-20 to 40°C

ACCESSORIES

CODES	LENGHT *(mm)*	MATERIAL	MOUNTING THREAD	PN
TS-6300W-E200	50 [1]	Brass/Copper	R 1/2"	PN16
TS-6300W-D200	80			
TS-6300W-F200	120			
TS-6300W-G200	150			
TS-6300W-H200	200			
TS-6300W-I200	260			
TS-6300W-E300	50 [1]	Stainless steel	R 1/2"	PN25
TS-6300W-D300	80			
TS-6300W-F300	120			
TS-6300W-G300	150			
TS-6300W-H300	200			
TS-6300W-I300	260			
TS-6300W-E400	50 [1]		G 1/2"	
TS-6300W-D400	80			
TS-6300W-F400	120			
TS-6300W-G400	150			
TS-6300W-H400	200			
TS-6300W-I400	260			

TS-6300D-000	Duct flange kit
TS-6300W-900	Retrofitting thermowell adapter kit

Note

1 For cable sensor only

Johnson Controls

PLANT
TEMPERATURE

STS-6300

PLANT TEMPERATURE SENSOR

The STS-6300 series temperature sensors provide a passive signal that corresponds to the air or water temperature Heating, Ventilation and Air Conditioning (HVAC) applications.

They are passive resistive signal NTC K2, NTC K10, Pt100 or Pt1000 related to the sensed temperature.

The series consists of:

- **Duct/Immersion sensor** for measurement of air temperature and other gaseous media for HVAC applications (e.g. supply and exhaust ducts).
- **Cable sensor** for temperature measurement in HVAC applications. In conjunction with a **thermowell pocket** suitable for temperature measurement in duct applications. Designed for control and monitoring applications.
- **Outdoor temperature sensors** for measuring temperature in outdoor areas, in cold stores and greenhouses, production plants and warehouses. Designed for connecting to control and display systems.
- **Cable temperature sensors**: Sensor with hinged cover enclosure for temperature measurement of pipes and round surfaces. Spring loaded brass contact sensor.

FEATURES

- Wide range of mounting types and signal outputs

- Different length of tubes and wells for duct and immersion applications

- For immersion applications, well can be mounted before duct sensor is mounted

- IP54 ingress protection (except cable sensor)

- IP67 ingress protection for cable sensor

Johnson Controls

SENSORS

STS-6300 PLANT TEMPERATURE SENSOR

DIMENSIONS
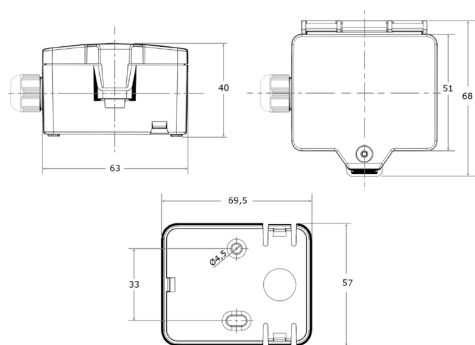
**STS-63xx OUTDOOR
TEMPERATURE SENSOR**
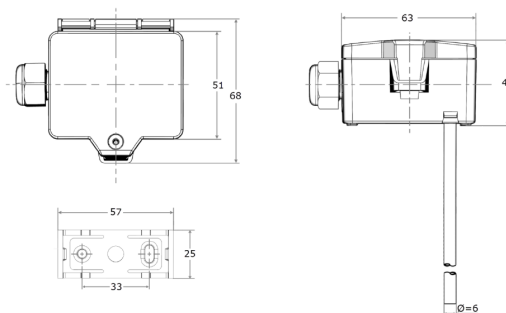
**STS-63xx DUCT / IMMERSION
TEMPERATURE SENSOR**
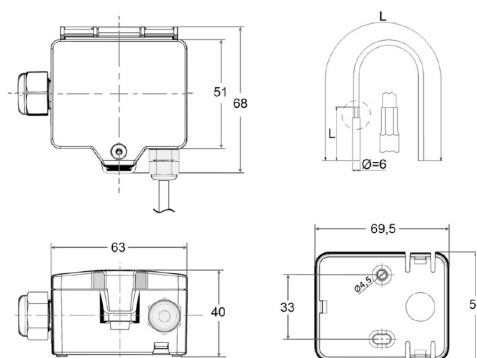
**STS-63xx CABLE
TEMPERATURE SENSOR**
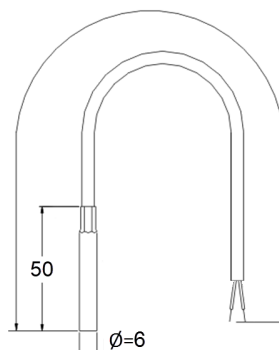
**STS-63xx CABLE TEMPERATURE
SENSOR**
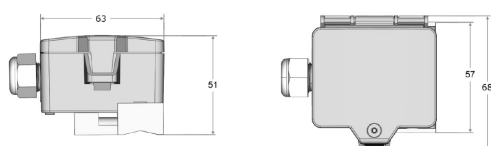
**STS-63xx CONTACT
TEMPERATURE SENSOR**

Johnson Controls

PLANT TEMPERATURE

STS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

CODES	OUTPUT	MOUNTING TYPE	LENGHT (mm)	TEMPERATURE RANGE
STS-6370D-A11	0...10 VDC	Duct / immersion	150	default setting: 0..+160°C selectable from 8 temperature ranges –50..+50 | –20..+80 | –15..+35 | –10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250°C, adjustable at the transducer
STS-6370D-B11			200	
STS-6370D-C11			300	
STS-6370D-D11			446	
STS-6330D-A10	2K2 NTC		150	–50..+150°C
STS-6330D-B10			300	
STS-6330D-D10			450	
STS-6340D-A10	10K NTC		150	
STS-6340D-B10			200	
STS-6340D-C10			300	
STS-6340D-D10			450	
STS-6350D-A10	Pt100		150	
STS-6350D-B10			200	
STS-6350D-C10			300	
STS-6350D-D10			450	
STS-6360D-A10	Pt1000		150	
STS-6360D-B10			200	
STS-6360D-C10			300	
STS-6360D-D10			450	

Johnson Controls

PLANT TEMPERATURE

STS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

| CODES	OUTPUT	MOUNTING TYPE	LENGHT (mm)	TEMPERATURE RANGE
STS-6370R-F01	00..10 V or 0..5 V, configurable via jumper, min. load 5 kΩ	Cable sensor	1.5 m cable lenght	default setting: 0..+160°C, selectable from 8 temperature ranges −50..+50 | −20..+80 | −15..+35 | −10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250°C, adjustable at the transducer
STS-6330K-F00	2K2 NTC		2 m cable lenght	−35..+100 °C
STS-6340K-F00	10K NTC		2 m cable lenght	
STS-6360K-F00	Pt1000		1.5 m cable lenght	
STS-6370E-001	0..10 V or 0..5 V, configurable via jumper, min. load 5 kΩ	Outdoor	---	default setting: −50..+50°C, selectable from 8 temperature ranges −50..+50 | −20..+80 | −15..+35 | −10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250
STS-6330E-000	2K2 NTC			−35 to +90°C
STS-6340E-000	10K NTC			
STS-6350E-000	Pt100			
STS-6360E-000	Pt1000			
STS-6370S-002	0..10 V or 0..5 V, configurable via jumper, min. load 5 kΩ	Strap-on	---	default setting: 0..+100 °C, selectable from 8 temperature ranges −50..+50 | −20..+80 | −15..+35 | −10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250°C, adjustable at the transducer
STS-6330S-000	2K2 NTC			−35..+120 °C
STS-6340S-000	10K NTC			
STS-6350S-000	Pt100			
STS-6360S-000	Pt1000			
STS-6370C-E13	0..10 V or 0..5 V, configurable via jumper, min. load 5 kΩ	DUCT/ IMMERSION	50	default setting: 0..+160 °C selectable from 8 temperature ranges −50..+50 | −20..+80 | −15..+35 | −10..+120 | 0..+50 | 0..+100 | 0..+160 | 0..+250°C, adjustable at the transducer
STS-6340C-E10	10K NTC	Ceiling	50	−50..+15 °C
STS-6360C-E10	Pt1000	Ceiling	50	−50..+16 °C

Johnson Controls

PLANT TEMPERATURE

STS-6300 PLANT TEMPERATURE SENSOR

ORDERING INFORMATION

ACCESSORIES

CODES	LENGHT (mm)	MATERIAL	MOUNTING THREAD	PN
STS-6300W-E200	50	Brass/Copper	R 1/2"	PN16
STS-6300W-D200	80			
STS-6300W-G200	150			
STS-6300W-H200	200			
STS-6300W-I200	260			
STS-6300W-E300	50	Stainless steel	R 1/2"	PN40
STS-6300W-E400	50		G 1/2"	
STS-6300W-D300	80		R 1/2"	
STS-6300W-D400	80		G 1/2"	
STS-6300W-G300	150		R 1/2"	
STS-6300W-G400	150		G 1/2"	
STS-6300W-H300	200		R 1/2"	
STS-6300W-H400	200		G 1/2"	
STS-6300W-I300	260		R 1/2"	
STS-6300W-I400	260		G 1/2"	

STS-6300D-000	Duct Flange Kit for TS-63xx sensors

Johnson Controls

SENSORS
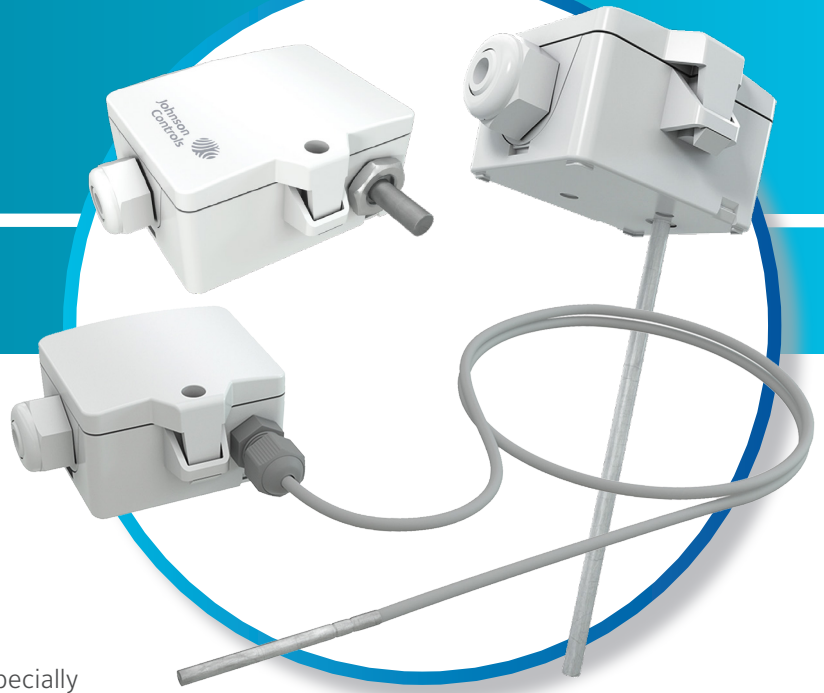
PLANT
TEMPERATURE

TS-63M0

PLANT TEMPERATURE SENSOR - MODBUS

The STS-63M0 sensor with Modbus interface has been specially developed for HVAC applications and is a highly accurate and reliable sensor for measuring temperature.

The housing minimises installation costs and provides excellent protection against dirt and condensation, ensuring flawless operation. The STS series temperature sensors provide an active signal corresponding to the air or water temperature in heating, ventilation and air conditioning applications.

FEATURES

- Different length of tubes and wells for duct and immersion applications
- Bayonet mounting system
- For immersion applications, well can be mounted before duct sensor is mounted
- IP54 ingress protection (except cable sensor)
- IP67 ingress protection for cable sensor

DIMENSIONS *(in mm)*
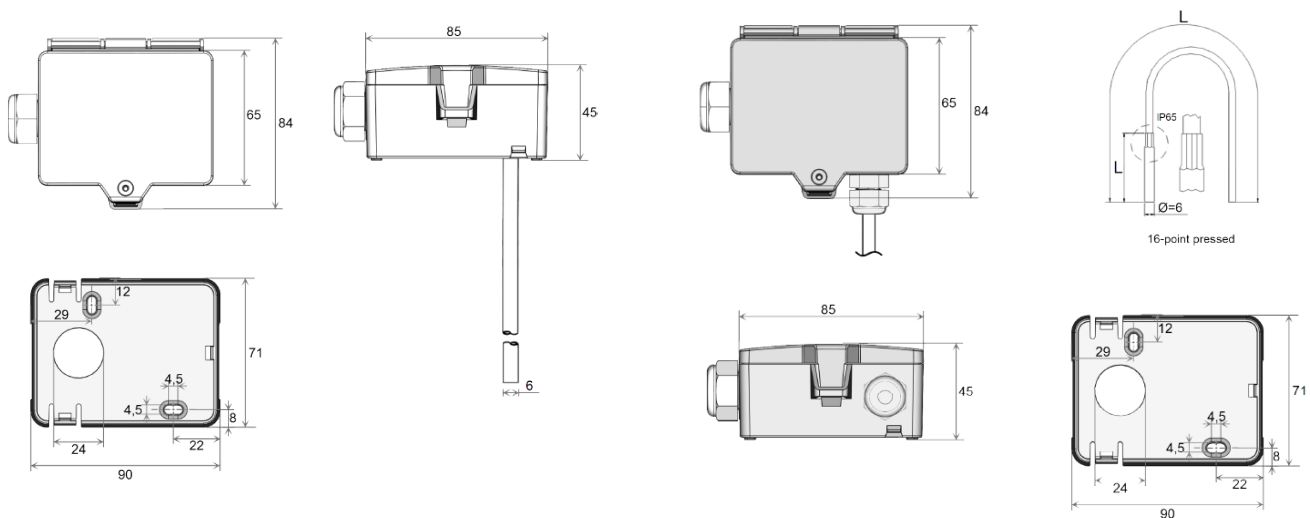
STS-63M0D

STS-63M0K-F00

Johnson
Controls

PLANT TEMPERATURE

TS-63M0 PLANT TEMPERATURE SENSOR - MODBUS

DIMENSIONS *(in mm)*
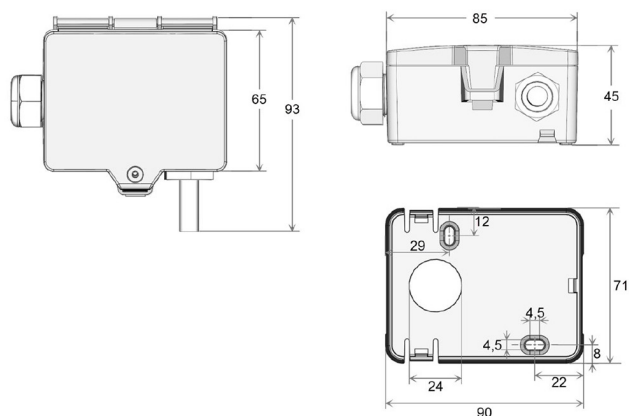
STS-63M0E-050

ORDERING INFORMATION

CODES	ANALOG OUTPUT	NETWORK TECHNOLOGY	MOUNTING TYPE	LENGHT *(mm)*	TEMPERATURE RANGE
STS-63M0D-E10	1x 0..10 V / 0..5 V, configurable via jumper, min. load 5 kΩ	Modbus	Duct/Immersion	50	−35..+70°C
STS-63M0D-F10				100	
STS-63M0D-A10				150	
STS-63M0D-B10				200	
STS-63M0D-G10				250	
STS-63M0D-C10				300	
STS-63M0D-D10				450	
STS-63M0E-050	0..10 V / 0..5 V, configurable via jumper, min. load 10 kΩ		Outdoor	---	
STS-63M0K-F00	1x 0..10 V / 0..5 V, configurable via jumper, min. load 5 kΩ		Cable	cable length 2 m	−50..+160°C

Johnson Controls

PT-5217

LIQUID OR AIR PRESSURE TRANSMITTER

The PT-5217 pressure transmitter accurately measures pressure and converts the measurement into a standard proportional 0...10 V signal.

The PT-5217 is especially adapted to measure relative and absolute pressure of liquid and gases.

The pressure transmitter consists of a piezoresistive ceramic measuring cell with a diaphragm, installed in a stainless steel housing.

FEATURES

- Compact, rugged construction
- Negligible temperature influence on accuracy
- Low hysteresis
- High accuracy
- Direct mounting, 1.5 m cable included
- Splash proof enclosure

DIMENSIONS *(in mm)*

Johnson Controls
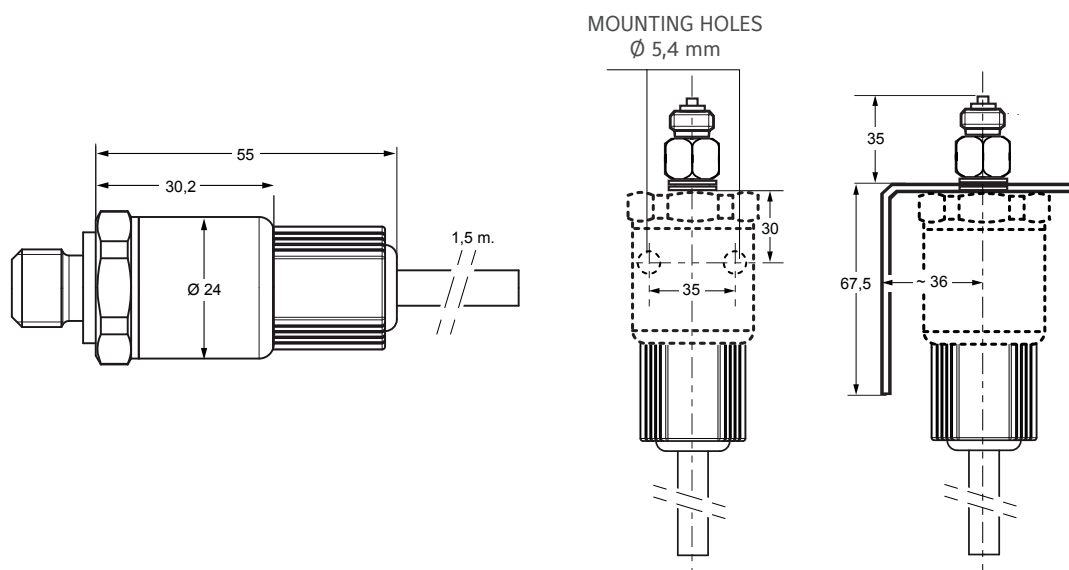
PRESSURE

PT-5217 LIQUID OR AIR PRESSURE TRANSMITTER

ORDERING INFORMATION

CODES	OPERATING RANGE	ENCLOSURE	SUPPLY VOLTAGE
PT-5217-7011	0...100 kPa	IP67	24 VAC +15% / -15%, 50/60 Hz or 12...33 VDC, < 7 mA
PT-5217-7101	0...1000 kPa		

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
EQ-6056-7000	Mounting kit for plastic hose 4 x 6 mm

Johnson Controls

SENSORS

ROOM
HUMIDITY

HT-1000

WALL MOUNT

Room sensor for recording indoor climate (Temperature + humidity). The maintenance-free sensor creates the conditions for a pleasant indoor climate and well-being.

Typical applications are schools, office buildings, hotels, cinemas or similar.

FEATURES

- **Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)**
  Flexible application

- **Humidity Accuracy 2% RH from 10 to 90% RH**
  More accurate humidity control and energy savings

- **Snap-on Enclosure**
  Allows a quick and easy mounting of the device and saves installation costs

- **Modern and attractive cover with mounting base**
  Blends in with room decor. Easy installation.

Johnson Controls

ROOM HUMIDITY

HT-1000 WALL MOUNT

DIMENSIONS *(in mm)*
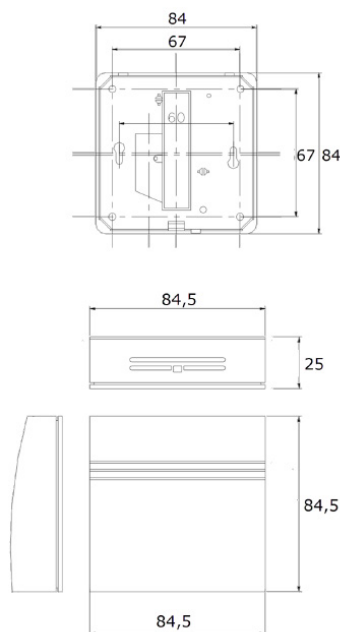
SHT-1306-UR
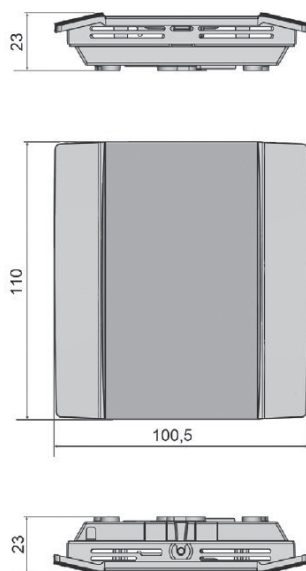
SHT-1301-UR
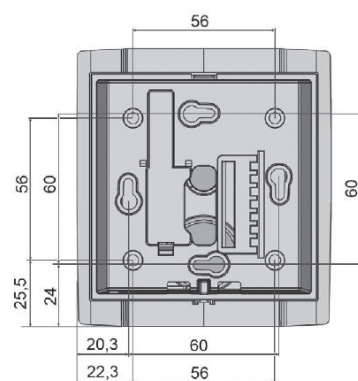
ORDERING INFORMATION

CODES	HUMIDITY RANGE	HUMIDITY ACCURACY	TEMPERATURE RANGE	TEMPERATURE OUTPUT	SUPPLY VOLTAGE
SHT-1301-UR	0..100% rH non-condensing	±2% between 10..90% rH (typ. at 21°C)	0..+50 °C	2x 0...10V	15..24 V = (±10%) or 24 V ~ (±10%) SELV
SHT-1306-UR				2x 0..10V + PT1000	

SENSORS

HT-100M

WALL MOUNT - MODBUS

The Johnson Controls SHT-130M-UR room humidity sensors with Modbus interface provides active sensing of relative humidity and temperature in HVAC applications. The humidity sensing element provides within either ±2 % accuracy a voltage output signal proportional 0 to 100 % relative humidity. The maintenance-free sensor creates the conditions for a pleasant indoor climate and well-being. Typical applications are schools, office buildings, hotels, cinemas or similar.

FEATURES

- **Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)**
  Flexible application

- **Humidity Accuracy 2% RH from 10 to 90% RH**
  More accurate humidity control and energy savings

- **Additional temperature output**
  Suitable for a wider range of applications

- **Snap-on Enclosure**
  Allows a quick and easy mounting of the device and saves installation costs

- **Modern and attractive cover with mounting base**
 Blends in with room decor. Easy installation.

- **Polymer humidity sensing element is integrated onto a chip**
  Provides stability, repeatability and linear response.
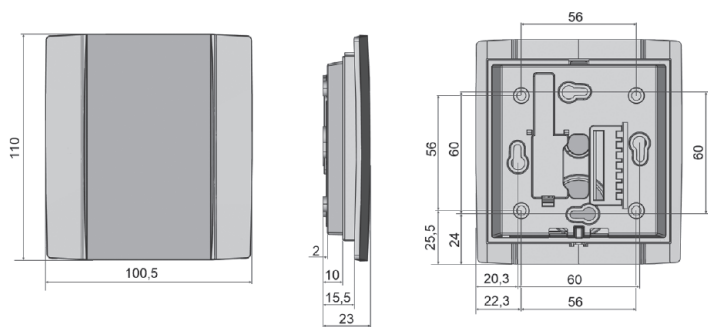
ROOM HUMIDITY

HT–100M WALL MOUNT – MODBUS

DIMENSIONS *(in mm)*

ORDERING INFORMATION

CODES	HUMIDITY RANGE	HUMIDITY ACCURACY	TEMPERATURE RANGE	NETWORK TECHNOLOGY	SUPPLY VOLTAGE
SHT–130M–UR	0..100 % non-condensing	±2% between 10..90% rH (typ. at 21 °C)	0..+50 °C	RS485 Modbus	15..35 V = / 19..29 V ~ SELV

FLUSH MOUNT SENSORS

RS-7000

ANALOG SENSORS

The Flush Mount RS-7000 Analog Sensors Series with LCD is an electronic room command module designed to work with Johnson Controls® controllers in heating, ventilating and air conditioning (HVAC) systems. Models in this series monitor the zone temperature and humidity, and transmit data to a field controller using up to three analog outputs.

RS-7060-0000 can toggle between Temperature and RH on the display, depending on desired default display.

The temperature only model RS-7080-0002 includes Fan mode push button to set the desired fan speed (OFF-LOW-MED-HIGH-AUTO). Both models with display have occupancy button, which allows user to select when the zone is occupied, to set the comfort mode only when is necessary.

The model without display RS-7040-0000 provides a combined measurement of the zone temperature and humidity.

Installation is quite easy, given the possibility to configure the Setpoint Mode and temperature limits during installation.

FEATURES

- **Temperature sensor with combined humidity for best comfort -** RS-7000 range offers fan speed control or combined humidity sensor for best comfort

- **Configurable options reduce stock need -** The setpoint mode adjust or warmer/cooler can be configured during the installation

- **Large backlit display in a low profile enclosure -** Provides a modern looking and clear user interface

- **Customizable display helps to meet building policy -** RS-7000 can show actual values or setpoint only

- **Keypad lockable in public space -** The RS-7000 sensor buttons can be locked against misuse in public space

- **Flush mount installation -** Suitable for various installation boxes, offers low profile enclosure

Johnson Controls
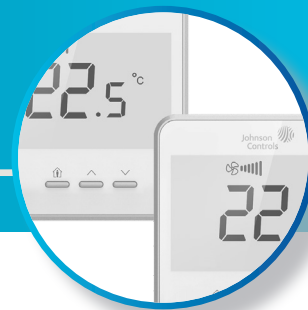
FLUSH MOUNT SENSORS

RS-7000 ANALOG SENSORS

DIMENSIONS *(in mm)*
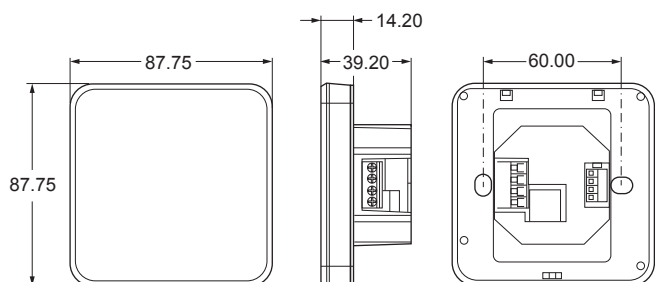
ORDERING INFORMATION

CODES	COLOR [1]	LCD	TEMPERATURE	HUMIDITY [2]	FAN CONTROL	TEMPERATURE ADJUSTMENT [3]	°F/°C SCALE TOGGLE	OCCUPANCY OVERRIDE
RS-7040-0000	White	---	■	■ (±3%)	---	---	---	---
RS-7060-0000		■	■	■ (±3%)	---	Adj/WC	■	■
RS-7080-0002		■	■	---	■	Adj/WC	■	■

Notes

1 Device color white only.

2 For models with humidity sensor, the humidity value can be displayed in LCD too.

3 Adj/WC, Setpoint Adjust 12 to 28°C (Default) / WC (Warmer/Cooler) Setpoint ±3°C mode.

Johnson Controls

SENSORS

FLUSH MOUNT SENSORS

NSA-7000

NETWORK SENSORS

The Flush Mount NSA-7000 Network Sensor Series with LCD is an electronic zone sensor designed to function directly with Johnson Controls® BACnet® MS/TP digital controllers in heating, ventilating and air conditioning (HVAC) systems. Models in this series monitor the temperature set point, zone temperature and humidity and transmit this data to a field controller on the Sensor Actuator (SA) bus.

NSA-FHR71x3-0 can toggle on the display between temperature and relative humidity, depending on desired default display.

A push button is included in NSA-FTD70x3-0 to set the desired fan speed (OFF/LOW-MED-HIGH-AUTO). All models have occupancy button, which allows user to signal when the zone is occupied, to set the comfort mode only when is necessary.

The model without display NSA-FHN7001-0 has not buttons but provides an accurate measurement of the zone temperature and humidity.

For communication wiring flexibility, all models have both a modular jack and screw terminals for an easy connection to the *Metasys*® controllers.

FEATURES

- ◼ **Large backlit display in a low profile enclosure -** Provides a modern looking clear user interface
- ◼ **Flush mount installation -** Suitable for various installation boxes, offers low profile enclosure
- ◼ **Programmable SA Bus Address -** Addressable through the display without the use of tool or screwdriver
- ◼ **Easy wiring -** NSA700 offers both type of connections: Modular Jack (MJ) and Screw terminal (ST)
- ◼ **Configurable options help product selection -** Setpoint type and limits can be configured during the installation
- ◼ **Customizable display helps tenants to meet building policy -** NSA can show actual values or setpoint only
- ◼ **Keypad lockable in public space -** The NSA sensor buttons can be locked against misuse in public space
- ◼ **Customize colors meet customer needs -** The white front panel may be optionally customized in black or other colors

Johnson Controls

FLUSH MOUNT SENSORS

NSA–7000 NETWORK SENSORS

DIMENSIONS *(in mm)*
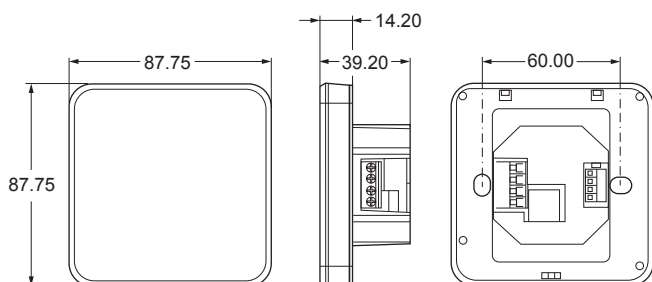
ORDERING INFORMATION

WHITE STANDARD DEVICES

CODES	LCD	TEMPERATURE	HUMIDITY [1]	FAN CONTROL	TEMPERATURE ADJUSTMENT[2]	°F/°C SCALE TOGGLE	OCCUPANCY OVERRIDE	SCREW TERMINAL [3]	ADDRESS SELECTION [4]
NSA-FHN7001-0	---	■	■ (±3%)	---	---	---	---	ST/MJ	---
NSA-FTD7003-0	■	■	---	■	Adj/WC	■	■	ST/MJ	■
NSA-FTB7003-0	■	■	---	---	Adj/WC	■	■	ST/MJ	■
NSA-FHR7103-0	■	■	■ (±3%)	---	Adj/WC	■	■	ST/MJ	■

BLACK OPTIONAL DEVICES

There is MOQ (Minimum Order Quantity) requirement for black devices

CODES	LCD	TEMPERATURE	HUMIDITY [1]	FAN CONTROL	TEMPERATURE ADJUSTMENT [2]	°F/°C SCALE TOGGLE	OCCUPANCY OVERRIDE	SCREW TERMINAL [3]	ADDRESS SELECTION [4]
NSA-FHN7011-0	---	■	■ (±3%)	---	---	---	---	ST/MJ	---
NSA-FTD7013-0	■	■	---	■	Adj/WC	■	■	ST/MJ	■
NSA-FTB7013-0	■	■	---	---	Adj/WC	■	■	ST/MJ	■
NSA-FHR7113-0	■	■	■ (±3%)	---	Adj/WC	■	■	ST/MJ	■

Notes

1 For models with humidity sensor, the humidity value also can be displayed in LCD.

2 Adj/WC, Setpoint Adjust 12 to 28°C (Default) / WC (Warmer/Cooler) Setpoint ±3°C mode.

3 All models equipped with both ST (Screw Terminal) and MJ (Modular Jack).

4 Default address is 199. Model without display has fixed address 199. Model with display can be configured between 199 to 215. In a mixed bus configuration 4 sensors max.

Johnson Controls

SENSORS

RS-1100

ROOM COMMAND MODULE

The RS-1100 room command modules are designed for use with any type of Johnson Controls or third party HVAC controllers that can accept a 0...10 V signal directly proportional to the sensed temperature.

Models are available with and without LCD display, room temperature setpoint adjustment dial, temporary occupied override function and fan speed button.

FEATURES

- ▪ Power supply:
  15 VDC (all models)
  24 VAC / VDC (only models with display)

- ▪ 0...10 VDC temperature output

- ▪ Remote temperature setpoint adjustment

- ▪ Occupancy override function (models with or without display)

- ▪ Room enclosures 80 x 80 mm

- ▪ Protection class: IP30

- ▪ Fan speed button

DIMENSIONS *(in mm)*

Comfort / Stand-by button

Mode LED

LCD display with back-light

Dial for Temperature setpoint adjustment

Fan speed override

80   80   25   32

RS-1140-0000

80   80   25   35

RS-1160-0005

80   80   25   35

RS-1180-0000

Johnson Controls
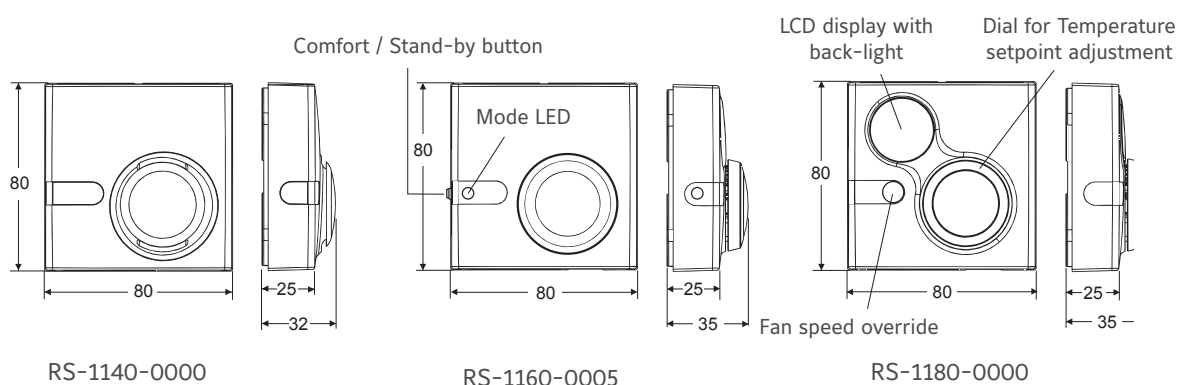
ANALOG SENSORS

RS-1100 ROOM COMMAND MODULE

ORDERING INFORMATION

CODES	TEMPERATURE OUTPUT	LCD DISPLAY	SETPOINT DIAL SCALE	TEMPORARY OCCUPANCY OVVERIDE FUNCTION	FAN SPEED OVERRIDE
RS-1140-0000	0...10 VDC	---	---	---	---
RS-1160-0000		---	12...28°C	Pushbutton	---
RS-1160-0005		---	+/-		---
RS-1180-0000		■	12...28°C	Integrated	---
RS-1180-0005		■	+/-		---
RS-1190-0000		---	12...28°C	---	---
RS-1190-0005		---	+/-		---
RS-1180-0002		■	12...28°C	Integrated	■
RS-1180-0007		■	+/-	Integrated	■

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
TM-1100-8931	Plastic surface mounting kit
TM-9100-8900	Special tool for opening enclosure

ANALOG SENSORS

TM-1100

ROOM COMMAND MODULE

The TM-1100 series of room command modules are designed for use with the TC-9102, TC-9109 and TCU series of DDC terminal unit controllers.

The setpoint dial enables the room occupant to adjust the working set point of the controller within the range of 12 to 28°C or -3 to +3°, according to the model number.

The occupancy button enables the occupant to switch the mode of operation of the controller between COMFORT and STANDBY or to request a temporary COMFORT mode during NIGHT operation.

A LED indicator shows the current operating mode. For TC-9102 and TCU fan coil unit controllers, a room command module with a 3-speed fan override is available. Models without a temperature sensing element are provided for application where the temperature sensor is mounted inside the fan coil unit.

FEATURES

- Passive sensor
- NTC K2 temperature output
- Remote temperature setpoint adjustment
- 3-speed fan override
- Occupancy override button
- Room enclosures 80 x 80 mm
- Protection class: IP30

DIMENSIONS *(in mm)*
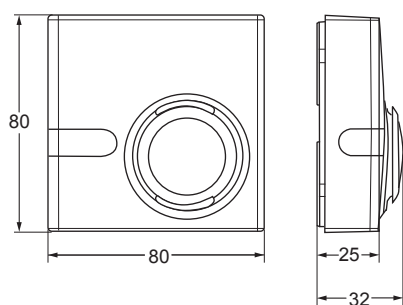
TM-1140-0000
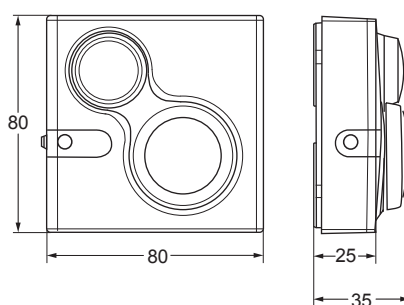
TM-1160-0007 and TM-1170-0007

Johnson Controls

ANALOG SENSORS

TM-1100 ROOM COMMAND MODULE

ORDERING INFORMATION

CODES	BUILT-IN SENSING ELEMENT	TEMPERATURE SETPOINT DIAL SCALE	FAN SPEED OVERRIDE	OCCUPANCY BUTTON
TM-1140-0000	NTC K2	---	---	---
TM-1150-0000	NTC K2	---	---	▪
TM-1160-0000	NTC K2	12 to 28°C	---	▪
TM-1160-0005	NTC K2	+/-	---	▪
TM-1160-0002	NTC K2	12 to 28°C	3-speed fan override	▪
TM-1160-0007	NTC K2		3-speed fan override	▪
TM-1170-0005	Without	+/-	---	▪
TM-1170-0007	Without	+/-	3-speed fan override	▪
TM-1190-0000	NTC K2	12 to 28°C	---	---
TM-1190-0005	NTC K2	+/-	---	---

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
TM-1100-8931	Plastic base for surface mount
TE-9100-8501	Unit mount NTC K2 temperature sensor (1.5 m cable)
TM-9100-8900	Special tool for opening enclosure

Johnson Controls

SENSORS

ANALOG SENSORS

TM-2100

ROOM COMMAND MODULE

The TM-2100 series of room command modules are designed for use with
the FCC and Facility Explorer series of DDC terminal unit controllers. The setpoint
dial enables the room occupant to adjust the working set point of the controller within the range of 12 to 28°C or -3 to +3°,
according to the model number.

The occupancy button enables the occupant to switch the mode of operation of the controller between COMFORT and
STANDBY or to request a temporary COMFORT mode during NIGHT operation.

A LED indicator shows the current operating mode. A Room Command Module with a 3-speed fan override adjuster is
available.

FEATURES

- Passive sensor
- NTC 10K temperature output
- Remote temperature setpoint adjustment
- 3-speed fan override
- Occupancy override button
- Room enclosures 80 x 80 mm
- Protection class: IP30

DIMENSIONS *(in mm)*
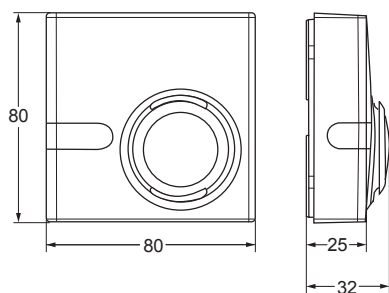
TM-2140-0000
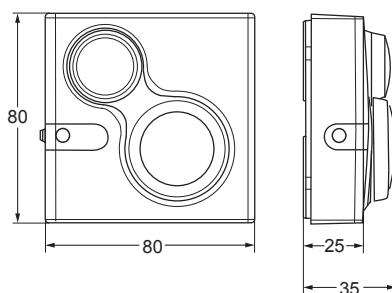
TM-2160-0007 and TM-2170-0007

Johnson Controls

ANALOG SENSORS

TM-2100 ROOM COMMAND MODULE

ORDERING INFORMATION

CODES	BUILT-IN SENSING ELEMENT	TEMPERATURE SETPOINT DIAL SCALE	FAN SPEED OVERRIDE	OCCUPANCY BUTTON
TM-2140-0000	NTC 10K	---	---	---
TM-2150-0000		---	---	
TM-2160-0000		12-28°C	---	■
TM-2160-0005		+/-	---	■
TM-2160-0002		12-28°C	3-speed fan override	■
TM-2160-0007		+/-	3-speed fan override	■
TM-2190-0000		12-28°C	---	---
TM-2190-0005		+/-	---	---

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
TM-1100-8931	Plastic base for surface mount
TE-9100-8502	Unit mount NTC K10 temperature sensor (1.5 m cable)
TM-9100-8900	Special tool for opening enclosure

Johnson Controls

SENSORS

ANALOG SENSORS

TM-3100

ROOM COMMAND MODULE

The TM-3100 series room temperature sensor provide passive sensing of temperature in HVAC application.

The TM-3100 is equipped with a Pt1000 class A sensing element and provides an output proportional signal to the measured ambient temperature.

The TM-3100 series room temperature sensor is designed for use with the Facility Explorer series and with the Field Equipment controller series.

FEATURES

- Passive sensor
- Pt1000
- Room enclosure: 80 x 80 mm
- Protection Class: IP30
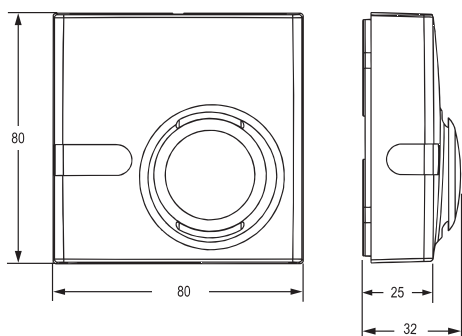
DIMENSIONS *(in mm)*

ANALOG SENSORS

TM-3100 ROOM COMMAND MODULE

ORDERING INFORMATION

CODES	BUILT-IN SENSING ELEMENT	TEMPERATURE SETPOINT DIAL SCALE	FAN SPEED OVERRIDE	OCCUPANCY BUTTON
TM-3140-0000	Pt 1000	---	---	---

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
TM-1100-8931	Plastic base for surface mount
TM-9100-8900	Special tool for opening enclosure

TE-7000

ROOM COMMAND MODULE

The TE-7000 room command module is designed for use with Johnson Controls VAV Modular Assembly.

The module has an NTC temperature sensor, a dial for setpoint adjustment within the range of 12 to 28°C or -3 to +3K, and an occupancy button with an LED indicator.

If the VAV controller is not already in occupied mode, as shown by the LED indicator, the occupant may press the occupancy button to obtain comfort control for a set period of time, normally defaulted to one hour.

The module also has a built-in connector for a PC with the software to test and commission the VAV modular assembly and the air supply system.

FEATURES

- Power supply: +15 Vdc
- Temperature sensor: NTC
- Occupancy override button
- Protection class: IP30
- Remote setpoint adjustment

DIMENSIONS *(in mm)*
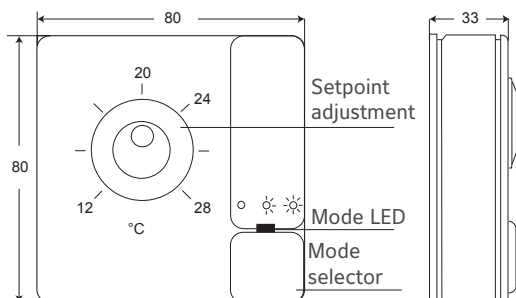
SENSORS

TE-7000 ROOM COMMAND MODULE

ORDERING INFORMATION

CODES	COLOR	SETPOINT DIAL RANGE
TE-7000-8002	Off-white / Gray base	12 to 28°C
TE-7000-8002-W	White / White base	
TE-7000-8003	Off-white / Gray base	-3 to +3 K
TE-7000-8003-W	White / White base	

Note

Add **"-K"** to code for setpoint dial with serrated edge, e.g. TE-7000-8002-K, TE-7000-8002-WK

ACCESSORIES (ORDER SEPARATELY)

CODES	DESCRIPTION
TE-7000-8900	Service tool connector cable (1.5 m) (for use with IU-9100 converter)
TM-9100-8900	Special tool (to open module)
TM-9100-8901	Dial-Stop screws kit (bag og 100 self-tapping screws)
TM-9100-8902	Serrated knob kit (bag of 10 knobs) - Off-white
TM-9100-8902-W	Serrated knob kit (bag of 10 knobs) - white

ANALOG SENSORS
MODBUS

TM-11xM

WALL MOUNT DUCT - MODBUS

The Johnson Controls STM room temperature sensors with Modbus interface provides active sensing of temperature in HVAC applications. The temperature sensing element provides within either ±0,5 K accuracy (typ. at 21°C) a voltage output signal proportional 0 to 50°C (configurable via Modbus).

The maintenance-free sensor creates the conditions for a pleasant indoor climate and well-being. Typical applications are schools, office buildings, hotels, cinemas or similar.

FEATURES

■ **Power Supply 15..24 VDC (±10%) or 24 VAC (±10%)**
Flexible application

■ **Snap-on Enclosure**
Allows a quick and easy mounting of the device and saves installation costs

■ **Modern and attractive cover with mounting base**
Blends in with room decor. Easy installation.

DIMENSIONS *(in mm)*
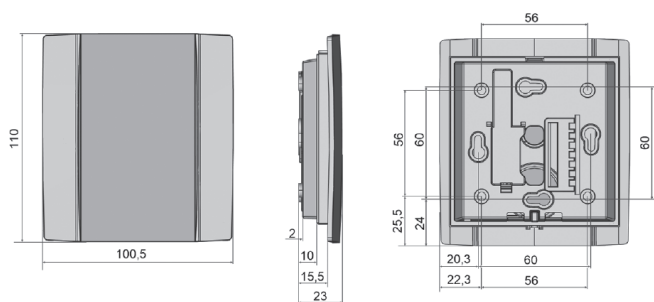
ORDERING INFORMATION

CODES	DESCRIPTIONS
STM-115M-0000	Temperature Output Only

SENSORS

NETWORK SENSORS

NS8000

SERIES NETWORK SENSORS

The NS Series Network Sensors function directly with Metasys® system Field Equipment Controllers (FECs), Metasys Network and Control Engines (NCEs), Advanced Application Field Equipment Controller (FACs), Metasys VAV Box Equipment Controllers (CVM) and General Purpose Application Controllers (CGM), VAV Modular Assembly (VMA16) Controllers, and Facility Explorer™ FX-PC Series Programmable Controllers (FX-PCGs, FX-PCVs, and FX-PCXs). The sensors are also compatible with Verasys® and Johnson Controls® Smart Equipment.

The NS Series Network Sensors monitor zone temperature, relative humidity (RH), carbon dioxide (CO_2), motion, and local temperature setpoint adjustments. The sensor transmits this data to a controller on the Sensor/Actuator (SA) bus.

Some NS Series Network Sensors models include an onboard passive infrared (PIR) occupancy sensor that detects motion to determine if a space is occupied. This feature maximizes up to 30% energy savings in high-energy usage environments such as schools, dormitories, offices, hospitals, and hotels by adjusting the temperature of the space based on the occupancy status. In addition, the PIR occupancy sensor facilitates trending of floor space usage in these environments.

The full color graphical LCD models use the graphical user interface to set a unique BACnet® address for applications that require multiple sensors.

FEATURES

- **BACnet MS/TP protocol communication** – Provides compatibility with Metasys system field controllers, Facility Explorer programmable controllers as well as Verasys and Johnson Controls Smart Equipment in a proven communication network.

- **Single and multifunctional sensors** – Choose temperature, RH, CO_2, and occupancy sensing depending on HVAC needs.

- **Large backlit LCD fixed segment display or LCD full color graphical display on some models** – Provides real-time status of the environment with backlighting activated during user interaction.

- **Simple temperature setpoint adjustment or Warmer/Cooler mode available on display models** – Configure simple setpoint adjustment or Warmer/Cooler mode.

- **Onboard occupancy sensor available on PIR models** – Maximizes up to 30% energy savings in high-energy usage environments, and facilitates trending of floor space usage.

- T**emporary occupancy included on all display and Warmer/Cooler models** – Provides a timed override command, which initiates a temporary occupancy state.

- **Field-selectable default display setting on display models** – Toggle between temperature, RH or temperature setpoint on the display, and set the desired default for continuous viewing.

Johnson Controls

NETWORK SENSORS

NS8000 SERIES NETWORK SENSORS

- **Fahrenheit/Celsius (°F/°C) selectable on display models** – Display temperature in degrees Fahrenheit or degrees Celsius.
- **All display models meet California Energy Code (Title 24)** – Displays the required State of California Title 24 economizer fault conditions.
- **All display models include a screen lockout** – Prevents sensor tampering.
- **Serialized sensors and calibration certificates** – Obtain factory calibration certificates for all models.

ORDERING INFORMATION

NS Series Network Sensor ordering information: temperature, humidity, and CO_2 models (3% RH)

CODES	DISPLAY & INTERFACE INFORMATION	JCI LOGO	COLOR	PIR OCCUPANCY SENSOR
NSB8BHC040-0	No display	■	White	---
NSB8BHC041-0		---	White	---
NSB8BHC042-0		■	Black	---
NSB8BHC043-0		---	Black	---
NSB8MHC040-0		■	White	■
NSB8MHC041-0		---	White	■
NSB8MHC042-0		■	Black	■
NSB8MHC043-0		---	Black	■
NSB8BHC240-0	Fixed segment display	■	White	---
NSB8BHC241-0		---	White	---
NSB8BHC242-0		■	Black	---
NSB8BHC243-0		---	Black	---
NSB8MHC240-0		■	White	■
NSB8MHC241-0		---	White	■
NSB8MHC242-0		■	Black	■
NSB8MHC243-0		---	Black	■
NSB8BHC340-0	Graphical user interface	■	White	---
NSB8BHC341-0		---	White	---

Johnson Controls

SENSORS

NETWORK SENSORS

NS8000 SERIES NETWORK SENSORS

NS Series Network Sensor ordering information: temperature and humidity models (3% RH)

CODES	DISPLAY & INTERFACE INFORMATION	JCI LOGO	COLOR	PIR OCCUPANCY SENSOR
NSB8BHN240-0	Fixed segment display	■	White	---
NSB8BHN241-0		---	White	---
NSB8BHN242-0		■	Black	---
NSB8BHN243-0		---	Black	---
NSB8MHN240-0		■	White	■
NSB8MHN241-0		---	White	■
NSB8MHN242-0		■	Black	■
NSB8MHN243-0		---	Black	■
NSB8BHN040-0 o	No display	■	White	---
NSB8BHN041-0		---	White	---
NSB8BHN042-0		■	Black	---
NSB8BHN043-0		---	Black	---
NSB8MHN040-0		■	White	■
NSB8MHN041-0		---	White	■
NSB8MHN042-0		■	Black	■
NSB8MHN043-0		---	Black	■
NSB8BHN140-0	Warmer/Cooler interface	■	White	---
NSB8BHN141-0		---	White	---
NSB8BHN142-0		■	Black	---
NSB8BHN143-0		---	Black	---
NSB8BHN340-0	Graphical user interface	■	White	---
NSB8BHN341-0		---	White	---

Johnson Controls

NETWORK SENSORS

NS8000 SERIES NETWORK SENSORS

NS Series Network Sensor ordering information: temperature and CO_2 models

CODES	DISPLAY & INTERFACE INFORMATION	JCI LOGO	COLOR	PIR OCCUPANCY SENSOR
NSB8BTC040-0	No display	■	White	---
NSB8BTC041-0		---	White	---
NSB8BTC042-0		■	Black	---
NSB8BTC043-0		---	Black	---
NSB8MTC040-0		■	White	■
NSB8MTC041-0		---	White	■
NSB8MTC042-0		■	Black	■
NSB8MTC043-0		---	Black	■
NSB8BTC240-0	Fixed segment display	■	White	---
NSB8BTC241-0		---	White	---
NSB8BTC242-0		■	Black	---
NSB8BTC243-0		---	Black	---
NSB8MTC240-0		■	White	■
NSB8MTC241-0		---	White	■
NSB8MTC242-0		■	Black	■
NSB8MTC243-0		---	Black	■
NSB8BTC340-0	Graphical user interface	■	White	---
NSB8BTC341-0		---	White	---

Johnson Controls

NETWORK SENSORS

NS8000 SERIES NETWORK SENSORS

NS Series Network Sensor ordering information: temperature only models

CODES	DISPLAY & INTERFACE INFORMATION	JCI LOGO	COLOR	PIR OCCUPANCY SENSOR
NSB8BTN240-0	Fixed segment display	■	☐ (white)	---
NSB8BTN241-0		---	☐ (white)	---
NSB8BTN242-0		■	■ (black)	---
NSB8BTN243-0		---	■ (black)	---
NSB8MTN240-0		■	☐ (white)	■
NSB8MTN241-0		---	☐ (white)	■
NSB8MTN242-0		■	■ (black)	■
NSB8MTN243-0		---	■ (black)	■
NSB8BTN040-0	No display	■	☐ (white)	---
NSB8BTN041-0		---	☐ (white)	---
NSB8BTN042-0		■	■ (black)	---
NSB8BTN043-0		---	■ (black)	---
NSB8MTN040-0		■	☐ (white)	■
NSB8MTN041-0		---	☐ (white)	■
NSB8MTN042-0		■	■ (black)	■
NSB8MTN043-0		---	■ (black)	■
NSB8BTN140-0	Warmer/Cooler interface	■	☐ (white)	---
NSB8BTN141-0		---	☐ (white)	---
NSB8BTN142-0		■	■ (black)	---
NSB8BTN143-0		---	■ (black)	---
NSB8BTN340-0	Graphical user interface	■	☐ (white)	---
NSB8BTN341-0		---	☐ (white)	---

Johnson Controls

SENSORS

NETWORK SENSORS

NS8000 SERIES NETWORK SENSORS

NS Series Network Sensor ordering information: CO$_2$ only models without display

CODES	JCI LOGO	COLOR
NSB8BNC040-0	■	
NSB8BNC041-0	---	
NSB8BNC042-0	■	▬
NSB8BNC043-0	---	▬

NS Series Network Sensor ordering information: temperature and humidity models (2% RH)

CODES	JCI LOGO	COLOR	DISPLAY AND INTERFACE INFORMATION
NSB8BPN240-0	■		
NSB8BPN241-0	---		Fixed segment display
NSB8BPN242-0	■	▬	
NSB8BPN243-0	---	▬	

DIMENSIONS *(in mm)*

127.55

85.30   85.30   26.80

Johnson Controls

SENSORS

WIRELESS SENSORS

WRZ
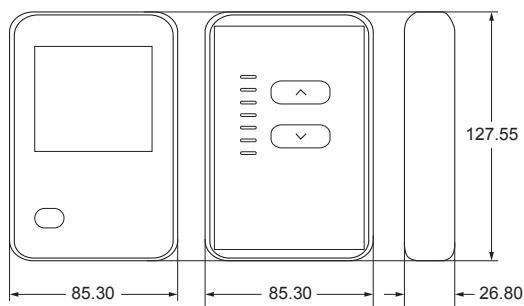
ZigBee WIRELESS PROTOCOL

The WRZ series wireless room sensors are designed to sense room/zone temperature and transmit wireless temperature control data.
Some models also sense and transmit relative humidity.

In a ZFR1800 series wireless field bus system application, the sensors communicate with FEC16 Series, FEC26 series and VMA16 series controllers by means of the ZFR1811 router.

In wired field bus applications, the sensors communicate with a WRZ-7860 wireless receiver. The WRZ-7860 receiver transfers data to the controller by means of the Sensor Actuator (SA) communication bus. In a typical application, one WRZ series sensor reports to one
WRZ-7860 receiver, but up to five WRZ series sensors can be associated with a single WRZ-7860 receiver for multi-sensor averaging or high/low temperature selection.

WRZ series sensor models are available with or without a Liquid Crystal Display (LCD). Depending on the sensor model, the WRZ series sensor can transmit sensed temperature, setpoint temperature, sensed humidity, occupancy status and PIR occupancy sensor and low battery conditions to an associated router or receiver. The WRZ series sensors are designed for indoor, intra-building applications only.

The WRZ sensors use direct-sequence, spread-spectrum RF technology, and operate on the 2.4 GHz Industrial, Scientific and Medical (ISM) band. The receiver meets the IEEE 802.15.4 standard for low power, low duty cycle RF transmitting systems.

Refer to the WRZ Series Wireless Room Sensors Product Bulletin (LIT-12011653) for important product application information.

FEATURES

- Wireless RF design
- Integral wireless signal strength testing built into the sensor
- Easy installation and relocation
- Easily-applicable data types
- Simple, field adjustable DIP switches
- Optional, battery-powered WRZ-SST-110 wireless system survey tool
- High resistance to RF interference from other radio devices or RF noise sources
- User selectable default display for humidity models
- Display models
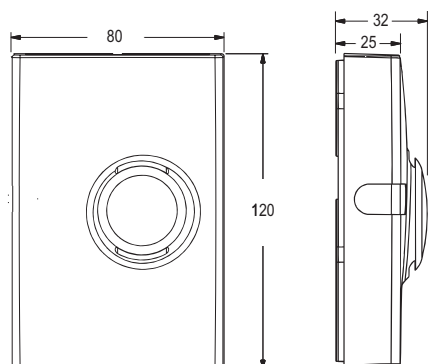- Three temperature setpoint range options

Johnson Controls

WIRELESS SENSORS

WRZ ZIGBEE WIRELESS PROTOCOL

DIMENSIONS *(in mm)*

ORDERING INFORMATION

CODES	DESCRIPTION
WRZ-THB0000-0	Wireless room temperature and humidity sensor with display, warmer/cooler (+/−) setpoint adjustment or setpoint adjustment scale: 13 to 27°C, F/C button, relative humidity (RH) button and manual occupancy override button
WRZ-THN0000-0	Wireless room temperature and humidity sensor with battery level/signal strength LED and manual occupancy override button
WRZ-THP0000-0	Wireless room temperature and humidity sensor with warmer/cooler (+/−) setpoint adjustment and manual occupancy override button
WRZ-TTB0000-0	Wireless room temperature sensor with display, F/C button and manual occupancy override button
WRZ-TTD0000-0	Wireless room temperature sensor with display, F/C Button, fan speed control and manual occupancy override button
WRZ-TTP0000-0	Wireless room temperature sensor with warmer/cooler (+/−) setpoint adjustment, battery level/signal strength LED and manual occupancy override button
WRZ-TTR0000-0	Wireless room temperature sensor with battery level/signal strength LED, manual occupancy override button and no setpoint adjustment
WRZ-TTS0000-0	Wireless room temperature sensor with setpoint adjustment scale: 13 to 27°C, battery level/signal strength LED and manual occupancy override button
WRZ-MNN0100-0	Wireless Zigbee™ sensor, occupancy (PIR)
WRZ-MTN0100-0	Wireless Zigbee™ sensor, occupancy (PIR), temperature, no display
WRZ-MHN0100-0	Wireless Zigbee™ sensor, occupancy (PIR), temperature, 3% relative humidity, no display
WRZ-MTB0100-0	Wireless sensor, occupancy (PIR), temperature, display, warmer/cooler dial, Fahrenheit/Celsius pushbutton, occupancy override
WRZ-SST-120	Wireless system survey tool

Johnson
Controls

WIRELESS SENSORS

WRZ ZIGBEE WIRELESS PROTOCOL

ORDERING INFORMATION

WRZ SENSOR MODEL COMPARISON

CODES	TEMPERATURE	3% HUMIDITY	DISPLAY	F/°C BUTTON	FAN CONTROL	OCCUPANCY OVERRIDE	PIR OCCUPANCY SENSOR	SETPOINT ADJUSTMENT DIAL [1]
WRZ-THB0000-0	■	■	■	■	---	■	---	CONFIG
WRZ-THN0000-0	■	■	---	---	---	■	---	NO DIAL
WRZ-THP0000-0	■	■	---	---	---	■	---	W/C
WRZ-TTB0000-0	■	---	■	■	---	■	---	CONFIG
WRZ-TTD0000-0	■	---	■	■	■	■	---	CONFIG
WRZ-TTP0000-0	■	---	---	---	---	■	---	W/C
WRZ-TTR0000-0	■	---	---	---	---	■	---	NO DIAL
WRZ-TTS0000-0	■	---	---	---	---	■	---	SCALED
WRZ-MNN0100-0	---	---	---	---	---	---	■	NO DIAL
WRZ-MTN0100-0	■	---	---	---	---	---	■	NO DIAL
WRZ-MHN0100-0	■	■	---	---	---	---	■	NO DIAL
WRZ-MTB0100-0	■	---	■	■	---	■	■	W/C

Note

1 Warmer/cooler temperature offset (W/C), single-value in 13 to 29°C range (SCALED), CONFIG - system-configured (available on display models only)

Johnson Controls