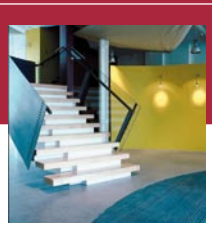
HVAC Sensors Catalogue



Issue: January 2007

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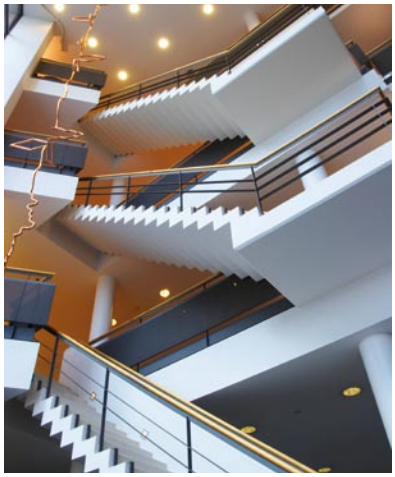
TAC – the Single Source for all Your HVAC Sensor Needs

This catalogue presents the comprehensive HVAC sensor portfolio offered by TAC's Field Device Product Division. The Division provides a single source for the field products our customers require to complete their system installations. By dealing with one trusted supplier, TAC's customers save time and cost, fully confident of the quality, performance, compatibility, and value for money of the items they buy.

For further details of the products featured in this catalogue, consult the relevant data sheets on the TAC extranet, ExchangeOnline at http://extranet.tac.com/ (registration requirement applies) or contact your local TAC sales office.

GLOBAL LEADER IN BUILDING IT

TAC is a leading provider of building automation solutions based on Open Integrated Systems for Building IT. TAC's mission is to provide added value through building environment services for indoor climate, security and use of energy, delivered with advanced technology to end users and property owners throughout the world. TAC offers its customers a total capability in terms of hardware and software supply, installation and support.



With over 80 years experience in the HVAC, building automation and security arenas, TAC employs more than 5,000 people worldwide, with partners and branches in 80 countries. TAC's parent company, Schneider Electric, is the world leader in automation and electricity management, with over 90,000 employees worldwide, and operations in 130 countries.

TAC is the fastest growing, most innovative company in the Building Automation industry. We are at the forefront of growth because we deliver what our customers want, year after year, building after building.

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Temperature Sensors

We offer a wide range of temperature sensors for room, duct, pipe and outdoor applications. The range has been designed for ease of installation, pleasing aesthetics, and full compatibility with all TAC systems

Room Temperature Sensors

STR100, 200, 600 Series

The STR range of room temperature sensors comprises a series of wall modules optimised for public facilities such as office buildings, hotels, hospitals, schools and shopping malls. Their attractive appearance and well-designed interface make them suitable for any contemporary building. They are easy to operate and install. STR wall modules are mounted directly onto the wall or a back-box/ J-box and the base plate is designed to be compatible with any global fixing method.

There are options for compatibility with Vista, I/NET and Satchwell Systems as shown in the following table. Continuum is not available in STR at the moment.

Output	NTC thermistor
Range	0 to 50 °C, Max. 95% RH
Accuracy	See Appendix A: Tables A, B and F

Model	Order Code	Temp Sensor	Mode Indicator	RJ-10 Jack	Setpoint Offset	Bypass Button	Fan*Speed Control	System
STR100	004600100	1.8k						Vista
STR100-W (White)	004600110	1.8k						Vista
STR101	004600200	1.8k	X	X				Vista
STR102	004600300	1.8k	X	X	X			Vista
STR103	004600700	1.8k	X	X	X			Vista
STR104	004600400	1.8k	X	X	X	X		Vista
STR106	004600500	1.8k	X	X	X	X	X	Vista
STR106-B	004600800	1.8k	X	X	X	X	X	Vista
STR107	004600600	1.8k	X	X	X	X	X	Vista
STR200	004603000	10k						I/NET
STR200-W	004603010	10k						I/NET
STR202	004603200	10k	X					I/NET
STR600D	004604000	30k						Drayton
STR600	004604100	5.02k						Satchwell
STR601	004604200	5.02k	X					Satchwell
STR602	004604300	5.02k			X			Satchwell
STR609	004604400	5.02k	X		X		X	Satchwell
STR610	004604500	5.02k	X		X		X	Satchwell
STR611	004604600	5.02k			X			Satchwell
STR612	004604700	5.02k			X			Satchwell
STR613	004604800	5.02k	X		X			Satchwell
STR614	004604900	5.02k						Satchwell

STR150

The STR150 is a wall module optimised for public facilities such as office buildings, hotels, hospitals, schools and shopping malls. Its attractive appearance and well-designed interface makes it suitable for any contemporary building. It is easy to operate and install. STR wall modules are mounted directly on the wall or onto a back-box/J-Box and the base plate is designed to be compatible with any global fixing method. The STR150 is equipped with an LCD for displaying information.

The STR150 is designed to be used together with:
- TAC Xenta 101-VF SW-version 1.2 or later
- TAC Xenta 102-ES SW-version 1.2 or later
- TAC Xenta 103-A SW-version 1.2 or later
- TAC Xenta 104-A SW-version 1.2 or later

Range	5 to 45 °C
Accuracy	±0.5 °C at 15-30 °C
Resolution	0.1 or 0.5 °C
Supply	from controller

Description	Order Code	Part Number	System
Room Temperature Sensor STR150	00460280	STR150	Vista, Xenta

STR250

STR wall modules are optimised for public facilities such as office buildings, hotels, hospitals, schools and shopping malls. Their attractive appearance and well designed interface make them suitable for any contemporary building. They are easy to operate and install. STR wall modules are designed to be mounted directly on the wall or onto a variety of back-boxes/J-Boxes. The plug-in concept makes wiring quick and easy.

The STR250 replaces the I/STAT LCD with regard to major functionality such as indoor and outdoor temperature indication, setpoint adjustment, bypass mode and fan speed commands. The STR250 can be used with the 7728, MRs, and Xenta 102-AX controllers. All local configuration is carried out using an M/STAT module.

Range	5 to 45 °C
Accuracy	±0.5 °C at 15 to 30 °C
Resolution	0.1 or 0.5 °C selectable
Supply	from controller

Description	Order Code	Part Number	System
Room Temperature Sensor STR250	00460330	STR250	Vista, Xenta, I/NET

STR350/351

The STR350 and STR351 use LON communication to display and control the room temperature and fan speed. Optionally, one lighting group and/or one sunblind group can be controlled. The STR350/351 can also be used in TAC Vista Classic configurations, that is, without the need for a separate binding tool. Both models, STR350 and STR351, have an extra analogue (0-10Vdc) input that can be connected to a CO_2, relative humidity or occupancy sensor. The STR350 and STR351 are is equipped with an LCD display (STR351 with backlight) that displays the different functions of the module. STR wall modules are mounted directly on the wall or onto a backbox.

Range	5 to 45 °C
Accuracy	±0.6 °C
Supply	24 Vac
Resolution	0.1 °C or 1 °C

Description	Order Code	Part Number	System
Room Temperature Sensor STR350	004605000	STR350	Vista
Room Temperature Sensor with Backlight STR351	004605100	STR351	Vista

Duct Temperature Sensors

STD100, 200, 500

STD 100, 200 and 500 temperature sensors are intended for air duct mounting. The STD housing is equipped with a Ø 20mm cut-out for the cable, a 20mm conduit gland nut and a mounting flange.

Accuracy	See Appendix A: Tables A, B, C

Description	Order Code	Part Number	Probe Length (mm)	System
Duct Temperature Sensor STD100-50	5123002010	STD100-50	50	Vista
Duct Temperature Sensor STD100-100	5123004010	STD100-100	100	Vista
Duct Temperature Sensor STD100-150	5123006010	STD100-150	150	Vista
Duct Temperature Sensor STD100-200	5123008010	STD100-200	200	Vista
Duct Temperature Sensor STD100-250	5123010010	STD100-250	250	Vista
Duct Temperature Sensor STD100-300	5123012010	STD100-300	300	Vista
Duct Temperature Sensor STD100-400	5123014010	STD100-400	400	Vista
Duct Temperature Sensor STD200-50	5123030010	STD200-50	50	I/Net
Duct Temperature Sensor STD200-100	5123032010	STD200-100	100	I/Net
Duct Temperature Sensor STD200-150	5123034010	STD200-150	150	I/Net
Duct Temperature Sensor STD200-200	5123036010	STD200-200	200	I/Net
Duct Temperature Sensor STD200-250	5123038010	STD200-250	250	I/Net
Duct Temperature Sensor STD200-300	5123040010	STD200-300	300	I/Net
Duct Temperature Sensor STD200-400	5123042010	STD200-400	400	I/Net
Duct Temperature Sensor STD500-150	5123074010	STD500-150	150	Continuum
Duct Temperature Sensor STD500-250	5123078010	STD500-250	250	Continuum
Duct Temperature Sensor STD500-400	5123082010	STD500-400	400	Continuum

STD660

The STD660 temperature sensor is intended for air duct mounting, and has a telescopic probe extendable from 100mm to 300mm. The STD660 housing is equipped with a Ø 20mm cut-out for the cable. A 20mm conduit gland nut and a mounting flange are supplied with the product.

Accuracy	See Appendix A: Table F

Description	Order Code	Part Number	Probe Length (mm)	System
Duct Temperature Sensor STD660	5126030000	STD660	100 to 300	Satchwell

STD670

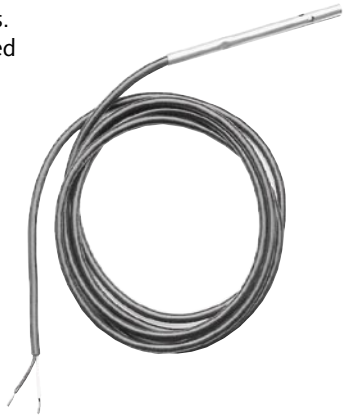
The STD670 temperature sensor is intended for air duct mounting.
The STD670 has a 1.5m fly-lead.

Accuracy	See Appendix A: Table F

Description	Order Code	Part Number	System
Duct Temperature Sensor STD670	5126040000	STD670	Satchwell

STD150

The STD150 is intended for measuring air temperature in fan coil applications or exhaust ducts. The sensor, which is made of stainless steel, is delivered with a 2m (6.5 ft.) cable, PVC sheathed overall. Mounting details such as screw and clamp are included with the product.



Accuracy	See Appendix A: Table A

Description	Order Code	Part Number	System
Duct Temperature Sensor STD150	5123058000	STD150	Vista

Duct Temperature Averaging Sensors

STD190, 591

The STD190 and STD591 sensors are delivered as complete units, comprising a junction box and a cable on which four sensors are located at 1 metre (3.3 ft.) intervals. The distance from the first sensor to the junction box is 2 metres (6.6 ft.). The STD190/591 contains four thermistors and is a mean value temperature sensor. The sensor is used for temperature measurement in air ducts. It is intended for mounting on to a grid or on wires suspended across a duct.

Accuracy	See Appendix A: Tables D, E

Description	Order Code	Part Number	System
Average Duct Temperature Sensor STD190	5123060010	STD190	Vista
Duct Temperature Sensor STD591	5123086010	STD591	Continuum

STD550

The STD550 is intended for measuring air temperature in fan coil applications or exhaust ducts. The sensor element is an NTC 10k ohm for Continuum products. The sensor, which is made of stainless steel, is delivered with a 2m (6.5 ft.) cable PVC sheathed overall. Mounting details such as screw and clamp are included with the product on delivery.

Accuracy	See Appendix A: Table C

Description	Order Code	Part Number	System
Duct Temperature Sensor STD550	5123084000	STD550	Continuum

Duct Temperature Transmitters

STD300

STD300 is an electronic temperature transmitter that converts the temperature measured into an electric current signal 4-20 mA. The transmitter is delivered as a complete unit, comprising a stainless steel immersion well, the sensing element and an amplifier, mounted in a housing. The transmitter is intended for immersion installation and is used for temperature measurement in air ducts. The transmitter shall be connected with a 2-wire cable, which serves both as power supply and for signal transmission.

Output	2-Wire, 4-20 mA
Range	-50 to +50 °C; 0 to 100 °C
Accuracy	±0.4 % of range
Supply	Min. 15Vdc, Max. 36Vdc

Description	Order Code	Part Number	Probe Length (mm)	System
Duct Temperature Sensor STD300-300 0/100	006920150	STD300-300 0/100	300	All
Duct Temperature Sensor STD300-300 -50/50	006920130	STD300-300 -50/50	300	All

STD400

The STD400 is an electronic averaging transmitter that converts the average measured temperature into an electric current signal 4-20 mA. The transmitter is used for temperature measurement in air ducts.

The STD400-04 has an immersion length of 0.4m. Measurement is made at 5 points equally spread over the length. A copper tube protects the 5 measuring points. The tube can be bent to a minimum radius of 50 mm to allow the probe to be shaped across the duct.

For larger ducts use the STD400-30 or STD400-60 transmitters with immersion length of 3m or 6m. Measurements are taken over the entire sensor length. The transmitter is delivered as a complete unit, comprising a junction box with amplifier and sensors.

The transmitters should be connected with a 2-wire cable, which serves both as power supply and for signal transmission.

Output	2-Wire, 4-20 mA
Range	-50 to +50 °C; 0 to 100 °C
Accuracy	±0.4 % of range
Supply	Min. 15Vdc, Max. 36Vdc

Description	Order Code	Part Number	Probe Length (mm)	System
Duct Temperature Sensor STD400-04 0/100	006920690	STD400-04 0/100	400	All
Duct Temperature Sensor STD400-04 -50/50	006920710	STD400-04 -50/50	400	All
Duct Temperature Sensor STD400-30 0/100	006920730	STD400-30 0/100	3000	All
Duct Temperature Sensor STD400-30 -50/50	006920750	STD400-30 -50/50	3000	All
Duct Temperature Sensor STD400-60 0/100	006920770	STD400-60 0/100	6000	All
Duct Temperature Sensor STD400-60 -50/50	006920790	STD400-60 -50/50	6000	All

STD410

The STD410 is an electronic averaging transmitter that converts the average measured temperature to one electronic signal 0-10 Vdc. The transmitter is used for temperature measurement in air ducts.

The STD410 transmitter has an immersion length of 400mm. Measurements are taken at 5 points equally spread over the length. A copper tube protects the 5 measuring points. The tube can be bent to a minimum radius of 50 mm to allow the probe to be shaped across the duct.

For larger ducts use the STD410-30 or STD410-60 transmitters with immersion length of 3m or 6m. Measurements are taken over the entire sensor length. The transmitter is delivered as a complete unit, comprising a junction box with amplifier and sensors.

The transmitters should be connected with a 3-wire cable, which serves both as power supply and for signal transmission.

Output	3-Wire, 0-10 V
Range	-50 to +50 °C; 0 to 100 °C
Available Lengths	0.4m, 3m, 6m
Accuracy	±0.4 % of range
Supply	24 Vac ±10% or 15-36Vdc

Description	Order Code	Part Number	Probe Length (mm)	System
Average Duct Temperature Sensor STD410-04 0/100	006920850	STD410-04 0/100	400	All
Average Duct Temperature Sensor STD410-04 -50/50	006920870	STD410-04 -50/50	400	All
Average Duct Temperature Sensor STD410-30 0/100	006920890	STD410-30 0/100	3000	All
Average Duct Temperature Sensor STD410-30 -50/50	006920910	STD410-30 -50/50	3000	All
Average Duct Temperature Sensor STD410-60 0/100	006920930	STD410-60 0/100	6000	All
Average Duct Temperature Sensor STD410-60 -50/50	006920950	STD410-60 -50/50	6000	All

Immersion Temperature Sensors

STX140

The STX140 is made of polythene tube Ø 10mm and is primarily intended for laying underfloor. Four thermistors are evenly spaced along the length of the tube. The sensor is delivered with a connection cable of two metres.

When laying underground, the thermistor cable should be placed in pipes with a minimum inside diameter of 12mm.

Accuracy See Appendix A: Table D

Description	Order Code	Part Number	System
Ground Temperature Sensor STX140	5123310000	STX140	Vista

STX120, 520

The sensor, which is made of stainless steel, is delivered with a 2m or 4m cable PVC sheathed overall. STX120 is intended for measuring water temperature in heating applications, mounted in a well/pocket.

Accuracy See Appendix A: Tables A, D

Description	Order Code	Part Number	System
Immersion Temperature Sensor STX120-200	5123302000	STX120-200	Vista
Immersion Temperature Sensor STX120-400	5123304000	STX120-400	Vista
Immersion Temperature Sensor STX520-200	5123320000	STX520-200	Continuum
Immersion Temperature Sensor STX520-400	5123322000	STX520-400	Continuum

STX122

The STX122 is primarily intended for pipe mounting without a separate pocket in heating coils. The insert pipe is stainless steel. The sensor is delivered with a 2m connecting cable, and has a R1/4" (DN 8) male thread fixing. As standard the sensor is delivered with a separate R1/2" (DN 15) male thread reducing bush.

Accuracy See Appendix A: Table A

Description	Order Code	Part Number	Probe Length (mm)	System
Coil Temperature Sensor STX122-250	5123306000	STX122-250	250	Vista
Coil Temperature Sensor STX122-400	5123308000	STX122-400	400	Vista

Immersion Temperature Sensors for Pockets

STP100, 200, 500

These sensors are designed for immersion mounting in pipe systems with a separate pocket (well). The pocket is sealed, making it easy to replace the sensor if necessary. The STP housing is equipped with a 20mm cable fitting. A 20mm cable gland is supplied. The pocket must be ordered separately.

Accuracy	See Appendix A: Table A, B, C

Description	Order Code	Part Number	Probe Length (mm)	System
Pipe Temperature Sensor STP100-50	5123102010	STP100-50	50	Vista
Pipe Temperature Sensor STP100-100	5123104010	STP100-100	100	Vista
Pipe Temperature Sensor STP100-150	5123106010	STP100-150	150	Vista
Pipe Temperature Sensor STP100-200	5123108010	STP100-200	200	Vista
Pipe Temperature Sensor STP100-250	5123110010	STP100-250	250	Vista
Pipe Temperature Sensor STP100-300	5123112010	STP100-300	300	Vista
Pipe Temperature Sensor STP100-400	5123114010	STP100-400	400	Vista
Pipe Temperature Sensor STP200-50	5123130010	STP200-50	50	I/NET
Pipe Temperature Sensor STP200-100	5123132010	STP200-100	100	I/NET
Pipe Temperature Sensor STP200-150	5123134010	STP200-150	150	I/NET
Pipe Temperature Sensor STP200-200	5123136010	STP200-200	200	I/NET
Pipe Temperature Sensor STP200-250	5123138010	STP200-250	250	I/NET
Pipe Temperature Sensor STP200-300	5123140010	STP200-300	300	I/NET
Pipe Temperature Sensor STP200-400	5123142010	STP200-400	400	I/NET
Pipe Temperature Sensor STP500-50	5123170010	STP500-50	50	Continuum
Pipe Temperature Sensor STP500-150	5123174010	STP500-150	150	Continuum
Pipe Temperature Sensor STP500-200	5123176010	STP500-200	200	Continuum
Pipe Temperature Sensor STP500-300	5123180010	STP500-300	300	Continuum

STP660

The STP660 temperature sensor is intended for immersion mounting in pipe systems with a separate pocket (well), and has a telescopic probe extendable from 100mm to 300mm. This technology makes the product ideal for the HVAC service industry as the probe is adjustable for any size pocket. The tip is primed with heat conductive paste, ensuring that the time constant is optimised. The pocket is sealed, making it easy to replace the sensor if necessary. The STP housing is equipped with a 20mm cable fitting. A 20mm cable gland is supplied.

As there is a choice of both pocket material (brass or stainless steel) and size (120mm or 200mm) for this sensor, the pocket must be ordered separately. See the DWA range in the pocket / wells section of this catalogue.

Accuracy See Appendix A: Table F

Description	Order Code	Part Number	Probe Length (mm)	System
Pipe Temperature Sensor STP660	5126080000	STP660	100 to 300	Satchwell

STP120, 620

The STP620 and STP620 temperature sensors are intended for immersion mounting in pipe systems without requiring a pocket (well). This product is for use in fast time constant systems such as district heating applications. The STP housing is equipped with a 20mm cable fitting. A 20mm cable gland is supplied.

Accuracy See Appendix A: Tables A, F

Description	Order Code	Part Number	Probe Length (mm)	System
Pipe Temperature Sensor STP120-70	5123158010	STP120 –70	70	Vista
Pipe Temperature Sensor STP120-120	5123160010	STP120 –120	120	Vista
Pipe Temperature Sensor STP120-220	5123162010	STP120 –220	220	Vista
Pipe Temperature Sensor STP620	5126090000	STP620	100	Satchwell

Immersion Temperature Transmitters for Pockets

STP300

The STP300 is an electronic immersion temperature transmitter that converts a measured temperature into an electronic current signal 4-20 mA. The STP300 is designed for immersion mounting in pipe systems with a separate pocket (well). The pocket is sealed, making it easy to replace the transmitter if necessary. For a new installation the pocket has to be ordered separately.

The transmitter is intended for measurement of high and low temperatures. The transmitter is connected with a 2-wire cable, which serves both as power supply and for signal transmission. The reading of the measured signal is done over an external load resistance.

Output	2-Wire, 4-20 mA
Range	0/100, 0/160, -50/+50 °C
Accuracy	±0.4 % of range
Supply	Min. 15Vdc, Max. 36Vdc

Description	Order Code	Part Number	Probe Length (mm)
Pipe Temperature Sensor STP300-100 0/100	006920141	STP300-100 0/100	100
Pipe Temperature Sensor STP300-100 0/160	006920261	STP300-100 0/160	100
Pipe Temperature Sensor STP300-100 -50/50	006920221	STP300-100 -50/50	100
Pipe Temperature Sensor STP300-200 0/100	006920301	STP300-200 0/100	200
Pipe Temperature Sensor STP300-200 0/160	006920321	STP300-200 0/160	200
Pipe Temperature Sensor STP300-200 -50/50	006920281	STP300-200 -50/50	200
Pipe Temperature Sensor STP300-300 0/100	006920361	STP300-300 0/100	300
Pipe Temperature Sensor STP300-300 0/160	006920381	STP300-300 0/160	300
Pipe Temperature Sensor STP300-300 -50/50	006920341	STP300-300 -50/50	300
Pipe Temperature Sensor STP300-400 0/100	006920421	STP300-400 0/100	400
Pipe Temperature Sensor STP300-400 0/160	006920441	STP300-400 0/160	400
Pipe Temperature Sensor STP300-400 -50/50	006920401	STP300-400 -50/50	400

Pockets/Wells

The table below provides a list of pockets/wells suitable for use with most pipe sensors and transmitters. For Satchwell pipe sensors use DWA pockets. Note: pockets/wells must be ordered separately.

Description	Order Code	Part Number	Probe Length (mm)
Pocket STP 50mm Brass	9121040000	Pocket STP 50mm Brass	50
Pocket STP 50mm Stainless steel	9121050000	Pocket STP 50mm Stainless steel	50
Pocket STP 100mm Brass	9121041000	Pocket STP 100mm Brass	100
Pocket STP 100mm Stainless steel	9121051000	Pocket STP 100mm Stainless steel	100
Pocket STP 150mm Brass	9121042000	Pocket STP 150mm Brass	150
Pocket STP 150mm Stainless steel	9121052000	Pocket STP 150mm Stainless steel	150
Pocket STP 200mm Brass	9121043000	Pocket STP 200mm Brass	200
Pocket STP 200mm Stainless steel	9121053000	Pocket STP 200mm Stainless steel	200
Pocket STP 250mm Brass	9121044000	Pocket STP 250mm Brass	250
Pocket STP 250mm Stainless steel	9121054000	Pocket STP 250mm Stainless steel	250
Pocket STP 300mm Brass	9121045000	Pocket STP 300mm Brass	300
Pocket STP 300mm Stainless steel	9121055000	Pocket STP 300mm Stainless steel	300
Pocket STP 400mm Brass	9121046000	Pocket STP 400mm Brass	400
Pocket STP 400mm Stainless steel	9121056000	Pocket STP 400mm Stainless steel	400
Satchwell Pocket DWA0001	9121058000	Pocket adaptor	N/A
Satchwell Pocket DWA0002	9121060000	Pocket STP120mm Stainless steel	120
Satchwell Pocket DWA0003	9121062000	Pocket STP 200mm Brass	200
Satchwell Pocket DWA0004	9121064000	Pocket STP 200mm Stainless steel	200
Satchwell Pocket DWA0005	9121066000	Pocket STP 120mm Brass	120

Strap on Temperature Sensors

STC100, 200, 500, 600

STC strap on temperature sensors are designed for surface pipe mounting. The STC housing is equipped with a 20mm cable fitting.

Accuracy See Appendix A: Tables A, B, C, F

Description	Order Code	Part Number	System
Contact Temperature Sensor STC100	5123202010	STC100	Vista
Contact Temperature Sensor STC200	5123206010	STC200	I/NET
Contact Temperature Sensor STC500	5123218010	STC500	Continuum
Contact Temperature Sensor STC600	5126070000	STC600	Satchwell
Contact Temperature Sensor STC600D	5126200000	STC600D	Drayton

STC110, 510

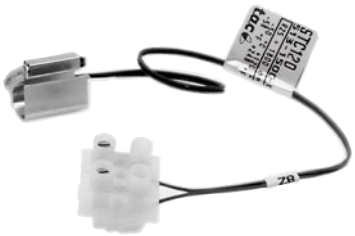
The STC110 and 510 temperature sensors are designed for mounting on pipe systems of max. Ø 100 mm. The temperature sensor is supplied with a connection cable of 2m or 4m.

Accuracy See Appendix A: Tables A, C

Description	Order Code	Part Number	System
Contact Temperature Sensor STC110-200	5123210000	STC110-200	Vista
Contact Temperature Sensor STC110-400	5123212000	STC110-400	Vista
Contact Temperature Sensor STC510-200	5123220000	STC510-200	Continuum

STC120

STC120 is a temperature sensor designed for mounting on a pipe system of heating coils Ø 10-15 mm. The sensor is supplied with a connection cable of 0.25m.



Accuracy See Appendix A: Table A

Description	Order Code	Part Number	System
Contact Temperature Sensor STC120	5123214000	STC120	Vista

Strap on Temperature Transmitters

STC300

STC300 is an electronic pipe contact temperature transmitter that converts the temperature measured into an electronic current signal 4-20 mA. The transmitter is delivered as a complete unit, comprising a pipe clamp, the sensing element and an amplifier, mounted in a housing.The sensor and amplifier are encapsulated in separate units, to protect the electronics from excessive heat. A 2m cable connects the two units.

The transmitter element is intended for external mounting directly on pipes, (max diameter 100 mm) e.g. flow and return water pipes. The transmitter is connected with a 2-wire cable, which serves both as power supply and for signal transmission.

The reading of the measured signal is done over an external load resistance.

Output	2-Wire, 4-20 mA
Range	0/100, 0/160, -50/+50 °C
Accuracy	±0.3 °C at 25 °C
Supply	Min. 15Vdc, Max.36Vdc

Description	Order Code	Part Number	System
Contact Temperature Sensor STC300 0/100	006920041	STC300 0/100	All
Contact Temperature Sensor STC300 0/160	006920061	STC300 0/160	All
Contact Temperature Sensor STC300 -50/50	006920021	STC300 -50/50	All

Outdoor Temperature Sensors

STO100,200,500,600

These outdoor sensors are intended for outdoor wall mounting. Variants are available for Vista, I/NET, Continuum and Satchwell systems. The body has a 20mm conduit entry and the product is supplied with a conduit gland.

Range	-40 to +90 °C
Accuracy	See Appendix A: Table A, C, F

Description	Order Code	Part Number	System
Outdoor Temperature Sensor STO100	5141100010	STO100	Vista
Outdoor Temperature Sensor STO500	5141104010	STO500	Continuum
Outdoor Temperature Sensor STO600	5126060000	STO600	Satchwell
Outdoor Temperature Sensor STO600D	5126000000	STO600D	Drayton

Outdoor Temperature Transmitters

STO300

The STO300 transmitter is supplied as a complete unit, comprising a sensing element and an amplifier mounted in a housing which is resistant to ultraviolet light. The transmitter is intended for mounting on an outside wall, on the north side where possible. The transmitter is connected over a 2-wire cable, which serves both as power supply and signal transmission. The reading of the measured signal is made over an external load resistance.

Output	4-20mA
Range	-50 to +50 °C
Accuracy	±0.4 % of range
Supply	Min. 15Vdc, Max. 36Vdc

Description	Order Code	Part Number	System
Outdoor Temperature Sensor STO300 -50/50	0069205010	STO300 -50/50	All

Humidity Transmitters

Room Humidity Transmitter

SHR100

The SHR100 is an active sensor, which measures relative humidity (%RH) and converts the measurement into two selectable output signals: voltage 0-10 V or an electric current 4-20 mA. The following options are available:

- SHR100-T includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for I/Net products.
- SHR100-T5 includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for Continuum products.
- SHR100-T6 includes selectable temperature sensors NTC 1.8 kΩ and NTC 5.02 kΩ for Satchwell products.

The transmitter consists of a sensor and amplifier, mounted together in a housing. The SHR100 is mounted directly onto the wall or a backbox / J-box.

Output	Selectable 4-20 mA, 0-10 V
Range	0-95% RH
Accuracy	±2%
Supply	24 Vac / 15-36 Vdc Power

Description	Order Code	Part Number	System
Room Humidity Sensor SHR100	006902340	SHR100	All (%RH only)
Room Humidity + Temperature SHR100-T	006902350	SHR100-T	I/NET, Vista
Room Humidity + Temperature SHR100-T5	006902390	SHR100-T5	Continuum, Vista
Room Humidity + Temperature SHR100-T6	006902420	SHR100-T6	Satchwell, Vista

Duct Humidity Sensor

SHD100

The SHD100 is an active sensor, which measures relative humidity (%RH) and converts the measurement into an electric current 4-20 mA or a voltage level 0 10 V. SHD100 is intended for immersion installation and is used for relative humidity measurement in air ducts.

The transmitter is delivered as a complete unit, comprising an aluminium mounting flange with the sensing element, and an amplifier mounted in a separate housing.

The following options are available:

- SHR100-T includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for I/Net products.
- SHR100-T5 includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for Continuum products.
- SHR100-T6 includes selectable temperature sensors NTC 1.8 kΩ and NTC 5.02 kΩ for Satchwell products.

The sensor has negligible hysteresis and is insensitive to dust as well as a wide range of chemicals.

The housing accommodates a 20mm conduit. A conduit gland nut is supplied with the unit.

Output	Selectable 4-20 mA, 0-10 V
Range	0-95% RH
Accuracy	±2%
Supply	24 Vac / 15-36Vdc

Description	Order Code	Part Number	System
Duct Room Humidity Sensor SHD100	006902320	SHD100	All
Duct Room Humidity + Temperature SHD100-T	006902330	SHD100-T	I/NET, Vista
Duct Room Humidity + Temperature SHD101-T5	006902381	SHD101-T5	Continuum, Vista
Duct Room Humidity + Temperature SHD101-T6	006902411	SHD101-T6	Satchwell, Vista

Outdoor Humidity Sensor

SHO100

The SHO100 is an active sensor, which measures relative humidity (%RH) and converts the measurement into an electric current 4-20 mA or a voltage level 0-10 V. It is intended for outdoor installation and for indoor areas where a more robust design is needed e.g. warehouse, swimming pool.

The following options are available:

- SHO100-T includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for I/Net products.
- SHO100-T5 includes selectable temperature sensors NTC 1.8 kΩ and NTC 10 kΩ for Continuum products.

The sensor has negligible hysteresis and it is insensitive to dust as well as a wide range of chemicals. The housing accommodates a 20mm conduit, and a conduit gland nut is supplied.

The transmitter is delivered as a complete unit, comprising a protective filter for the protruding sensor element, and an amplifier mounted in the housing.

Output	Selectable 4-20 mA, 0-10 V
Range	0-95% RH
Accuracy	±2%
Supply	24 Vac / 15-36 Vdc Power

Description	Order Code	Part Number	System
Outdoor Humidity Sensor SHO100	006902361	SHO100	All (%RH only)
Outdoor Humidity + Temperature SHO100-T	006902371	SHO100-T	I/NET, Vista
Outdoor Humidity + Temperature SHO101-T5	006902401	SHO101-T5	Continuum, Vista

Pressure Transmitters

SPD110 / SPD160

SPD110 / SPD160 Differential pressure transmitters are intended for use in air handling systems for the monitoring of air ducts, filters and fans. SPD110 / SPD160 are electronic differential pressure transmitters that convert the differential pressure measured into an electric 0-10 V signal. SPD160 has a LCD display, showing the differential pressure in Pa. The SPD110 / SPD160 are delivered with a 2 metre tube and two plastic duct connectors.

Medium: air and non-aggressive gases.

Output	0-10 V
Supply	24 Vac
Ranges	0-100 Pa, 0-300 Pa, 0-500 Pa, 0-1000 Pa, 0-1200 Pa, 0-2500 Pa, 0-5000 Pa

Accuracy:	
Linear output 0-100 Pa ≤ 2% ±FS	≤ 1% ±FS
Linearity inc. temperature and hysteresis 0-100 Pa ≤ 5% ±FS	≤ 2.5% ±FS
Accuracy at ambient temp. of 25°C	≤ ±0.4%FS

Description	Order Code	Part Number
Differential Air Pressure Transmitters SPD110-100Pa	004700020	SPD110-100Pa
Differential Air Pressure Transmitters SPD110-300Pa	004700040	SPD110-300Pa
Differential Air Pressure Transmitters SPD110-500Pa	004700060	SPD110-500Pa
Differential Air Pressure Transmitters SPD110-1000Pa	004700080	SPD110-1000Pa
Differential Air Pressure Transmitters SPD110-1200Pa	004700100	SPD110-1200Pa
Differential Air Pressure Transmitters SPD110-2500Pa	004700120	SPD110-2500Pa
Differential Air Pressure Transmitters SPD110-5000Pa	004700140	SPD110-5000Pa
Differential Air Pressure Transmitters SPD160-300Pa	004700160	SPD160-300Pa
Differential Air Pressure Transmitters SPD160-500Pa	004700180	SPD160-500Pa
Differential Air Pressure Transmitters SPD160-1000Pa	004700200	SPD160-1000Pa
Differential Air Pressure Transmitters SPD160-2500Pa	004700220	SPD160-2500Pa

Pressure Switches

SPD900

The SPD differential pressure switch is intended for use in air handling systems for the monitoring of air ducts, filters and fans. A control knob with a clear scale makes it easy to adjust the setpoint. SPD900 is delivered with a 2m tube and 2 plastic duct connectors. Medium: air and non-aggressive gases

SPD 900-200	
Range	20-200 Pa
Maximum voltage rating	250Vac
Contacts	Gold
Current rating	0.1A resistive, 1A inductive

SPD900-600	
Range	40-600 Pa
Maximum voltage rating	250Vac
Contacts	Silver
Current rating	3A resistive, 2A inductive

Description	Order Code	Part Number
Differential Air Pressure sensor SPD900-200Pa	004701020	SPD900-200Pa
Differential Air Pressure sensor SPD900-600Pa	004701040	SPD900-600Pa

SPP110

SPP110 pressure transmitters are intended for use in HVAC pipe systems to monitor pressure. The SPP110 is an electronic pressure transmitter that converts the measured pressure into an electric 0-10 V signal. The SPP110 is delivered with 2m (6.6 ft) cable and a G1/2 adapter nut.

Medium: any medium suitable for stainless steel.

Output	0-10 V
Range	0-100 kPa, 0-250 kPa, 0-600 kPa, 0-1000 kPa, 0-1600 kPa, 0-2500 kPa, 0-4000 kPa ranges
Accuracy:	
Total of linearity, hysteresis and repeatability	±0.5 % FS
Zero point residual voltage	< 50 mV
Supply	24 Vac / 15-36Vdc

Description	Order Code	Part Number
Wet Media Pressure Transmitter SPP110-100kPa	004702020	SPD110-100kPa
Wet Media Pressure Transmitter SPP110-250kPa	004702040	SPD110-250kPa
Wet Media Pressure Transmitter SPP110-600kPa	004702060	SPD110-600kPa
Wet Media Pressure Transmitter SPP110-1000kPa	004702080	SPD110-1000kPa
Wet Media Pressure Transmitter SPP110-1600kPa	004702100	SPD110-1600kPa
Wet Media Pressure Transmitter SPP110-2500kPa	004702120	SPD110-2500kPa
Wet Media Pressure Transmitter SPP110-4000kPa	004702140	SPD110-4000kPa

Air Quality Sensors

CO_2 Room Sensor

SCR100

The SCR100 is an infrared and maintenance-free carbon dioxide transmitter for indoor wall mounted installations.

SCR100 measures the carbon dioxide concentration in the ambient air, up to 2,000 ppm, and transforms the data into a 0-10V or 0-5V output signal.

SCR100 is also equipped with passive temperature elements including:
- 1.8 kΩ for TAC Vista® products
- 10 kΩ for I/NET® products
- 10 kΩ for Continuum® products.

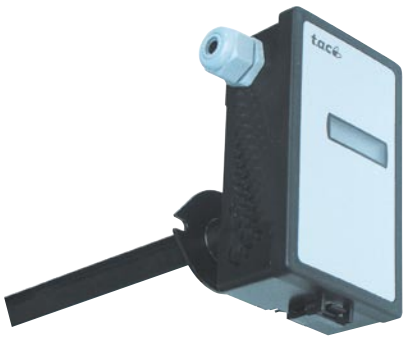
The SCR100 helps you save money by decreasing the energy consumption, while creating a healthier indoor climate.

Output	0-10 V / 0-5V
Range	0-2000 ppm
Accuracy	±1% of measurement range, ±5 % of measured value
Supply	24 Vac

Description	Order Code	Part Number	System
Room Sensor CO_2 SCR100	004630000	SCR100	Vista, I/Net, Continuum

CO_2 Duct Sensor

SCD100



The SCD100 is an infrared and maintenance-free carbon dioxide transmitter for installation in ventilation ducts. The SCD100 measures the carbon dioxide concentration in the ambient air up to 2,000 ppm and transforms the data into a 0-10V output signal. The SCD100 is also equipped with passive temperature elements for:

- TAC Vista® products, NTC 1.8 kΩ
- I/NET® products, NTC 10 kΩ
- Continuum® products, NTC 10 kΩ

The SCD100-D has an LCD display, showing CO_2 in ppm.

The SCD100 helps you save money by decreasing your energy consumption while creating a healthier indoor climate.

Output	0-10 V / 0-5V selectable
Range	0-2000 ppm
Accuracy	±1% of measurement range, ±5 % of measured value
Supply	24 Vac

Description	Order Code	Part Number	System
Duct Sensor CO_2 SCD100	004630100	SCD100	Vista, I/Net, Continuum
Duct Sensor CO_2 SCD100-D	004630110	SCD100-D	Vista, I/NET, Continuum

Light Transmitters

Room Light Transmitters

SLR300, SLR310

SLR300/310 electronic light transmitters convert a lux measurement into a 0-10 Vdc output signal or an electric current signal 4-20 mA. They have two sensitivity ranges to suit different light levels:

- 0-400 lux (e.g. for controlling outdoor lighting)
- 0-20k lux (for controlling sunshade systems).

The transmitter is delivered as a complete unit, comprising the sensing element, and an amplifier mounted in a housing. The transmitter is intended for wall mounting indoors. The sensitivity peak is for light at an angle of incidence of 0° to the perpendicular. The sensor has the same spectrum sensitivity peak as the human eye.

The SLR300 converts a lux measurement into a current signal 4-20mA.

The SLR310 converts a lux measurement into an electric signal 0-10 V.

SLR300	
Output	2-Wire, 4-20 mA
Range	0-400 lux, 0-20k lux selectable
Accuracy	±5%
Supply	Min. 15Vdc, Max. 36Vdc

SLR310	
Output	0-10Vdc
Range	0-400 lux, 0-20k lux selectable
Accuracy	±5%
Supply	24Vac, 15-36 Vdc

Description	Order Code	Part Number
Room Light Sensor SLR300	006920560	SLR300
Room Light Sensor SLR310	006920600	SLR310

Outdoor Light Transmitters

SLO300, SLO310

SLO300/SLO310 electronic light transmitters convert a lux measurement into an electric current signal. They have two sensitivity ranges to suit different light levels:

- 0-400 (e.g. for controlling outdoor lighting)
- 0-20 (for controlling sunshade systems).

The transmitter is delivered as a complete unit, comprising the sensing element and an amplifier mounted in a housing. The transmitter is intended for wall mounting. The sensitivity peak is for light at an angle of incidence of 0° to the perpendicular. The sensor has the same spectrum sensitivity peak as the human eye.

The SLR300 is an electronic light transmitter that converts a lux measurement into a current signal 4-20mA.

The SLR310 converts a lux measurement into an electric signal 0-10 V.

SLO300	
Output	2-Wire, 4-20 mA
Range	0-400 lux, 0-20k lux selectable
Accuracy	±5%
Supply	Min. 15Vdc, Max. 36Vdc

SLO310	
Output	0-10 Vdc
Range	0-400 lux, 0-20k lux selectable
Accuracy	±5%
Supply	Min. 15Vdc, Max. 36Vdc

Description	Order Code	Part Number
Outdoor Light Sensor SLO300	006920581	SLO300
Outdoor Light Sensor SLO310	006920621	SLO300

Appendix A: Sensor Accuracy Tables

Table A

For all Vista (100 Series Sensors), e.g. STD100

At temperature	Accuracy
-25 °C/-13 °F	±0.7 °C/±1.3 °F
±0 °C/32 °F	±0.5 °C/±0.9 °F
25 °C/77 °F	±0.3 °C/±0.5 °F
50 °C/122 °F	±0.6 °C/±1.1 °F
75 °C/167 °F	±0.9 °C/±1.6 °F
100 °C/212 °F	±1.3 °C/±2.3 °F

Table B

For all I/NET (200 Series Sensors), e.g. STD200

At temperature	Accuracy
-25 °C/-13 °F	±0.5 °C/±0.9 °F
±0 °C/32 °F	±0.2 °C/±0.4 °F
25 °C/77 °F	±0.2 °C/±0.4 °F
50 °C/122 °F	±0.2 °C/±0.4 °F
70 °C/158 °F	±0.2 °C/±0.4 °F
100 °C/212 °F	±0.5 °C/±0.9 °F

Table C

For all Continuum (500 Series Sensors), e.g. STD500

At temperature	Accuracy
-25 °C/-13 °F	±0.5 °C/±0.9 °F
±0 °C/32 °F	±0.2 °C/±0.4 °F
25 °C/77 °F	±0.2 °C/±0.4 °F
50 °C/122 °F	±0.2 °C/±0.4 °F
70 °C/158 °F	±0.2 °C/±0.4 °F
100 °C/212 °F	±0.5 °C/±0.9 °F

Table D

For all Vista Averaging Sensors (100 Series), e.g.STD 190

At temperature	Accuracy
-25 °C/-13 °F	±0.7 °C/±1.3 °F
±0 °C/32 °F	±0.5 °C/±0.9 °F
25 °C/77 °F	±0.3 °C/±0.5 °F
50 °C/122 °F	±0.6 °C/±1.1 °F
75 °C/167 °F	±0.9 °C/±1.6 °F
100 °C/212 °F	±1.3 °C/±2.3 °F

Table E

For all Continuum Averaging Sensors (500 Series), e.g.STD 5900

At temperature	Accuracy
-25 °C/-13 °F	±0.5 °C/±0.9 °F
±0 °C/32 °F	±0.2 °C/±0.4 °F
25 °C/77 °F	±0.2 °C/±0.4 °F
50 °C/122 °F	±0.2 °C/±0.4 °F
70 °C/158 °F	±0.2 °C/±0.4 °F
100 °C/212 °F	±0.5 °C/±0.9 °F

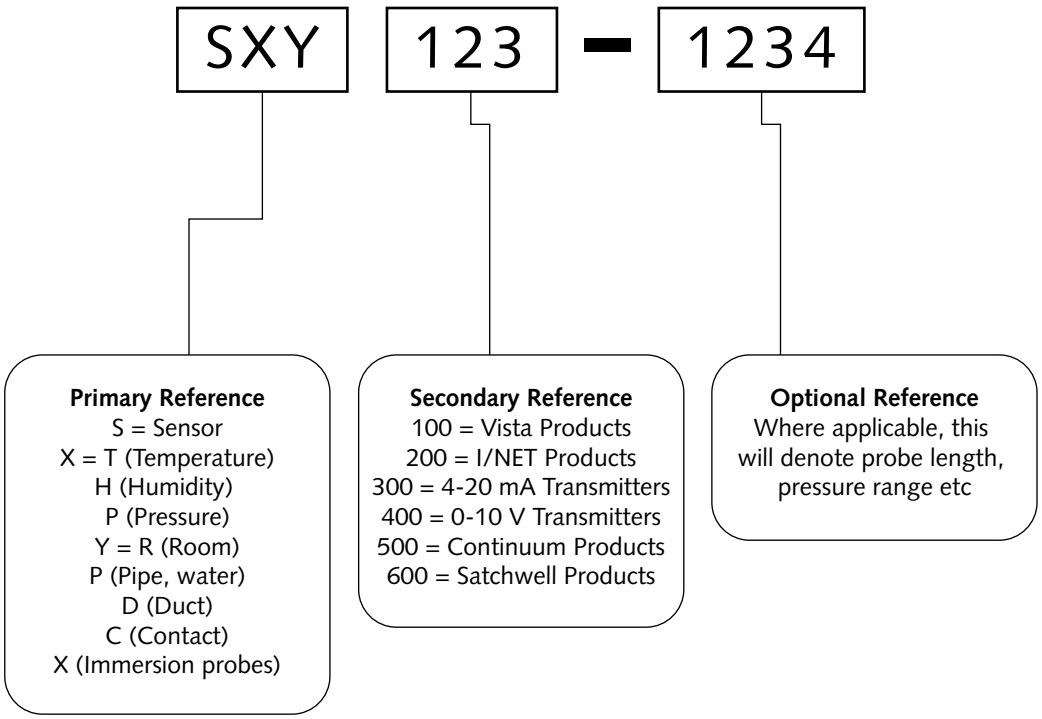
Table F

For all Satchwell Sensors (600 Series), e.g. STR600

At temperature	Accuracy
-25 °C/-13 °F	±0.6 °C/±1.0 °F
±0 °C/32 °F	. ±0.3 °C/±0.5 °F
25 °C/77 °F	±0.2 °C/±0.4 °F
50 °C/122 °F	±0.2 °C/±0.4 °F
75 °C/167 °F	±0.3 °C/±0.5 °F
100 °C/212 °F	±0.3 °C/±0.5 °F

General Part Number Format

The following diagram explains the general construction of the Sensor Part Numbering methodology. There are some rare instances where this rule is broken, but in most cases, this serves as a good guideline.



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