Sontay®

Measure
Improve
Sustain

2026

Product Catalogue

INNOVATION • QUALITY • COMMITMENT • SUPPORT

A NEW CHAPTER IN SENSING

Buildings are evolving, and expectations of performance are rising. This catalogue begins a refined chapter in sensing, precise, intuitive, and thoughtfully crafted.

Sontay draws on the clarity of early industrial design while embracing a modern simplicity. Each product works quietly and reliably within its environment to elevate comfort, intelligence, and efficiency.

SORA   LoRaWAN

WHY SENSING MATTERS TODAY

Intelligent buildings depend on accurate, reliable data. From reducing energy consumption to improving air quality, sensing forms the foundation of effective BMS and HVAC strategies. As sustainability targets tighten and expectations rise, sensing offers clarity, providing the insight needed for confident, optimised building control.

Hospitals
Precision sensing protects critical environments, supporting patient wellbeing, infection control, and energy-efficient healthcare operations.

Hotels
Smart sensing balances guest comfort with operational efficiency, reducing waste while enhancing the experience.

Schools
Healthy learning environments begin with clean air and stable comfort, enabled by intelligent, responsive sensing.

Offices
Data-driven environments improve productivity, wellbeing, and energy performance, creating smarter, more adaptive workplaces.

Commercial Spaces
Sustainable building control reduces operational costs while ensuring comfort, compliance, and environmental responsibility.

Smart Sensing

Sustainability

Building Controls

Sensing enables healthier, more sustainable spaces.

Sontay®

OUR DESIGN PHILOSOPHY

Every Sontay device is shaped with one intention: effortless performance through refined design.

Clean lines, thoughtful interfaces, and dependable engineering define our approach. Each material and detail serves a purpose, creating a sensing family that blends seamlessly into its environment while delivering robust, enduring performance.

ONE — Design Philosophy

TWO — Creative Process

THREE — Materials & Techniques

FOUR — Iconic Designs

FIVE — Legacy

BUILDING TRUST THROUGH CRAFT

Trust is earned through consistency and craft. Sontay products undergo rigorous testing and continual refinement, backed by a five-year warranty that reflects our confidence in long-term reliability.

Behind each device stands a team dedicated to clarity, accuracy, and dependable support, an extension of your technical capability.

- Trust
- Authenticity
- Empathy
- Logic

Sontay®
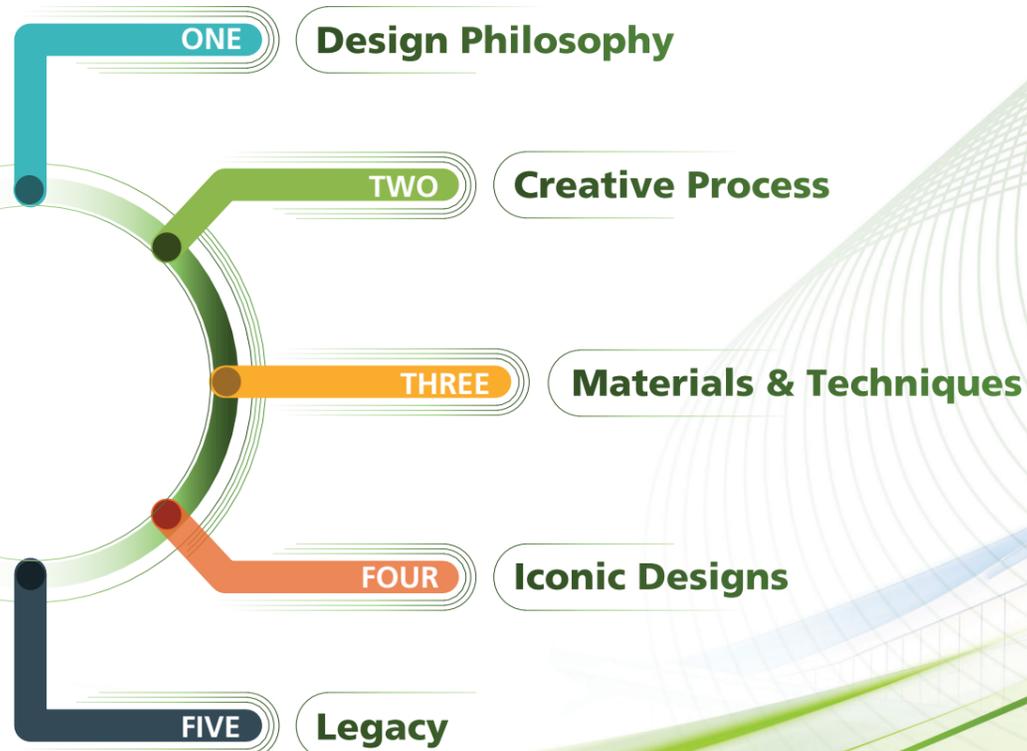
NEW PRODUCTS

IO-FRM4
Fan Speed Relay Module

RE-1P-x
Single-phase Controllers

RF-LW-HARVY2
LoRaWAN Current Sensor

RF-LW-WF
LoRaWAN Clampon Flow Meter

RF-LW-IO-16ADS
LoRaWAN Dry Switch

PL-EPSA
Economy Liquid Pressure Switch

GS-CO-P
CO Car Park Gas Detection

ST-RSTAT
Space Thermostat

RF-LW-THPIR-S – LoRaWAN
Space Occupancy Sensors

RF-LW-HM
LoRaWAN Heat Meter

RF-LW-IO-16A – LoRaWAN
Switch and Power Meter

ST-EFRE
Economy Capillary Frost Thermostat

GS-CO2-RHT-240V-S
Indoor sensor traffic light LCD

RF-LW-TIAQ-RAD – LoRaWAN
Indoor Air Quality plus Radon

RF-LW-TIAQ-ISO – LoRaWAN
Indoor Air Quality Monitoring ISO

RF-LW-WM
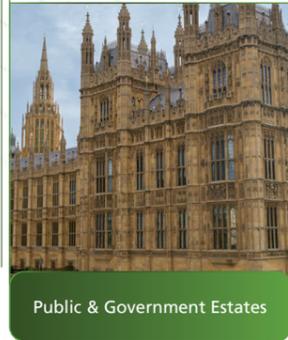LoRaWAN Water Meter

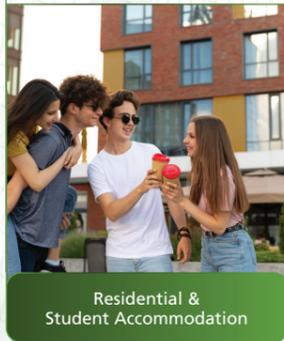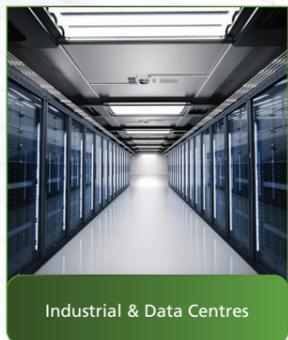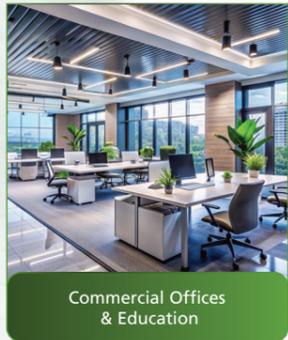**RF-LW-TRV-RUGGED – LoRaWAN**
TRV with rugged back plate

PA-985 – Economy
Air Differential Pressure Transmitter

Sontay®

SECTORS WE SUPPORT

Our sensing solutions support a broad landscape of building types:

Commercial Offices & Education

Healthcare & Laboratories

Hospitality & Leisure

Industrial & Data Centres

Residential & Student Accommodation

Public & Government Estates

Across all sectors, Sontay devices provide consistency, clarity, and dependable control.

OUR PRODUCT ECOSYSTEM

The Sontay ecosystem brings together wired and wireless sensing designed to integrate seamlessly with BMS and HVAC systems. From temperature and humidity to CO_2, pressure, flow, metering, and total indoor air quality, each product family is crafted with a unified purpose:

To make building performance smarter, more sustainable, and more dependable.

- BMS & HVAC Systems
- Flow
- Pressure
- Temperature & Humidity
- Metering
- CO_2
- Total Indoor Air Quality
- Building Performance
- More Dependable

CASE STUDIES

We're immensely proud of what our customers achieve using our products. We support them in every aspect from product selection and advice through to technical support on site. The final outcome of these projects shows the dedication and capabilities of our clients.

Sontay LoRaWAN TRVs improve comfort at St Luke's Community Centre.

St Luke's implemented a pilot phase using Sontay LoRaWAN Smart Radiator Thermostats (TRVs) alongside the Sontay Tower platform to implement a mini BMS.

Sontay Smart sensors support air quality monitoring at the National Cycling Centre Velodrome.

As part of this extensive upgrade, Sontay solutions were specified to provide reliable monitoring and control across the site, ensuring optimal environmental conditions within the velodrome arena.

Enhancing comfort and efficiency in a Scottish care home with Sontay's IOTsolutions

A care home in northern Scotland, housing over 30 self-contained apartments, recently undertook a significant upgrade to its heating and monitoring systems with a view to improve resident comfort, operational efficiency, and sustainability.

Gatwick Airport Implement Sontay's SORA Wireless Sensing Solution

A major international airport needed a reliable and efficient Building Management System (BMS) to monitor key environmental parameters such as temperature, relative humidity, and CO_2 levels.

Sontay provides wireless temperature monitoring solution for Playmobil Malta

To maintain the optimal environment for its operations, Playmobil Malta required a number of temperature sensors to be installed at various locations throughout its facility. The challenge was that many of these locations were inaccessible for traditional wired solutions.

Smart Legionella compliance for a UK boarding college

A prestigious UK boarding college required a modern, reliable way to monitor Legionella risk across multiple residential boarding houses. Many of the buildings are listed, meaning drilling, new cabling and intrusive installation work were heavily restricted.

SONTAY ACADEMY

Sontay Academy
sontay-academy.com

Through over 45 years in the industry, Sontay has gained great knowledge in products and applications. This offers a fantastic opportunity to pass this information on to the industry through training via the Sontay Academy!

The Sontay Academy offers Building Controls Industry Association (BCIA) courses.

bcia training partner

Available at our facilities in Edenbridge, Bristol, Leeds, Uxbridge and, Scotland as well as by online webinar.

Courses delivered to you!

Please contact us to organise group training at your chosen location.

CIBSE CPD

The courses incorporate the latest technical information from the building controls sector:

BCIA

- BCM01 - Fundamentals of HVAC & Building Controls
- BCM02 - Measuring & Control Technology
- BCM03 - Hydraulics in Building Services
- BCM04 - Control Function of Heating Plants
- BCM05 - Control of Ventilation and Air Conditioning
- BCM06 - Control of Cooling Systems
- BCM10 - Fault Diagnostics and Corrections
- BCM12 - BEMS Control Principles
- BCM13 - Testing, Inspection and Certification

SONTAY

- Introduction to Building Controls
- Wireless Sensing Systems
- Practical BMS Course
- Smart Communication using BACnet
- The Importance of Sensing in BMS

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bsi ISO 9001 Quality Management Systems CERTIFIED

bsi ISO 14001 Environmental Management CERTIFIED

SONTAY'S Contact Team

Our team will be pleased to hear from you whenever you require any information on our range of products and services.

Internal Sales & Technical Support

Customers regularly comment on the excellent services they receive from our Internal Sales and Technical Support Team's. Contact them for any enquiry you may have.

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Icons / category labels: AV FS LS · GL GS SD · FC RE · IO · LL OC · PM PS · PA PL · SORA RF-LW SC PA-DPT SC-Gateways · RH ST TT UI · VA VR VZ · EP WD CPS

WHEN FLOW CONTROL IS CRITICAL

MAKE SURE IT IS SONTAY

POWER MONITORING

TEMPERATURE & HUMIDITY

WATER LEAK DETECTION

SMART SENSORS

SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX

AIR & WATER FLOW

BENEFITS

SAFETY
Prevent dry-run, blockage, and overflow ·
Enable safe interlocking of equipment ·

RELIABILITY
· Proven technologies for HVAC environments
· Long-term stability and accuracy

EFFICIENCY
Ensure correct flow for optimal performance ·
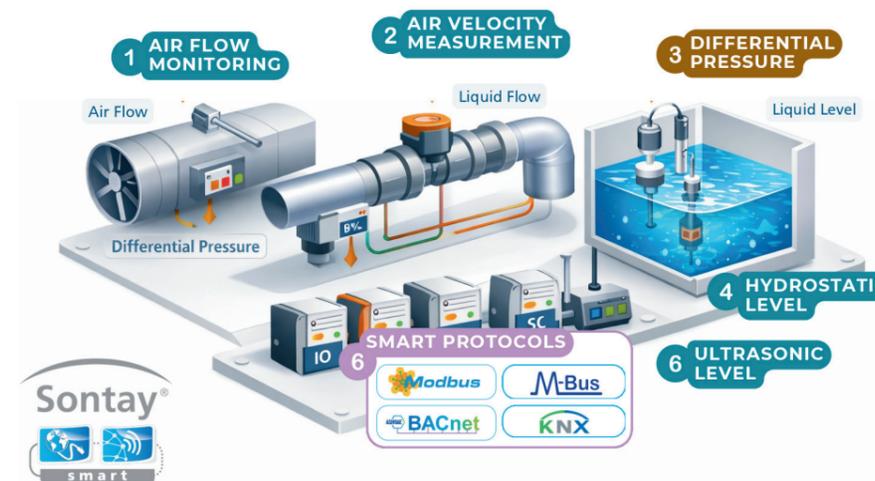Reduce energy waste and system imbalance ·

INTEGRATION
· Easy integration with BMS architectures
· Compatible: Sontay pressure & control sensors

SCAN HERE

Sontay Sensors for Air & Water Flow

Reliable monitoring for ventilation control, safety, and compliance.

1 AIR FLOW MONITORING
2 AIR VELOCITY MEASUREMENT
3 DIFFERENTIAL PRESSURE
4 HYDROSTATIC LEVEL
6 ULTRASONIC LEVEL

Air Flow
Liquid Flow
Liquid Level
Differential Pressure

SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX

Sontay smart

Sensing for safe, efficient flow control. Accurate air and water flow measurement is essential for the safe and efficient operation of HVAC and building services systems. From air distribution in ductwork to liquid circulation in heating and cooling systems, reliable flow monitoring protects equipment, supports system efficiency, and reduces energy waste.

Sontay's Air & Water Flow sensing range delivers dependable monitoring across airflow, liquid flow, and level detection, supporting engineers and integrators with proven solutions for real-world HVAC applications.

Air velocity probes and flow switches are commonly used within AHUs and heating circuits to verify airflow and liquid circulation before enabling heating or cooling equipment, improving safety, reliability, and energy efficiency.

	Product Code	Applications	
1	FS-W / FS-X	Air Flow Monitoring	
2	AV-EP / AV-MPS	Air Velocity Measurement	
3	PA / PS	Differential Pressure	
4	LS-SLP	Hydrostatic Level	
5	LS-RD	Radar Level	
6	SC	Smart Communication Protocols	

AIR VELOCITY & FLOW
- Measure airflow in ducts and controlled spaces
- Support balancing, ventilation, and pressurisation

AIR & LIQUID FLOW SWITCHES
- Prove airflow or liquid circulation
- Enable safe fan, pump, and heater interlocking

LIQUID LEVEL MONITORING
- Detect low and high levels early
- Protect equipment and prevent overflow

AV-D — Single-Point Multi-Range Air Velocity Transmitter

The AV-D is a single point, multi-range air velocity transmitter with user se-lectable 0-10Vdc or 4-20mA outputs and 4 user selectable measurement rang-es. The unit has a built-in self-test feature and the user can manually override the output to 0%, 50% or 100% of output range to aid commissioning.

FEATURES

- User selectable 0-10Vdc or 4-20mA outputs
- User selectable measurement ranges
- Durable and resistant to chemical reagents
- Adjustable probe depth using the optional DPA
- Built-in self-test feature

SPECIFICATION

Accuracy	±3% of ranges
Environmental Housing	-30 to 60°C 0 to 95% non-condensing
Environmental Media	-10 to +50°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Max.Current	50mA
Output	4-20mA into 100Ω min, 0-10Vdc into 4.7kΩ min
Probe Dimensions	215mm x 20mm dia
Probe Material	Delrin
Protection	IP65
Selectable ranges	0 to 4m/s, 0 to 8m/s, 0 to 16 m/s, 0 to 32 m/s
Supply (Current Output)	20Vdc to 35Vdc for 500Ω loop resistance,12Vdc to 30Vdc for 100Ω loop resistance
Supply (Voltage output)	17Vdc to 34Vdc,14Vac to 26Vac supply into 4.7kΩ min.
Weight	220g

Part code	Description
AV-D	Single Point Air Velocity Sensor
Accessory	
DPA	Duct probe adjustment flange

AV-W — Wind Speed and Direction Sensors

The AV-W series measures the wind speed and direction, providing output signals compatible with most BEMS controllers. Intended for applications where external weather conditions influence the building control strategy, such as for the automatic closing of windows in high wind conditions. Mounting kit is included.

SPECIFICATION

Accuracy	±2%
Ambient Range	-20 to +70°C
Contact rating Current	1A max.
Contact rating Power	50W max. (dc resistive)
Contact Rating Voltage	100Vdc max
Electrical connections	Flying lead (3m long)
Electrical Travel	357° (±2°)
Mechanical travel	360° endless travel
Min. start speed	0.5m/s typically
Output	1 contact closure per 1.493 metre (zero bounce)
Protection	IP65
Weight	1.45kg

Part code	Description
AV-W-AD	Wind Speed and Direction Transmitter
AV-W-S	Wind Speed Transmitter

AV-X — Multi-point Air Velocity Probes

The AV-EP and the EV -MPS velocity probes are used to ensure that recom-mended flow rates for public buildings and industrial plants are achieved. They are used with either the PA-DPT, PA-699 or PA-267 Air Differential Pressure Sensor of an appropriate range (please refer to data sheet on Sontay's website for the further information), the output of the sensor represents the velocity pressure and is defined by the following equation:

$$\text{Velocity} = \sqrt{(2 \times \text{Velocity Pressure}) / 1.2}$$

FEATURES

- Push-on connectors to suit PA-TUBE range of PVC tubing
- Neoprene rubber gaskets duct seals included
- Averages across the duct
- Fully compatible with Sontay's range of DP pressure transmitters
- Mounting plates included
- Double gasket seals the probe to the duct

SPECIFICATIONINCOME STEAMI

Connectors	Nickel Plated brass to suit 6mm ID PVC tubing
Probe Material	ABS Flame retardant (V0)

Part code	Description
AV-EP-100	100mm Multi-point probe (ABS)
AV-EP-200	200mm Multi-point probe (ABS)
AV-EP-300	300mm Multi-point probe (ABS)
AV-EP-400	400mm Multi-point probe (ABS)
AV-EP-500	500mm Multi-point probe (ABS)
AV-EP-600	600mm Multi-point probe (ABS)
AV-MPS-700	To suit duct size 600-700mm
AV-MPS-800	To suit duct size 700-800mm
AV-MPS-1000	To suit duct size 750-1000mm
AV-MPS-1250	To suit duct size 1000-1250mm
AV-MPS-1500	To suit duct size 1250-1500mm
AV-MPS-1750	To suit duct size 1500-1750mm
AV-MPS-2000	To suit duct size 1750-2000mm

FS-A — Air Flow Paddle Switch

The FS-A paddle switch is intended to monitor air flow within a duct and provides a switched output on detection of either a specific air velocity or flow failure. Switching sensitivity can be adjusted by means of a calibration screw within the unit.

FEATURES

- Adjustable switching point
- High capacity, fully encapsulated N/C, N/O micro-switch
- Lid-mounted screws provide tamper proofing
- Cost-effective flow switch for many HVAC applications

SPECIFICATION

Operating ambient temp	-20 to +70°C
Operating media temp	-20 to +120°C
Paddle Material	Stainless Steel
Rod Material	Brass
Enclosure Material	ABS flame retardant (type VO)
Switch rating	15(8)A SPDT @ 230Vac
Paddle dimensions	80 x 175mm
Housing Dimensions	113.5 x 65 x 62mm
Protection	IP65
Weight	580g

Part code	Description
FS-A	80 x 175mm Paddle Switch

FS-W — Liquid Flow Switch

The FS-W paddle switch is intended to monitor liquid flow within pipes and provide a VFC output on detection of either a specific flow rate or flow failure. Switching sensitivity can be adjusted by means of a calibration screw within the unit. The paddle can be trimmed to increase sensitivity if necessary.

FEATURES

- Adjustable switching point
- Suitable for applications up to 11bar
- Lid-mounted screws provide tamper proofing
- Well suited for many general industrial plant applications
- Screws directly into a 1" BSPT boss

SPECIFICATION

Operating Temperature	-40 to +120°C
Paddle Material	Stainless Steel
Rod Material	Brass
Enclosure Material	ABS flame retardant (type VO)
Switch rating	15(8)A @ 24 to 250Vac
Pipe suitability	1" to 8"
Housing Dimensions	113.5 x 65 x 62mm
Paddle dimensions	28.5, 54.5, 83.5 and 161.5mm
Protection	IP65
Weight	700g

Part code	Description
FS-W	1" BSPT Flow Switch

Integrated Air & Water Flow Monitoring

Air Flow   Differential Pressure

Liquid Flow   Liquid Level   Smart Communication

SORA LoRaWAN   BMS

Sontay®
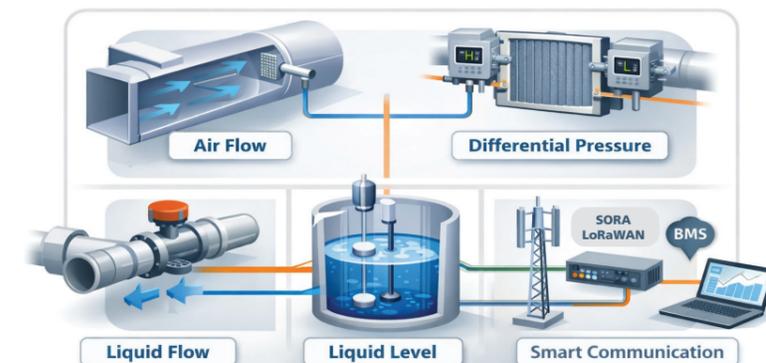
LS-RD — Radar level sensor

Radar sensor for non-contact level measurement in all standard applications where a high degree of protection is required. It is particularly suitable for level measurement in pumping stations, water treatment, flow measurement in open channels, and level monitoring and for many other industrial applications. The sensor is suitable both for measuring liquids and for maintenance free use on small bulk silos or bulk solids containers.

FEATURES

• Maintenance-free operation due to non-contact 80 GHz radar technology

• Exact measuring results independent of product, process and ambient conditions

• Low-cost sensor for simple measuring tasks

SPECIFICATION

Operating Voltage	12-35VDC
Output	4-20mA
Control	Bluetooth 5.0 app 25m range
Measurement range	10m
Beam Angle	8 °C
Accuracy	≤5mm
Radar frequency	W-band 80 GHz
Operating Temperature	-40 - +60°C
Housing colour	White
Housing Dimensions	108mm x 76mm Dia.
IP Rating	IP66/68
Country of origin	Germany

Part code	Description
LS-RD	Radar level sensor

LS-SLP — Submersible level probe

This level probe measures the level of liquids continuously and hydrostatically. It can be used in ventilated tanks at filling heights from 2.50 to 10 mH2O. The level probe can also be used in other places such as rainwater cisterns or in greywater recycling.

FEATURES

• Measuring ranges: 0.25 to 1 bar, Medium temperature 0 to 50 °C

• Piezoresistive silicon sensor

• Accuracy: 0.3% MSP2 (linearity)

• Sensor technology proven thousands of times over Reverse-polarity protection mechanism

SPECIFICATION

Operating pressure	0-0.25 Bar
Operating Temperature	0-50°C Sensor must not freeze in the medium
Output	4-20mA
Supply Voltage	10-30V Nominal 24VDC
Weight	90g

Part code	Description
LS–SLP–0.25	Submers Level probe 0.25 Bar 4-20ma 5m cable
LS–SLP–0.25–V	Submers Level probe 0.25 Bar 0-10Vdc 5m cable
LS–SLP–0.4	Submers Level probe 0.4 Bar 4-20ma 10m cable
LS–SLP–0.4–V	Submers Level probe 0.4 Bar 0-10Vdc 10m cable
LS–SLP–1	Submers Level probe 1 Bar 4-20ma 25m cable
LS–SLP–1–V	Submers Level probe 1 Bar 0-10Vdc 25m cable

LS-541 — Float Switch

The LS-541 is liquid level float switch which is intended to monitor liquid level in a tank or vessel, to provide a switched output to provide local alarm, pump or valve control. The differential between switching is equivalent to approximately 15mm. The unit mounts into 1" BSPT female boss. Access is not required from the inside of the tank.

SPECIFICATION

Enclosure Material	ABS Base, PC Cover
Float & Rod Dimensions	200 x 25mm dia max.
Float Material	Acrylic
Housing Dimensions	140 x 65 x 62mm
Media	Non-aggressive fluids
Mounting	1" BSPT boss
Operating pressure	11 bar max
Operating Temperature	-40 to +85°C, media 85°C max.
Protection	IP65
Rod/boss material	Brass
Switch rating	15(8)A SPDT @ 24...250Vac, VFC
Weight	960g

Part code	Description
LS-541	1"BSPT Float Switch (horizontal mount)

LS-FL — Liquid Level Float Switches

The LS-FL series is a range of level switches suitable for single or multi-level applications where access is only available from the top surface or where multiple level sensing is desired from a single penetration. Units consistsof a float, which is suspended from a weighted cable. As the liquid level changes, the float follows the surface level, at the same time tilting due to its weighted restraint. Inside the float are a number of micro switches which trigger as the float tips.

SPECIFICATION

Ambient Temperature Range	0 to +55°C
Material	Polypropylene & PVC
Max. ext. pressure	200Kpa
Min. fluid S.G	0.7
Protection	IP68
Std. cable length	5m
Switch rating	6A @ 240Vac
Weight	1.62kg max.

Part code	Description
LS-FL-1H	High Level, Alarm Switch
LS-FL-1L	Low Level, Alarm Switch
LS-FL-2H	Emptying Pump, Control Switch
LS-FL-2L	Filling Pump, Control Switch
LS-FL-2LH	High & Low Level AlarmSwitch

LS-S — Liquid Level Float Switches

LS-S TYPES

LS-TM

The LS-S range of side mounting level switches designed for high or low liquid level detection in tanks and vessels. Units consistsof a lever arm reed switch assembly and a tank fixing boss. The LS-S types are for side mounting, type 1 switches fit from the inside of the tank and tighten on to a back nut whilst the type 2 switches mount from the outside into a tapered boss. Units project into the tank by a maximum of 100mm.

The LS-TM is an easy to install Top Mounting Level Switch, and has a reversible float so that it can be used for either high or low level alarms. The float is suspended from a 5 metre PVC weighted cable.

SPECIFICATION LS-SN (POLYPROPYLENE)

Operating range	-20 to +80°C
Switch Rating	230Vac/200Vdc@0.5A max.
Weight	120g max.

SPECIFICATION LS-SS (STAINLESS STEEL 316)

Operating range	-20 to +120°C
Switch Rating	300Vac/350Vdc@1A max.
Weight	120g max.

SPECIFICATION

Switch rating	240Vac/200Vdc @ 0.5A max.	
Contact	N/O, reversible to N/C	
Material	Cable:	PVC (5 metres)
	Float:	Nylon
	Weight:	Stainless Steel
Operating range	-20 to +80°C	
Dimensions	115 x 65mm	
Weight	320g	

Part code	Description
LS–SN–1	Level Switch Side (Int) Polypropylene M16 back nut
LS–SN–2	Level Switch Side Mtg Ext Polypropylene ½" NPT
LS–SS–1	Stainless Level Switch Side Mount Int M8 back nut
LS–SS–2	Stainless Steel Level Switch Side Mounting Ext ½" BSPT

Part code	Description
Top Mounting Reversible Float Switch	
LS-TM	Top Mounting Level Switch

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

Sontay®

WHEN AIR QUALITY IS CRITICAL

CO₂ 2000ppm

CO₂

CO₂ : 500

MAKE SURE IT IS SONTAY

CAR PARK MONITORING

VOC MONITORING

PM DETECTION

SMOKE DETECTION

CO2 MEASURING

SMART SENSORS

SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX

AIR QUALITY & GAS SENSING

BENEFITS

HEALTH & SAFETY
Protect from poor air quality & harmful gases ·
Early warning for unsafe conditions ·

EFFICIENCY
Demand-controlled: Reduces energy waste ·
Ventilate only when and where needed ·

COMPLIANCE
· Support indoor air quality standards
· Suitable for safety-critical environments
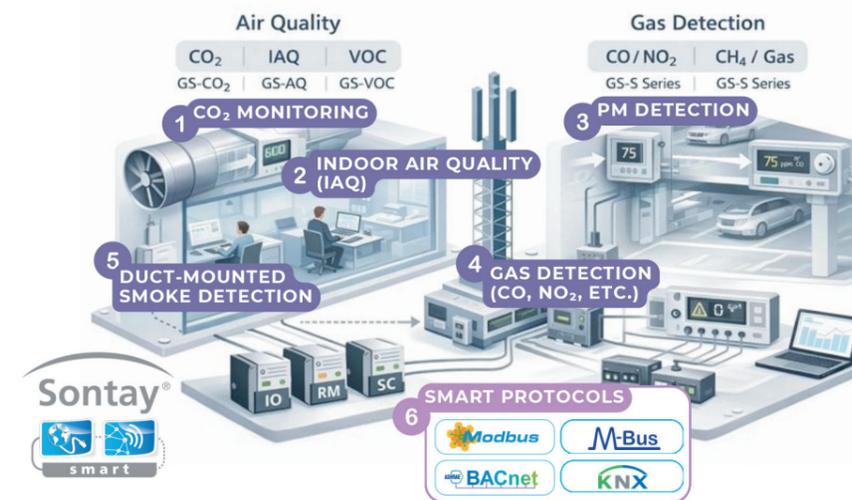
INTEGRATION
· Compatible with modern BMS architectures
· SMART communication options available

SCAN HERE

Sontay Sensors for Air Quality & Gas Detection
Accurate sensing for airflow, liquid flow, and level detection.

Air Quality
CO₂ | IAQ | VOC
GS-CO₂ | GS-AQ | GS-VOC

Gas Detection
CO / NO₂ | CH₄ / Gas
GS-S Series | GS-S Series

1 CO₂ MONITORING
2 INDOOR AIR QUALITY (IAQ)
3 PM DETECTION
4 GAS DETECTION (CO, NO₂, ETC.)
5 DUCT-MOUNTED SMOKE DETECTION
6 SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX

IO RM SC

Sontay® smart

Sensing for healthy, compliant indoor environments. Indoor air quality and gas detection play a vital role in protecting occupant health, supporting ventilation efficiency, and ensuring compliance with safety standards. From offices and schools to car parks and plant rooms, reliable sensing is essential wherever people and equipment share enclosed spaces.

Sontay's Air Quality & Gas Sensing range provides accurate monitoring of CO₂, IAQ parameters, VOCs, and hazardous gases, enabling smarter ventilation control, early fault detection, and safer building operation.

Key Application Areas

INDOOR AIR QUALITY
- CO₂ and IAQ monitoring for occupied spaces
- Demand-controlled ventilation

GAS DETECTION
- Monitoring of hazardous gases
- Health and safety protection

CAR PARK VENTILATION
- CO and NO₂ detection
- Automatic fan and alarm control

VENTILATION & AHU CONTROL
- Optimised fresh air intake
- Energy-efficient airflow management

	Product Code	Applications	
1	GS-CO2	CO₂ Monitoring	
2	GS-AQ	Indoor Air Quality (IAQ)	
3	GS-PM	PM Detection	
4	GS-S	Gas Detection (CO, NO₂, etc.)	
5	SD-D	Duct-Mounted Smoke Detection	
6	SC	Smart Communication Protocols	

AIR QUALITY
- Monitor CO₂, IAQ and VOC levels
- Enable demand-controlled ventilation

GAS DETECTION
- Detect hazardous gases early
- Protect occupants and equipment

SMOKE DETECTION
- Detect smoke within ductwork
- Support safe system shutdown

Sontay®

GS-AQ — Indoor Air Quality Space Sensors

The GS-AQ series of air quality transmitters determine the air quality through measurement of Total Volatile Organic Compounds (TVOC's).

This signal can be used to control fresh air fans and dampers according to the ventilation load. A valuable feature of this sensor is it automatically detects what the controller input is set to, 4-20mA or 0-10Vdc.

This removes the requirement for output jumpers that can be inadvertently set incorrectly.

FEATURES
- Auto detection 0-10Vdc or 4-20mA outputs, 3-wire only
- Direct thermistor options available
- Pluggable terminal blocks and tool free installation
- Optional set point, fan speed & momentary switch
- LCD display option
- Easy installation: 2-part, push-in spring terminals

SPACE SENSORS

SPECIFICATION
Active outputs	0-10Vdc or 4-20mA (3-wire) self detecting
Air quality output ranges	Index, 0 to 500
Environmental Housing	0 to 50°C
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (flame retardant)
Optional passive output	PTC/NTC Element Any Sontay resistive type
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
Setpoint optional passive outputs	11-1kΩ/0-10kΩ linear
Temperature Output range	0 to 40°C
Weight	180g

Part code	Description
GS-AQ-S	Space Mounted Air Quality & Temperature Sensor

DUCT SENSORS

SPECIFICATION
Active outputs	0-10Vdc or 4-20mA (3 wire) self detecting
Air quality output ranges	Index, 0 to 500
Environmental Housing	-30 to +60°C 5 to 95% non-condensing
Environmental Media	-10 to +50°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Housing probe	215 x 20mm dia
Optional passive output	PTC/NTC Element Any Sontay resistive
Power Supply	24Vac/dc ±10%
Protection	IP65
Temperature Output range	-20 to +20°C
Weight	250g

Part code	Description
GS-AQ-D	Duct Mounted Air Quality & Temperature Sensor

Part code	Description
-T	Direct resistive temperature output
-SP*	11-1kΩ/0-10kΩ setpoint
-MS*	Momentary switch
-LCD	LCD display
-TR	Custom temperature output range -20 to 50°C
-5V	Output 0-5Vdc (instead of 0-10Vdc)
-BLK**	Black Space Housing

Part code	Accessories
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

⚠ Notes:
* -T versions use a thermistor element. Please specify type when ordering. When using in space sensors, they are not compensated for self heating. Please see pages 90-93 for Thermistor Types and Compatibility Chart.
* Only available on Space Sensor Types.
** Plain front, no user interface option available (SP/MS/LCD)

GS-AQ-x-UN — Single Output Indoor Air Quality Space Sensor

The GS-AQ-x-UN range offers a cost-effective single output for air quality measurement. These can also include a combination of familiar passive options such as temperature, set point adjustment & momentary switch plus an LCD display.

A unique feature of the sensor is its ability to automatically detect what sort of controller input it is connected to, 4-20mA or 0-10Vdc, removing the requirement for output jumpers which can be inadvertently set incorrectly. Just connect it to the controller input and it does the rest.

PCB LED indication of which output type is in operation is provided, with diagnostic LED patterns for determining faults.

FEATURES
- Auto-detection 0-10Vdc or 4-20mA output, 3-wire only
- Fully configurable LCD Display
- Resistive temperature output option
- No jumpers or DIP-switches to select output type

SPACE SENSORS

SPECIFICATION
Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (flame retardant)
Optional passive output	PTC/NTC Element Any Sontay resistive type
Output range	0 to 10 (0=good / 10=poor)
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
Setpoint optional passive outputs	1-11kΩ
Weight	200g

Part code	Description
GS-AQ-S-UN	Space Mounted Air Quality Sensor

DUCT SENSORS

SPECIFICATION
Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Housing Dimensions	115 x 85 x 30mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Optional passive output	PTC/NTC Element Any Sontay resistive type
Output range	0 to 10 (0=good / 10=poor)
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
Setpoint optional passive outputs	1-11kΩ
Weight	250g

Part code	Description
GS-AQ-D-UN	Duct Mounted Air Quality Transmitter

Part code	Description
-BLK**	Black Space Housing
-SP*	1-11kΩ set point
-T	Direct resistive temperature output
-LCD	LCD display
-MS*	Momentary switch

Part code	Accessories
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

⚠ Notes:
* -T versions use a thermistor element. Please specify type when ordering. When using in space sensors, they are not compensated for self heating. Please see pages 90-93 for Thermistor Types and Compatibility Chart.
* Only available on Space Sensor Types.
** Plain front, no user interface option available (SP/MS/LCD)

Air Quality & Gas Sensing
Data sheets online: www.sontay.com

Sontay®

GS-CO2 — Space Mounted CO2 Sensors

Using a NDIR (non-dispersive infrared) sensor for measuring CO_2 concentrations and utilizing ABC (Automatic Baseline Correction) ensures accurate and maintenance free operation. They are also fitted with a IAQ temperature outputs. A valuable feature of this sensor is, when in 3-wire mode, it automatically detects the controller input type, 4-20mA or 0-10Vdc. This removes the requirement for output jumpers. It also provides on-board LED indication for power up status and set output mode. The terminal blocks are pluggable and allow tool free installation (ferrules required).

FEATURES

• Robust sensor enclosure

• Easy installation with LED indication, test button and auto output mode detection (3-wire)

• Pluggable terminal blocks and tool free installation

• Energy saving by ventilating at the optimum CO_2 levels

SPACE SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3 wire) self-detecting
CO_2 accuracy	400-2000ppm, ±70ppm ±3%
CO_2 Output ranges	0-2000ppm
Environmental Housing	-30 to +60°C, 0 to 95% RH non-condensing
Environmental Media	-10 to +50°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	ABS (flame retardant)
Housing probe	215 x 20mm dia.
Optional AQ	Index, 0 to 500
Optional passive output	PTC/NTC Element Any Sontay resistive type
Power Supply	24Vac/dc±10%
Temperature Output range	0 to 40°C
Weight	200g

Part code	Description
GS-CO2-S	Space mounted CO_2 and T sensor 0-2000ppm
GS-CO2-RHT-S	Space Mounted CO_2, RH and T Sensor 0-2000ppm
GS-CO2-AQ-S	Space Mounted CO_2, T and AQ Sensor 0-2000ppm

DUCT SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self detecting
CO_2 accuracy	400-2000ppm ±70ppm±3%
CO_2 Output ranges	0-2000ppm
Environmental Housing	0 to 50°C, 0 to 90% RH non-condensing
Housing Dimensions	115 x 85 x 30mm
Housing Material	PC (Halogen Free Flame Retardant, UV stabilized)
Optional AQ	0 to 1000ppb TVOC
Optional passive output	PTC/NTC Element Any Sontay resistive type
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Setpoint optional passive outputs	11-1Ω/0-10Ω linear

Part code	Description
GS-CO2-D	Duct Mounted CO_2 and T Sensor 0-2000ppm
GS-CO2-RHT-D	Duct Mounted CO_2, RH and T Sensor 0-2000ppm
GS-CO2-AQ-D	Duct Mounted CO_2, T and AQ Sensor 0-2000ppm

Part code	Suffixes (add to part code)
-T*	Direct resistive temperature output
-SP*	11-1kΩ/0-10kΩ set point
-MS*	Momentary switch
-LCD	LCD display
-5V	Output 0-5Vdc (instead of 0-10Vdc)
-HR	0 to 5000ppm CO_2 range
-BLK**	Black space housing

Part code	Accessories
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

⚠ *Notes:*

* -T versions use a thermistor element. Please specify type when ordering. When using in space sensors, they are not compensated for self heating. Please see pages 90-93 for Thermistor Types and Compatibility Chart.

* Only available on Space Sensor Types.

** Plain front, no user interface option available (SP/MS/LCD)

GS-CO2-x-UN — Space Mounted Single Output Carbon Dioxide Sensors

The GS-CO2-x-UN range offers a cost-effective single output for CO2 measurement. These can also include a combination of familiar passive options such as temperature, set point adjustment, momentary switch and fan speed, plus an LCD display.

A unique feature of the sensor is its ability to automatically detect what sort of controller input it is connected to, 4-20mA or 0-10Vdc, removing the requirement for output jumpers which can be inadvertently set incorrectly. Just connect it to the controller input and it does the rest.

PCB LED indication of which output type is in operation is provided, with diagnostic LED patterns for determining faults.

FEATURES

• Auto-detection 0-10Vdc or 4-20mA output, 3-wire only

• Fully configurable LCD Display

• Resistive temperature output option

• No jumpers or DIP-switches to select output type

• CO_2 self-calibration over full sensor lifetime achieved by ABC logic

• Traffic Light LED indication option

SPACE SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
CO_2 accuracy	400 to 2000ppm, ±25ppm ±3% of CO_2
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (flame retardant)
Optional passive output	PTC/NTC Element Any Sontay resistive type
Output range	0 to 2000ppm
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
Setpoint optional passive outputs	1-11kΩ
Weight	200g

Part code	Description
GS-CO2-S-UN	Space Mounted CO_2 Sensor 0-2000ppm

DUCT SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
CO_2 accuracy	400 to 2000ppm ±25ppm ±3% of CO_2
Environmental Housing	-30 to +60°C 5 to 95% non-condensing
Environmental Media	-10 to +50°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Housing probe	215 x 20mm dia.
Optional passive output	PTC/NTC Element Any Sontay resistive type
Output range	0-2000ppm
Power Supply	24Vac/dc±10%
Protection	IP65
Weight	250g

Part code	Description
GS-CO2-D-UN	Duct Mounted CO_2 Sensor 0-2000ppm

Part code	Description
-T*	Direct resistive temperature output
-SP*	1-11kΩ set point
-MS*	Momentary switch
-LCD	LCD display
-LED	3-Colour LED indication for CO_2
-BLK**	Black Space Housing

Part code	Accessories
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

⚠ *Notes:*

* -T versions use a thermistor element. Please specify type when ordering. When using in space sensors, they are not compensated for self heating. Please see pages 90-93 for Thermistor Types and Compatibility Chart.

* Only available on Space Sensor Types.

** Plain front, no user interface option available (SP/MS/LCD)

Sontay®

GS-CO   Space Mounted Carbon Monoxide Sensors

Using latest electro-chemical sensor technology with high repeatability and sensitivity to Carbon Monoxide gases in the ambient air, this sensor ensures accurate and maintenance free operation in residential and commercial environments.

The sensor modules have a catalytic ability to ensure years of operation with no chance of sensor life degradation as known from other electro-chemical sensors. The long life electrochemical Carbon Monoxide sensor makes it ideal for many applications including underground parking, loading bays and warehouses.

FEATURES
- Latest electro-chemical sensor technology with a lifetime up to 10 years
- Easy installation with LED indication, test button and auto output mode detection (3-wire)
- Auto detection 0-10Vdc or 4-20mA outputs, loop powering via DIP
- Direct thermistor options
- Easy installation: 2-part, push-in spring terminal blocks

SPACE SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting, 4-20mA (2-wire) via DIP
Carbon Monoxide output range	0 to 500ppm
Environmental Housing	0 to +50°C, 0 to 95% RH non-condensing
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (flame retardant) RAL9003
Optional passive output	PTC/NTC Element Any Sontay resistive type
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
Setpoint optional passive outputs	11-1kΩ/0-10kΩ linear
Temperature Output range	0 to 40°C
Weight	200g

Part code	Description
GS-CO-S	Space Mounted CO and T Sensor

DUCT SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting, 4-20mA (2-wire) via DIP
Carbon Monoxide output range	0 to 500ppm
Environmental Housing	-30 to +60°C 5 to 95% non-condensing
Environmental Media	-10 to +50°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Housing probe	215 x 20mm dia.
Optional passive output	PTC/NTC Element Any Sontay resistive type
Power Supply	24Vac/dc ±10%
Protection	IP65
Temperature Output range	0 to 40°C
Weight	250g

Part code	Description
GS-CO-D	Duct Mounted CO and T Sensor

Part code	Description
-T	Direct resistive temperature output
-SP	11-1kΩ/0-10kΩ setpoint
-MS	Momentary switch
-TR	Custom temperature output range -20 to 50°C
-5V	Output 0-5Vdc (instead of 0-10Vdc)
-BLK	Black Space Housing

Part code	Accessories
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

⚠ Notes:
* -T versions use a thermistor element. Please specify type when ordering. When using in space sensors, they are not compensated for self heating. Please see pages 90-93 for Thermistor Types and Compatibility Chart.
* Only available on Space Sensor Types.
** Plain front, no user interface option available (SP/MS/LCD)

IMPORTANT
The sensor is not designed, manufactured or intended for use or re-sale as control or monitoring equipment in environments requiring life safety performance, in which the failure of the sensor could lead directly to death, personal injury, or severe physical or environmental damage. Sontay and its suppliers specifically disclaim any express or implied warranty of fitness for life safety.and its suppliers specifically disclaim any express or implied warranty of fitness for life safety.and its suppliers specifically disclaim any express or implied warranty of fitness for life safety.

Data sheets online: www.sontay.com

GS-CO-P   Carbon Monoxide Car Park Sensor

High-performance electro-chemical sensor technology ensures precise, repeatable carbon monoxide detection with exceptional long-term stability.

FEATURES
- 4-20mA or 0-10Vdc output, optional Modbus
- Replaceable electro-chemical cell, operating life up to 6 years
- Selectable CO ranges
- Selectable response times
- Optional relays, buzzer and LCD

SPECIFICATION

Consumption	±50ppm +3% of reading
Outputs	AO1: 4-20mA, 500Ω max.
	AO2: 0-10Vdc, 1000Ω max.
	Modbus: RTU (optional)
	Relay: 24Vac @ 1A
Electrical connections	1.5mm² max.
Output ranges	0 to 100ppm, 0 to 300ppm, 0 to 500ppm, 0 to 1000ppm
Accuracy	±3% full scale
Sensor:	T90 <50 seconds, Life >6 years expected
	Drift <5% per year, Resolution 1ppm
	Repeatability <±2%, Base line <5ppm
Coverage	762 to 2286m² typical
Protection	IP65
Country of origin	UK

Part code	Description
GS-CO-P	Wall mounted Carbon Monoxide Sensor 0-10Vdc or 4-20mA Output, Multi Range Selectable: 0 to 100ppm, 300ppm, 500ppm & 1000ppm

Part code	Description
-M	Modbus
-LCD	LCD display
-R1	Relay x 1
-R2	R2 Relay x 2
-B	Buzzer

GS-S   Gas Sensors

The GS-S range of 4-20mA loop powered gas sensors are fitted into a robust housing, to detect the following gases:
- Nitrogen dioxide (NO_2)
- Oxygen (O_2)
- Sulphur dioxide (SO_2)

FEATURES
- 4-20mA output
- Wide supply voltage range, 10 to 30Vdc
- Loop powered
- Tamperproof lid
- Excellent long term stability

SPECIFICATION

Environmental Housing	-30 to +50°C, 15 to 90% RH non-condensing
Housing Material	ABS (flame retardant) only for internal mounting
Output	4-20mA
Protection	IP65
Supply	7.5 to 35Vdc
Weight	160g

Part code	Range
CO – Carbon Monoxide	
GS-S-CM-100	CO_2- Carbon Monoxide Sensor 0-100ppm
GS-S-CM-1000	CO_2- Carbon Monoxide Sensor 0-1000ppm
NO_2 – Nitrogen Dioxide Sensors	
GS-S-ND10	NOa_2 - Nitrogen Dioxide Sensors
O_2 – Oxygen Sensor	
GS-S-OX25	O_2 - Oxygen Sensor
SO_2 – Sulphur Dioxide Sensor	
GS-S-SD20	SO_2- Sulphur Dioxide Sensor

SD-D   Duct Smoke Detector

The SD-D provides relay outputs on the detection of smoke or fault conditions. The alarm output relay can be either manual or auto reset.

FEATURES
- Manual or auto reset
- Fault relay output
- Self-test feature

SPECIFICATION

Duct Size	100 x 320mm (min.) 450 x 450mm (max.)
Environmental Housing	-30 to 60°C, 20 to 80% RH non-condensing
Environmental Media	10 to 40°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen Free Flame Retardant, UV stabilized)
LED indication	On in alarm
Probe Dimensions	300 x 20mm dia.
Probe Material	Plastic
Protection	IP65
Relay output	SPST 2A @48V (smoke & fault)
Reset	Manual or Auto rest (selectable)
Supply	24Vac/dc ±20%
Weight	350g

Part code	Description
SD-D	Duct Smoke Detector

Data sheets online: www.sontay.com

Sontay®

Air Quality & Gas Sensing

Room Particulate Matter Sensing
How to improve the health and wellbeing of building occupants indoors.

## THE HUMAN BODY CAN BE NEGATIVELY AFFECTED BY FINE DUST UNSEEN BY THE HUMAN EYE

HAIR diameter:
17 to 180 µm

The fine dust particles enter the nose, mouth and throat to cause breathing difficulties. Those particles can even penetrate deep into the lungs, can cause lung cancer and cardiovascular diseases.
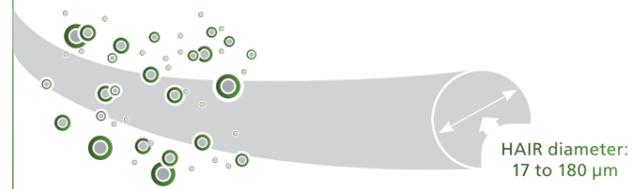
Fine dust particles in proportion			
PM10+		10+ µm diameter	[Blocked by nose]
PM5.0		2.5 to 10 µm diameter	[Blocked in mouth and throat]
PM2.5		2.5 µm diameter	[Can penetrate deep into the lungs, causing lung and cardiovascular diseases]

WHERE DO INDOOR PM2.5 AND PM10 POLLUTANTS COME FROM?

Our indoor air quality can be impacted by many things. From outdoor air pollution coming in, to our activities indoors. Things like, cooking, cleaning, or even burning a candle can create particulate matter.
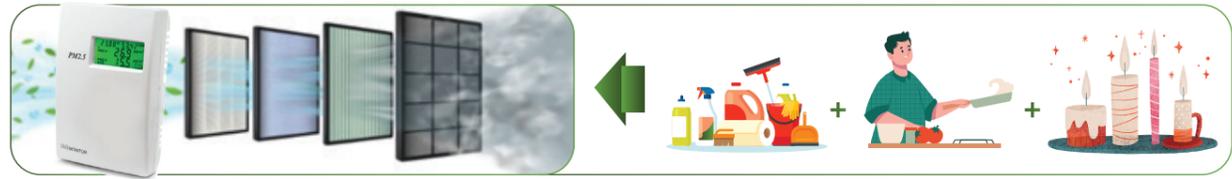
HOW CAN YOU IMPROVE INDOOR AIR QUALITY AND REDUCE PARTICULATE MATTER?

There are many ways that you can improve your air quality, and this is where monitoring levels can really help!

If your indoor air quality is poor and you know your outdoor air quality is good, the simple way to improve air quality would be to introduce fresh air from outside. However, **if the air quality outside is not good**, you would not want to introduce more particulate matter into the indoor environment.
You could then look at processes such as filtering and cleaning the air using many devices or systems available.

The most effective filter against particulate matter is HEPA. You can also help to improve or prevent poor indoor air quality by paying attention to things like cleanliness, activities and products being used that emit particulate matter. Things like vacuuming regularly, using safer cleaning products, not smoking or removing coats or clothing worn when smoking outside can all have an impact in levels.

HOW CAN WE REDUCE OVERALL PARTICULATE MATTER?

This is down to us and the way we live our lives. We can all make small changes in things that we do that when multiplied amongst all of us can help to make a big difference.

The Building Controls industry has a great opportunity to be part of the difference. Take a look at the BCIA "One Small Change" campaign to see how we can all play our part.
https://bcia.co.uk/news/one-small-change-one-big-difference/

bcia the building controls industry association

Data sheets online: www.sontay.com

Air Quality & Gas Sensing

PM2.5 & PM10 Sensing
with the GS-PM and GS-IAQ Ranges

It is proven that particulate matter such as PM2.5 and PM10 particles can have major health impacts to us all when breathed in over a long term. We all know that pollution from things like road traffic and industry can reduce our overall air quality and have seen in recent years that there are links between quality and poor air.

INTERNATIONAL **WELL** BUILDING INSTITUTE™

RESET
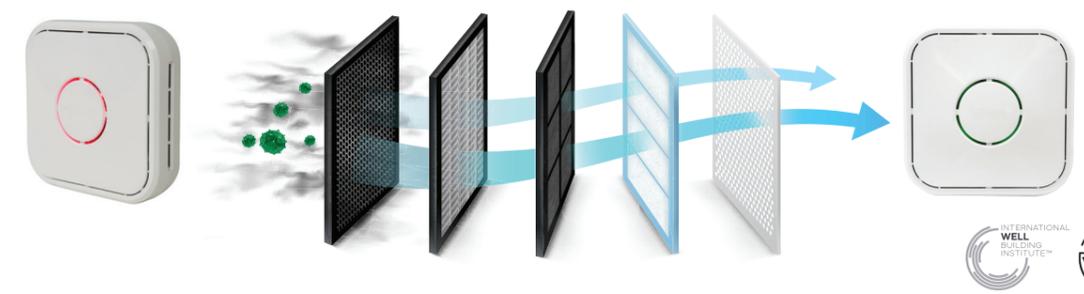
MONITORING PARTICULATE MATTER
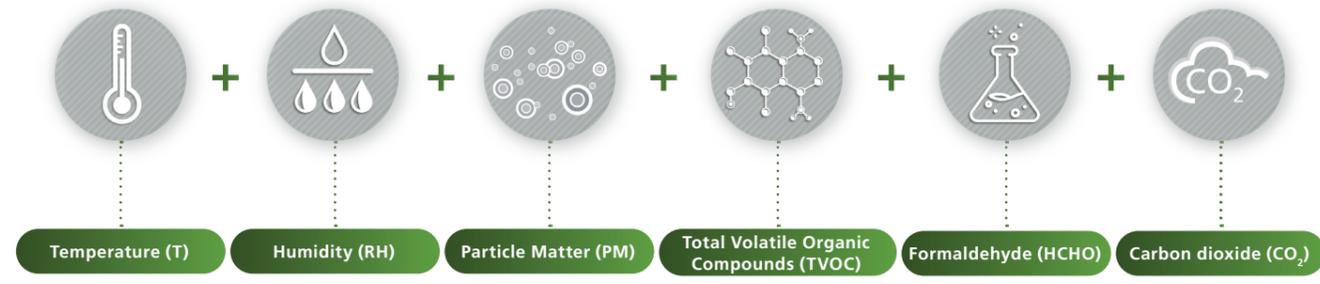
Temperature (T) + Humidity (RH) + Particle Matter (PM) + Total Volatile Organic Compounds (TVOC) + Formaldehyde (HCHO) + Carbon dioxide (CO_2)

>>> **It is proven that particulate matter such as PM2.5 and PM10 particles can have major health impacts to us all when breathed in over a long term.** <<<

APPLICATIONS	BENEFITS
Offices	Air purifying and ventilation to reduce fatigue and tiredness, resulting in higher productivity and better business results.
Schools	Filtering viruses and harmful matter to enhance health and wellbeing of pupils, resulting in improved academic results.
Hospitals	Controlling temperature and filtering viruses in air pollution, creates a break in cycle of secondary infections leading to increased recovery results.
Public buildings	Real time measurements of hazardous gases and filtering of harmful air polutants to avoid mass outbreaks of illnesses.
Transport	High air pollution levels for commuters entering and exiting of vehicles may effect wellbeing. Monitoring and controlling pollutants demonstrates consideration to their health and wellbeing.

Data sheets online: www.sontay.com

Sontay®

GS-PM — Particulate Matter Sensor

The GS-PM-S is for PM2.5, humidity and temperature measurement, they can be monitored via the Modbus RTU output or via the 6-colour LCD. The PM2.5 display reading is an average value of PM2 updated hourly, humidity & temperature measurements are real time. PM2.5 is sensed via a laser particle sensor, light scattering method, making these suitable for homes, offices, small ventilation systems etc.

Using unique technology of compensating method, and up to nine calibration points, to guarantee GS-PM-S measurements accuracy in different environments.PM2.5 display reading is an average value of PM2 updated hourly, humidity & temperature measurements are real time. PM2.5 is sensed via a laser particle sensor, light scattering method, making these suitable for homes, offices, small ventilation systems etc.

FEATURES
- Real time indoor PM2.5 via optical IR LED
- Compensating automatic re-calibration
- Humidity & temperature measurement
- Backlit 6 level LCD to indicate PM2.5 concentration levels
- Modbus RTU output

SPECIFICATION

Output	Modbus RTU 38400 baud rate
Power Supply	24Vac/dc ±10%
Current Consumption	1.2W (1200mA)
Warm Up Time	60 seconds
PM2.5 Output Ranges	0 to 600µg/m³
Humidity Output ranges	0 to 100%RH
Temperature Output range	-20 to +50°C
PM2.5 Accuracy	±10µg/m + 10% of reading @ 15-35°C, 20-80%RH
Humidity Accuracy	<±3%RH (20-80%RH)
Temperature Accuracy	<±0.5°C @ 25°C
Operational life PM2.5	>5 years (Avoid dust and bright lights)
Environmental temperature	0 to 60°C
Environmental humidity	5 to 95% non-condensing
Housing Material	PC/ABS
Housing Dimensions	85 x 130 x 36.5mm

Part code	Description
GS-PM-S	Wall mount PM2.5, T and RH sensor with 6 colour LCD

GS-PM-D — Duct Mounted PM2.5, Humidity & Temp. Sensor

The GS-PM-D is for PM2.5, humidity and temperature measurement, they can be monitored via the Modbus RTU output or via the 6-colour LCD. The PM2.5 display reading is an average value of PM2 updated hourly, humidity & temperature measurements are real time. PM2.5 is sensed via a laser particle sensor, light scattering method, making these suitable for homes, offices, small ventilation systems etc.

Using unique technology of compensating method, and up to nine calibration points, to guarantee GS-PM-D measurements accuracy in different environments.cle sensor, light scattering method, making these suitable for homes, offices, small ventilation systems etc.

FEATURES
- Real time indoor PM2.5 via optical IR LED
- Compensating automatic re-calibration
- Humidity & temperature measurement
- Backlit 6 level LCD to indicate PM2.5 concentration levels
- Modbus RTU output

SPECIFICATION

Outputs	Modbus RTU 9600 8NI (default)	
Power Supply	12-28Vdc or 18-27Vac	
Current consumption	2-15m/s	
Air speed (within duct)	60 seconds	
Output ranges	PM2.5/10	0 to 500µg/m³
	CO₂	0 to 2000ppm
	TVOC	0.01 to 4.00mg/m³
	Humidity	0 to 99%RH
	Temperature	-20 to +60°C
Accuracy	PM2.5	±5µg/m + 10% of reading
		{Oto 300µg/m³ 10-30°C, 10-60%RH)
	CO₂	±50ppm + 3% reading
	TVOC	<±0.05 mg/m³ + 15% of reading
	Humidity	<±3.5%RH (10-60%RH)
	Temperature	<±0.5°C@25°C
Environmental	Temperature	-20 to 60°C
	Humidity	0 to 95% non-condensing
Housing	Material	PC
	Dimensions	180 x 125 x 65.5mm
Pitot tube	240 x 30.4mm dia.	
Protection	IP30	
Certification	RESET, WELL	

Part code	Description
GS-PM-D	Duct PM2.5, CO₂,TVOC, RH and T sensor

GS-IAQ — Indoor Air Quality Monitor

The GS-IAQ-S measures multiple different sensors types for all-round indoor air quality. Sensor types include is for PM2.5, PM10, TVOC, HCHO, CO2, humidity & temperature measurement. All can be monitored via the Modbus RTU output, there is also a 3-colour LED ring indicating different indoor air quality levels.

A built-in large flow bearing blower and the control technology of a utomatic constant flow, the GS-IAQ-S has the much higher and long-term operation stability and life.

FEATURES
- Real time indoor air quality monitoring
- Multiple sensors, PM2.5, PM10, TVOC, HCHO, CO2, humidity & temperature
- Three colour light ring indicating indoor air quality levels
- Ceiling or wall mounted
- Modbus RTU output

SPECIFICATION

Certification	RESET, Grade B WELL
CO₂ Accuracy	±50ppm +3% of reading
CO₂ Output ranges	0 to 5000ppm
Current Consumption	1.9W (80mA)
Electrical connections	Rising cage to suit 0.2 to 1.5mm²
Environmental humidity	5 to 90% non-condensing
Environmental temperature	0 to 50°C
HCHO Accuracy	±0.005 µg/m³ +5% of reading
HCHO Output ranges	0 to 0.6mg/m³
Housing Dimensions	130 x 130 x 45mm
Housing Material	PC/ABS
Humidity Accuracy	<±4%RH (20-80% RH)
Humidity Output ranges	0 to 99%RH
PM10 Output ranges	0 to 800µg/m³
PM2.5 Accuracy	10% of reading, 0-300µg/m³
PM2.5 Output Ranges	0 to 500µg/m³
Power Supply	12-28Vdc or 18-27Vac
Protection	IP20
Temperature Accuracy	<±0.6°C @ 25°C
Temperature Output range	-20 to +60°C
TVOC Accuracy	±0.5µg/m³ +10% of reading
TVOC Output ranges	0 to 3.5mg/m³

Part code	Description
GS-IAQ-S	PM2.5/10, TVOC, HCHO, CO₂, RH & Temp. Monitor

From Stagnant to Smart Airflow

SMART SENSOR SYSTEM UPGRADE
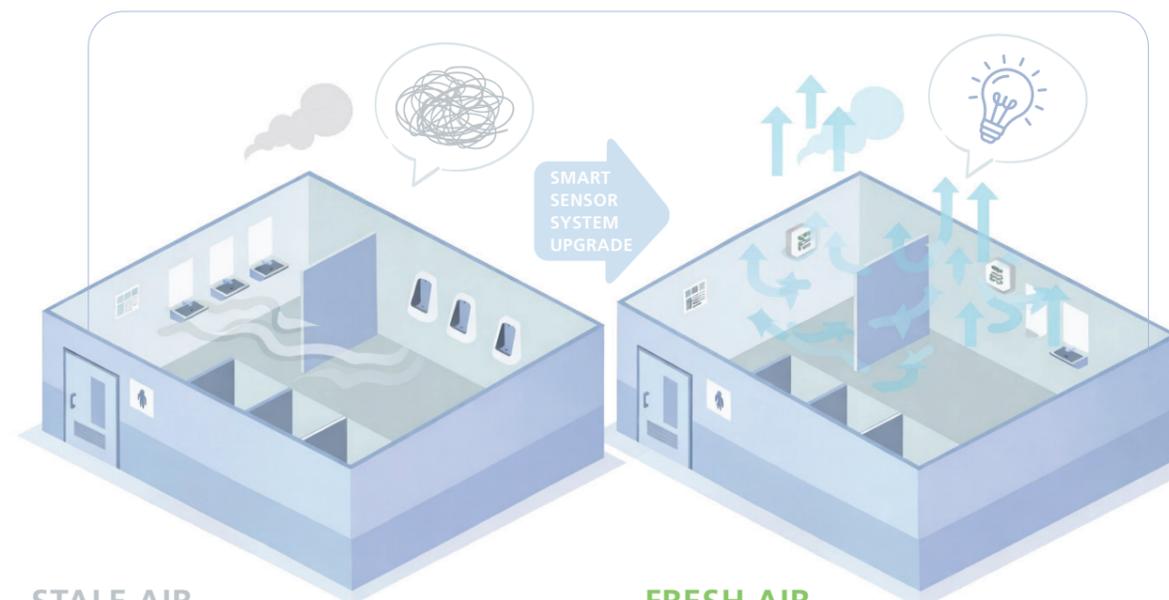
STALE AIR
- Low Productivity
- High Energy Cost
- Health Issues (Headaches, Fatigue)

FRESH AIR
- Enhanced Productivity
- Reduced Energy Cost
- Improved Well-being (Focus, Comfort)

WHEN RELIABILITY MATTERS

MAKE SURE IT IS SONTAY

CONTROLLERS

POWER MONITORING

AIR QUALITY & GAS DETECTION

WATER LEAK DETECTION

RELATIVE HUMIDITY

SMART SENSORS

SMART PROTOCOLS
Modbus M-Bus
BACnet KNX

AIR FLOW

PRESSURE

CONTROLLER

BENEFITS

SAFETY
Monitor temperature & pressure continuously ·
Prevent overheating, leaks, abnormal conditions ·

EFFICIENCY
· Measure flow and heat precisely
· Improve load balance and cut fuel use

PRECISION
Stable supply of temperature & pressure ·
Ensure comfort and reliable operation ·

INTEGRATION
· Connect easily with BMS platforms
· Supports BACnet, Modbus, KNX & LoRaWAN

SCAN HERE

Sontay Sensors for Boiler Room Applications

Safeguarding performance, efficiency, and uptime through precise monitoring.

FLOW MONITORING
2 PRESSURE MEASUREMENT
3
5 MONITORING
1 TEMPERATURE MONITORING
6 THYRISTOR CONTROLLERS
8 BOILER ROOM AIR QUALITY
7 SMART PROTOCOLS
Modbus M-Bus
BACnet KNX
WATER LEAK DETECTION
4
Sontay
smart
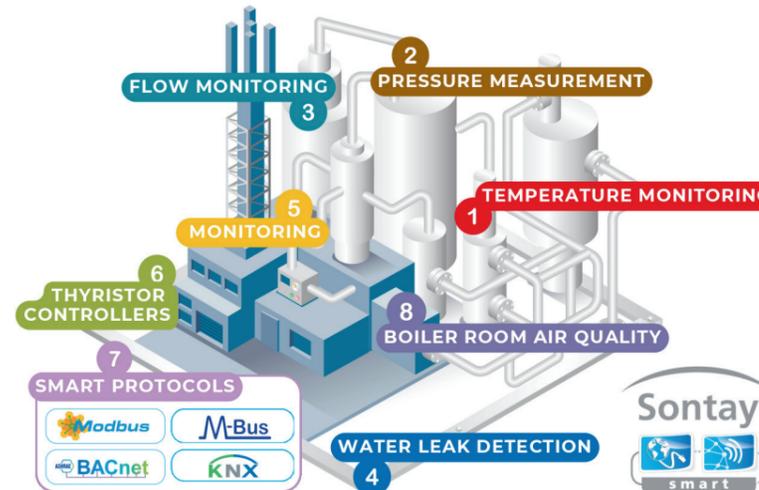
Sensing for heat, safety, and system performance.

Boiler rooms operate at the core of a building's thermal system, a stability breach in temperature or pressure can rapidly lead to equipment stress, corrosion or failure. With temperature, pressure, flow and leak detection sensors, Sontay delivers dependably precise control and protection.

Our smart and traditional sensor range helps you catch early warning signs, reduce energy waste and extend equipment life across heating and hot-water systems. Designed for full BMS/IoT integration, Sontay makes your boiler room efficient, compliant and robust.

	Product Code	Applications	
1	TT / TT-525	Temperature Monitoring	
2	PA / PL	Pressure Measurement	
3	FS-W	Flow Monitoring	
4	WD / WD-AMX	Water Leak Detection	
5	PM-CT / PM-EM	Monitoring	
6	RE	Thyristor Controllers	
7	SC	Smart Communication Protocols	
8	GS-CO-P	Boiler Room Air Quality	

TEMPERATURE & PRESSURE
Accurate sensing ensures safety and system stability. Detect deviations early to prevent overheating.

FLOW & ENERGY MONITORING
Monitor flow and heat energy to optimise efficiency and cut costs.

WATER LEAK DETECTION
Detect leaks early to protect equipment and uptime.

Sontay®

FC-SDY — Manual Fan Speed Controller for Small Motors

SPECIFICATION

Control type	Manual via potentiometer
Current Ratings	0.1 to 1.5A
Flush mount dimensions	82 x 87 x 23.5mm
Flush protection	IP44
Minimum speed	Adjustable via trim pot
Mounting Style	Wall and flush mount
Nominal Supply	230Vac, 1 phase, 50/60Hz
On/Off Switch	Inbuilt with pot.
Pot.action	Clockwise = min. to max. speed
Surface protection	IP54
Wall mount dimensions	82 x 87 x 63.5mm
Weight	360g max.

Manual control for small, single-phase motors up to 3 amps. The minimum speed can be adjusted via an internal trimmer. The unregulated output is active when the motor is enabled. The enclosure allows inset mounting (IP44) or surface mounting (IP54). Microprocessor controlled to guarantee accurate motor control and to minimise motor noise. Phase angle control (Triac technology) is used to vary the motor voltage and to regulate the motor speed. This variable speed controller is often used to ceiling fans, bathroom exhaust fans, extraction fans etc.

Part code	Description
FC-SDY-1.5	1.5A, 1-Phase Controller
FC-SDY-3	3A, 1-Phase Controller

FC-ITR — Manual Speed Controllers

SPECIFICATION

Control type	Separate to potentiometer, mounted on side
Current Ratings	0.5 to 10.0A
Fuse ratings	F16AH 250Vac (6.3x32mm)
Minimum speed	Adjustable via trim pot
Mounting Style	Wall mount
Nominal Supply	110 to 240Vac, 1 phase, 50/60Hz
On/Off Switch	Full speed for 8 to 10 secs
Pot.action	Clockwise = min. to max. speed
Protection	IP54
Weight	740g max.

The FC-ITR range of manual speed controllers provide an economic means of speed regulation for voltage controllable single-phase AC motors. Centrifugal fans, axial fans, propeller fans, and centrifugal pumps are prime candidates for electronic speed control.

Part code	Description
FC-ITR-3D	3A, 1-Phase Controller
FC-ITR-10D	10A, 1-phase Controller

FC-EVS — Fan Speed Controllers

SPECIFICATION

|	
Control type	Automatic from remote signal
Current Ratings	0.5 to 10.0A
Fuse	20mm 'FF' type
Fuse ratings	FF 3.15A
Minimum speed	According to signal value
Mounting Style	Wall mount
Nominal Supply	230Vac, 1 phase, 50/60Hz
On/Off Switch	Mounted on side
Pot.action	Two wire 4-20mA, 0-10Vdc or Modbus
Protection	IP54
Weight	810g max.

The FC-EVS series of electronic speed controllers provide an economic means of regulation for voltage controllable single-phase AC motors. Centrifugal fans, axial fans, propeller fans, and centrifugal pumps are prime candidates for electronic speed control. Fan speed is controlled via a remote invertible 0-10Vdc / 10-0Vdc or 0-20mA / 20-0mA signal, suitable for direct connection to BEMS or transmitters. It is equipped with Modbus RTU communication and provides a wide range of functionalities: remote control options, adjustable off level, min. and max. output voltage settings, and time-limited motor operation initiated by a logic or switch signal.

Part code	Description
FC-EVS-1.5	1.5A, 1-Phase Controller
FC-EVS-3	6A, 1-Phase Controller
FC-EVS-6	10A, 1-phase Controller
FC-EVS-10	3A, 1-Phase Controller

Data sheets online: www.sontay.com

RE-1P — Single Phase Controllers
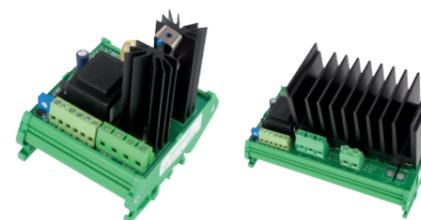
SPECIFICATION

Alarm Output	(as power supply) 0V when over temp alarm is active
Ambient Temperature Range	0-45°C without de-rating
Input Signal	Selectable; 0-5V, 0-10V, 2-10V or 4-20mA
LED indication	ON when output is on
Supply (load)	220-255Vac 50/60Hz
Weight	200g

The 2kW single phase DIN Rail mounting controller is suitable for providing control of electric heating loads from an analogue signal. Applications include electric heating coils, heating cables and electric furnaces. The units utilise solid-state switching with "zero crossing technology" to provide accurate switching control. All items are provided with an alarm output for over temperature protection and LED Indication of Output ON, and are designed to mount on DIN rail.

FEATURES

- Selectable control input
- Over temperature protection with auto reset
- Line powered
- LED Indication
- Efficient electronic switching
- No additional heat sinks or RFI filters required

Part code	Description
RE-1P-2	2kW Controller
RE-1P-4N	4kW Controller
RE-1P-7	7kW Controller
RE-1P-12	12kW Controller

RE-3P — 3-phase Controllers

SPECIFICATION

Input signal	Selectable; 0-5V, 0-10V, 2-10V or 4-20mA
Supply (load)	220-255Vac 50/60Hz
Supply (control)	DIN-Rail: 24Vac/dc
	Panel Mount: 230Vac
LED indication	ON when output is on
Alarm output	(as power supply),
	0V when over temp alarm is active*
Ambient temperature	0-45°C without de-rating
Dimensions (W, H, D)	RE-3P-12/18 - 170 x 110 x 102mm
	RE-3P-27/36 - 257 x 102 x 142mm
	RE-3P-57/86 - 257 x 200 x 158mm
	RE-3P-105 - 257 x 265 x 159mm
Weight	RE-3P-12 - 621g
	RE-3P-18 - 882g
	RE-3P-27/36 - 3.8kg
	RE-3P-57 - 7.2kg
	RE-3P-105 - 10kg

The RE-3P range are suitable for providing control of electric heating loads from an analogue signal. Applications include electric heating coils, heating cables and electric furnaces. The units utilise solid-state switching with "zero crossing technology" to provide accurate switching control.

All controllers are provided with an alarm output for over temperature protection and LED Indication of Output ON.

The 12 & 18kW versions are for Din-rail mounting and 27, 36, 57, 86 & 105kW are designed to mount on the control panel back plate.

FEATURES

- Selectable control input
- Over temperature protection with auto reset
- No additional heat sinks or RFI filters required
- Efficient electronic switching
- Small foot print

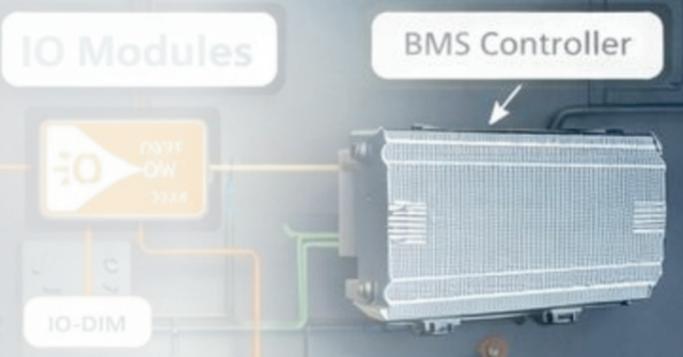| Part code	Description
RE-3P-12	Din-rail 12kW Controller
RE-3P-18	Din-rail 18kW Controller
RE-3P-27	Panel mount 27kW Controller
RE-3P-36	Panel mount 36kW Controller
RE-3P-57	Panel mount 57kW Controller
RE-3P-86	Panel mount 86kW Controller
RE-3P-105	Panel mount 105kW Controller

* No Alarm Output available on 105kW.

Data sheets online: www.sontay.com

IO Modules

BMS Controller

IO-DIM

WHEN CONTROL
NEEDS FLEXIBILITY

MAKE SURE IT IS SONTAY

IO - 1·10 0V

ON/OFF

IO-aM   IO-aM   IO-aM

AIR & WATER FLOW

IO MODULE

SMART SENSORS

SMART PROTOCOLS

Modbus   M-Bus
BACnet   KNX

IO MODULES

BENEFITS

FLEXIBILITY

Expand I/O without changing controllers ·
Support analogue, digital, and relay signals ·

RELIABILITY

· Proven designs for HVAC environments
· Stable signal conversion and control

EFFICIENCY

Reduce hardware and wiring complexity ·
Cost-effective system expansion ·

INTEGRATION

· Compatible with BACnet & Modbus systems
· Seamless connection to BMS controllers

SCAN HERE

Sontay IO Modules
for Control & Expansion

Smart signal handling for flexible system design.

OVERRIDE MODULES 4

ANALOGUE RE-
SCALING MODULE 3

2 RELAY
OUTPUT
MODULES

5
SMART COMMUNICATION IO

Modbus   M-Bus
BACnet   KNX

1 DIGITAL INPUT
MULTIPLEXERS

Sontay
smart
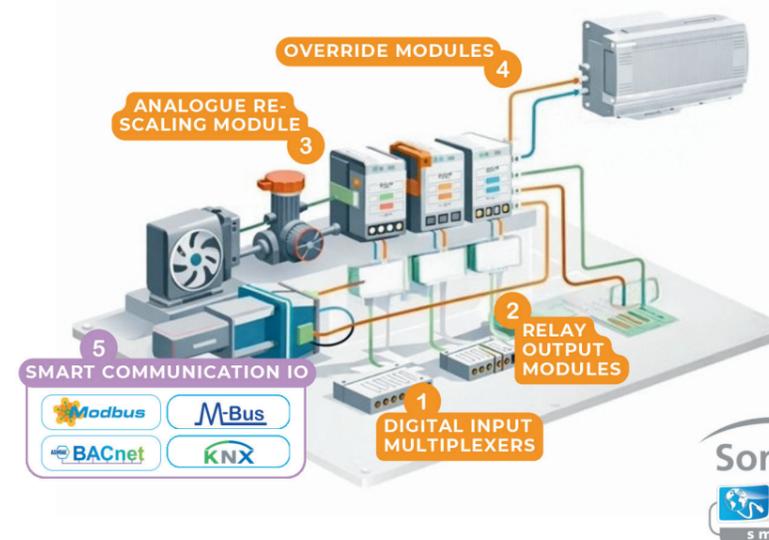
Smart signal control for modern BMS architectures. Input / Output modules play a critical role in connecting field devices to Building Management Systems. They enable the conversion, scaling, and switching of signals, allowing controllers to interact reliably with sensors, actuators, and plant equipment.

Sontay's IO Modules provide flexible, cost-effective expansion of BMS inputs and outputs, supporting analogue and digital signals, relay switching, and control functions across a wide range of HVAC and building services applications.

IO Modules are commonly used to expand BMS input and output capacity in plant rooms and AHUs, allowing additional sensors and actuators to be integrated without replacing the main controller.

	Product Code	Applications	
1	IO-DIM	Digital Input Multiplexers	IN OUT
2	IO-RM	Relay Output Modules	IN OUT
3	IO-A-RM	Analogue Re-Scaling Module	IN OUT
4	IO-ABM	Override Modules	IN OUT
5	SC-IO	Smart Communication IO	

INPUT EXPANSION

- Increase digital inputs on BMS controllers
- Reduce controller count & cost

OUTPUT SWITCHING

- Control fans, pumps, heaters, and valves
- Support ON/OFF and staged control

SIGNAL CONVERSION

- Convert and rescale signals
- Match field devices to controller requirements

IO-A-RM — Analogue Rescaling Module

SPECIFICATION

Ambient relative humidity	10 to 95% RH non-condensing
Ambient Temperature Range	-10 to +50°
Current input signal	0 to 44mA max.
Current Output	1 to 44mA max.
Power Supply	24Vac/dc ±10%, 200mA max.
Voltage input signal	0 to 35Vdc max.
Voltage output signal	0.25 to 20Vdc max.
Weight	60g

Part code	Description
IO-A-RM	Analogue Re-Scaling Module

The IO-A-RM can accept either a voltage or current input, which can be converted and /or rescaled to a voltage or current output. The IO-A-RM can also be used to reverse an input signal.

FEATURES

- Field selectable ranges
- Voltage to current, current to voltage conversion
- Reverse or normal output
- DIN Rail mounting
- Accurate signal rescaling
- Allows conversion of non-compatible signals
- LED indication

IO-ABM4 — Analogue Override Module

SPECIFICATION

|	
Ambient Range	-10 to +50°C
Fuse	8A max.
Fused Output	24Vac @ 8A
Input Signal	0-10Vdc
Max. supply current	AC supply 260mA | DC supply | 115mA
Max.output current	20mA per channel in buffered mode
Output signals	0-10Vdc direct or buffered
Power Supply	24Vac/dc ±15%
Weight	110g

Part code	Description
IO-ABM4	4-channel Module

Intended for applications which require independent manual override of analogue output channels from a BMS controller, as a fail-safe in the event of controller failure. This enables actuators and other plants to be manually overridden from the panel where local access may be difficult. The module is also useful for commissioning or temporary control of a plant prior to controller installation.

FEATURES

- 4 x 0-10Vdc channels & 24Vac/dc powered
- Hand/off/auto link selectable
- DIN Rail mounting
- Enables actuators or other equipment to be manually overridden
- Used as a fail-safe in event of controller failure
- Up to four outputs to be controlled from one input

IO-DIM — Digital Input Multiplexers
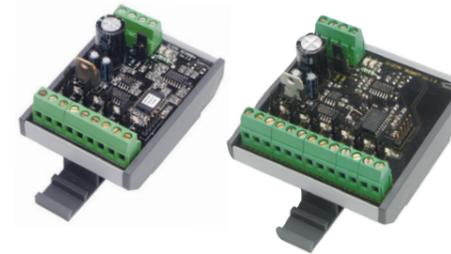
SPECIFICATION

Ambient relative humidity	0 to 80% RH non-condensing
Ambient Temperature Range	-10 to +50°C
Current	35mA max. voltage output mode, 55mA max. current output mode
Inputs	VFC, 24Vac or 24Vdc
LED indication	Supply OK, supply voltage low, supply voltage high, current output (4-20mA output only)
Output range	0-10Vdc into 2kΩ impedance
Power Supply	4-20mA into 500Ω max.
Weight	80g

These modules are to expand a BMS controllers input capacity by multiplexing four or six digital signals, or 24Vac/dc inputs into a single analogue controller unit. Each combination of input states corresponds to an analogue value from the module which can be decoded into four or six digital status bits.digital status bits.

Part code	Description
IO-DIM-4	4 x VFC or 24Vac/dc inputs, selectable output
IO-DIM-6	6 x VFC or 24Vac/dc inputs,selectable output

FEATURES

- Input status indication & simulation
- Calibrated output
- DIN Rail mounting
- Expands controller input capacity
- Fault finding LED indication
- Input status LED indication

IO–FRM4 — Fan Speed Relay Module
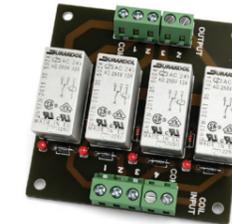
SPECIFICATION

Inputs	24VAC
Outputs	Common and 4 volt-free contact switched outputs
Contact Rating	10A @250Vac resistive (Inductive current depends on load– typically 5A inductive)
Terminals	Rising clamp for 0.5-2.5mm cable
Dimensions	72x72mm, Fits 72mm DIN rail carrier, Mounting hole 62mm apart
Weight	82gms
Ambient Temperature	0-50°C

The IO-FRM4 is an interlocked, four relay module. Intended for use as a fan speed switch, the unit can be used to change the fan speeds on fan motors with multitapped windings and also transformer speed controlled motors. The 'Change over' design of the relay contact configuration and common switching point ensure that the only set of contacts is active at any one time, thus preventing short circuits. The module can be panel mounted or DIN rail mounted.

Part code	Description
IO-FRM4	Fan Speed Relay Module
IO-FRM4-T	Fan Speed Relay Module with Transformer

FEATURES

- Interlocked relays allow only one output at a time
- High and low Voltage relay coil options
- Mounting: DIN rail carrier or panel mount
- Switches up to 10 Amps
- LED indication

IO-RM1 — Single Relay Modules

SPECIFICATION

Ambient Range	-10 to 50°C
Input Signal	10Vdc
Output Contacts	10A resistive
Relay Clip	Auto eject type supplied
Weight	60g

FEATURES

- Various coil types available
- Rising cage terminals
- DIN Rail mounting

A range of relays for use with BMS controllers for switching plant and isolation of input signals. They are supplied complete with DIN-rail mounting base and retaining clip.

Part code	Description
IO-RM1-12DC	Single Relay, 12Vdc Module
IO-RM1-24DC	Single Relay Module 24Vdc
IO-RM1-24AC	Single Relay Module 24Vac
IO-RM1-240AC	Single Relay Module 240Vac

IO Modules

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

Sontay®

IO Modules

IO-RM — Relay Modules

This range of relay modules are intended for use with BMS controllers to convert an analogue control output to a raise/lower, high/low or binary relay output pair. Applications include the control of raise/lower valve and damper actuators, and pump changeover.

LEDs indicate correct operation and Hand/ Off/Auto jumpers ease commissioning. Low current draw from 0-10Vdc controller output means that the IO-RM-2 can work successfully with most BEMS controllers.

FEATURES

- Link selectable modes raise/lower, hi/low or binary
- On/Off/Auto links for ease of commissioning
- DIN Rail mounting
- Fault finding LED indication
- Relay status LED indication

2 & 3 STAGE RELAY MODULES

SPECIFICATION

Ambient relative humidity	0 to 80% RH non-condensing
Ambient Temperature Range	-10 to 40°C
Input impedance	Approx. 11kΩ
Input Signal	0 to 10Vdc<1mA
Modes (selectable)	Binary, staged or sequenced
Output Contacts	8A @230Vac (resistive load)
Power Consumption	100mA max.
Power Supply	24Vac/dc ±15% @50Hz
Weight	200g
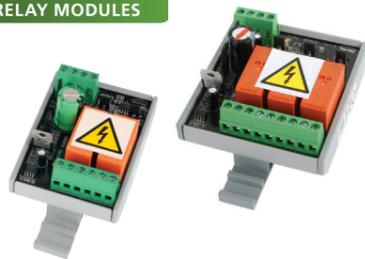
Part code	Description
IO-RM-2	2-stage Relay Module
IO-RM-3	3-stage Relay Module

4 & 8 STAGE RELAY MODULES

SPECIFICATION

Ambient relative humidity	0 to 80% RH non-condensing
Ambient Temperature Range	-10 to +40°C
Input impedance	Approx. 11kΩ
Input Signal	0 to 10Vdc<1mA
Modes (selectable)	Raise/lower, hi/low or binary
Output Contacts	8A @ 230Vac (resistive load)
Power Consumption	100mA max.
Power Supply	24Vac/dc ±15% @ 50Hz
Weight	100g

Part code	Description
IO-RM-4	4-stage Relay Module
IO-RM-8	8-stage Relay Module

Relay Module

SPECIFICATION

Ambient relative humidity	0 to 80% RH non-condensing
Ambient Temperature Range	-10 to +40°C
Input impedance	Approx. 11kΩ
Input Signal	0 to 10Vdc<1mA
Modes (selectable)	Raise/lower, hi/low or binary
Output Contacts	8A @ 230Vac (resistive load)
Power Consumption	100mA max.
Power Supply	24Vac/dc ±15% @ 50Hz
Weight	100g

Part code	Description
IO-RM-A	Adjustable Switching Point Relay Module

Data sheets online: www.sontay.com

WHEN COMFORT INSPIRES LEARNING

MAKE SURE IT IS SONTAY

RELATIVE HUMIDITY

POWER MONITORING

AIR QUALITY & GAS DETECTION

WATER LEAK DETECTION

SMART PROTOCOLS

Modbus · M-Bus · BACnet · KNX

TEMPERATURE

SMART SENSORS

AIR FLOW

LIGHT LEVEL & OCCUPANCY

LIGHTING CONTROL

BENEFITS

HEALTH & WELLBEING
Balanced lighting improves visual comfort ·
Reduces eye strain and fatigue ·

EFFICIENCY
· Daylight harvesting lowers energy use
· Auto switch-off prevents waste

SMART AUTOMATION
Occupancy-based responsive control ·
Integrates with HVAC and BMS ·

INTEGRATION
· BACnet, Modbus, KNX & LoRaWAN
· Suitable for offices, schools & healthcare

Sontay Sensors
for Educational Environments

Smart sensing for comfort, focus, and sustainability.

SCAN HERE

TEMPERATURE &
RELATIVE HUMIDITY **3**

2 LIGHT LEVEL & OCCUPANCY

4 AIR FLOW

AIR QUALITY &
CO₂ MONITORING **1**

6 SORA & LORAWAN

8 ENERGY & POWER MONITORING

7 SMART PROTOCOLS

Modbus · M-Bus · BACnet · KNX

5 TEMPERATURE CONTROL

Sontay® smart

Product Code	Applications
1 GS-CO2 / AQ	Air Quality & CO₂ Monitoring
2 LL / OC	Light Level & Occupancy
3 RH	Humidity Monitoring
4 AV	Air Flow
5 TT	Temperature Control
6 RF-LW	SORA & LoRaWAN
7 SC	Smart Communication Protocols
8 PM-CT / PM-EM	Energy & Power Monitoring

Sensing for healthy learning environments and sustainable performance.

Educational buildings face the dual challenge of maintaining comfort while minimising energy use. Class-rooms, lecture halls, and laboratories require reliable environmental control to create healthy spaces for learning and teaching. From early morning lessons to full lecture schedules, air quality and comfort directly influence focus and performance.

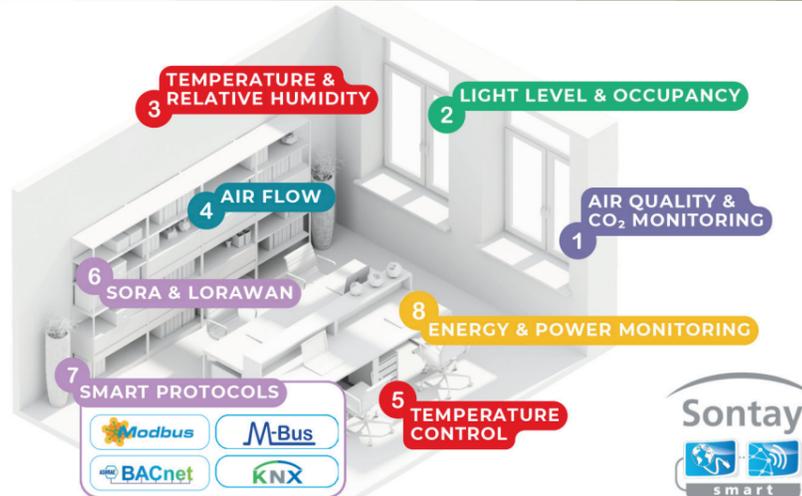Sontay's sensors enable precise control of air quality, temperature, humidity, and occupancy, helping schools and universities meet sustainability targets, reduce energy costs, and enhance student well-being. Designed for modern BMS integration, our sensing solutions ensure consistent performance and support smart campus management for the future of education.

AIR QUALITY & VENTILATION

Fresh air supports focus. Ventilation adjusts to occupancy and CO₂.

TEMPERATURE & HUMIDITY CONTROL

Stable temperatures enhance comfort and save energy.

LIGHT & OCCUPANCY

Smart sensing cuts waste by matching use and lighting.

LL   **Light Level Sensor**

The LL-P-V is a light level transmitter designed for use in the active control of artificial lighting, both to optimise light levels and to achieve maximum energy efficiency.

Using a photo-diode cell to detect light levels the LL-P-V provides a 10 to 2000 and 10 to 10,000 lux range, with a linear 0-10Vdc output signal.

FEATURES
- 0-10Vdc output
- Flush mounted
- 24Vac/dc powered
- Energy saving by dimming light ballast

LL-P-V

SPECIFICATION

Accuracy	±5% across range
Environmental Housing	-30 to +60°C, 0 to 90% RH non-condensing
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Output	0-10Vdc
Protection	IP65
Ranges (selectable)	10 to 2000 Lux, 10 to 10,000 Lux
Sensor Reference	Photo-diode
Supply	24Vac/dc
Weight	140g

Part code	Description
LL-P-V	Wall Mounted External, Light Level Sensor

LL-C-V

SPECIFICATION

Accuracy	±5% across range
Ambient relative humidity	0 to 90% RH non-condensing
Ambient Temperature Range	-10 to +40°C
Housing Material	Flame retardant ABS, Polypropylene
Output	0-10Vdc
Protection	IP30
Range	10 to 2000 Lux
Sensor Reference	Photo-diode
Supply	24Vac/dc
Weight	140g

Part code	Description
LL-C-V	Ceiling Mounted Internal, Light Level Sensor

LL   **Light Level & Occupancy Sensor**

The LL-C-M is designed to give savings over uncontrolled lighting whilst retaining an ease of installation and configuration. A Passive Infra-Red detector monitors occupancy through moving body heat and a photo-sensitive device monitors light level. This will ensure that lighting is only switched on when the area covered is occupied and the light level is too low for normal working use. In this way lighting remains off until required.

SPECIFICATION

Occupancy Sensor Passive	Infra-Red Detector
Field of view	360°
Coverage	6 metres max.
Light range	10 - 2000 Lux
Off Delay Timer	10 seconds to 30 minutes
Supply Voltage	230Vac @ 50Hz
Electrical Connections	Live, Neutral & Switched Live
Ambient Temperature	-10 to +40°C
Ambient Humidity	90%RH non–condensing
Material Flame retardant	ABS, polypropylene
Protection	IP30
Weight	140g

FEATURES
- Combined light level & occupancy detection
- Flush mounted
- 6 meter coverage
- Energy saving
- Easy adjustment of light level and delay time

Part code	Description
LL-C-M	230Vac. Flush ceiling mounted light level and occupancy controller

Data sheets online: www.sontay.com

Energy Saving through Lighting Control

OC Occupancy Detector

Occupancy Detection in BMS
Occupancy detection in Building Management Systems (BMS) is crucial for optimizing energy consumption and ensuring efficient resource allocation. Here are some key points regarding occupancy detection in BMS:

- Privacy-First Sensors: These sensors detect presence without capturing identifiable imagery or biometric identifiers, using thermal, radar, or other non-imaging techniques. They perform local anonymization, reducing legal exposure and resistance from occupants.

- Energy Efficiency: By controlling lighting, HVAC systems, and other energy-consuming devices based on occupancy, occupancy sensors can reduce energy consumption by up to 30%. This can lead to significant financial savings and a more cost-effective operation.

- Cost Savings: Occupancy sensors typically offer a return on investment (ROI) within one to three years, depending on the size of the installation and energy costs. They help in reducing energy usage, which translates to financial savings.

- Improved Comfort: Occupancy sensors ensure that spaces are lit and climate-controlled only when occupied, enhancing the comfort of building users.

- Smart Sensors: Smart sensors in BMS provide enhanced accuracy and intelligence, offering real-time data monitoring or predictive analytics. They can detect anomalies and deviations from normal operating conditions, enabling proactive maintenance strategies.

SPACE SENSORS

The OC-C-LVN is a Passive Infra-Red detector for monitoring occupation through moving body heat. Detection of occupancy causes the internal SPDT relay to activate and the volt free contact ensures compatibility with a vastarray of equipment including BMS digital inputs. An LED indicates detection, this flashes every 2 seconds on detection. The LED will be off when no occupancy is detected.

SPECIFICATION

Ambient relative humidity	0 to 90% RH non-condensing
Ambient Temperature Range	-10 to +40°C
Coverage	6 meters max.
Field Of View	90°
Off Delay Timer	10 seconds to 30 minutes
Protection	IP30
Sensor Type	Passive infra-red detector
Supply	24Vac/dc
Switching Capacity	6(2)A @24V
Weight	140g

Part code	Description
OC-C-LVN	Ceiling Mounted, PIR Occupancy Detector
OC-C-LVN-SR	Ceiling Mounted, PIR Occupancy Detector, without LED, silent relay

WALL SENSORS

The OC-W-LV can be directly fixed to a wall or mounted using the angled bracket supplied

SPECIFICATION

Ambient relative humidity	0 to 90% RH non-condensing
Ambient Temperature Range	-10 to 40°C
Field Of View	360°
Protection	IP30
Supply	24Vac/dc
Switching Capacity	6(2)A @24V
Weight	70g

Part code	Description
OC-W-LV	Wall Mounted, PIR Occupancy Detector

CEILING SENSORS

The OC-C-M is an active motion detector for direct ceiling mounting. It emits high-frequency electro-magnetic waves (5.8GHz). It detects the change in echo from even the slightest movement in its detection zone.

SPECIFICATION

Ambient Range	0 to 90% RH non condensating
Ambient Temperature:	-10 to 40°C
Coverage	1-8 meters max.
Field Of View	360°
Off Delay Timer	8 seconds to 12 minutes
Protection	IP30
Sensor Type	Microwave
Supply	230-5.8 GHz CW
Switching Capacity	1200A @240V, Radar / ISM board
Weight	140g

Part code	Description
OC-C-M	Ceiling Mounted, Microwave Occupancy Detector

Energy Saving through Lighting Control

Data sheets online: www.sontay.com

WHEN CONTROL IS CRITICAL

MAKE SURE IT IS SONTAY

RELATIVE HUMIDITY

POWER MONITORING

AIR QUALITY & GAS DETECTION

WATER LEAK DETECTION

TEMPERATURE

SMART SENSORS

SMART PROTOCOLS
Modbus M-Bus
BACnet KNX

AIR FLOW

LIGHT LEVEL & OCCUPANCY

POWER MONITORING

BENEFITS

POWER USAGE
Power use: few kW to several MW ·
Varies by size and workload ·

TEMPERATURE
· Temp & voltage fluctuations risk overheating
· Can disrupt system functions

PRECISION
Precise temp & RH setpoints required ·
Minimal tolerance for deviation ·

REDUNDANCY
· High equipment & control redundancy
· Exceeds standard building systems

Sontay Sensors for Data Centre Environments

Smart sensing for mission-critical reliability, energy optimisation, and environmental compliance.

- 1 AIR FLOW
- 2 POWER MONITORING
- 3 RELATIVE HUMIDITY
- 4 TEMPERATURE
- 5 WATER DETECTION
- 6 SORA & LORAWAN
- 7 SMART PROTOCOLS
- 8 LIGHT LEVEL & OCCUPANCY

Modbus · M-Bus · BACnet · KNX
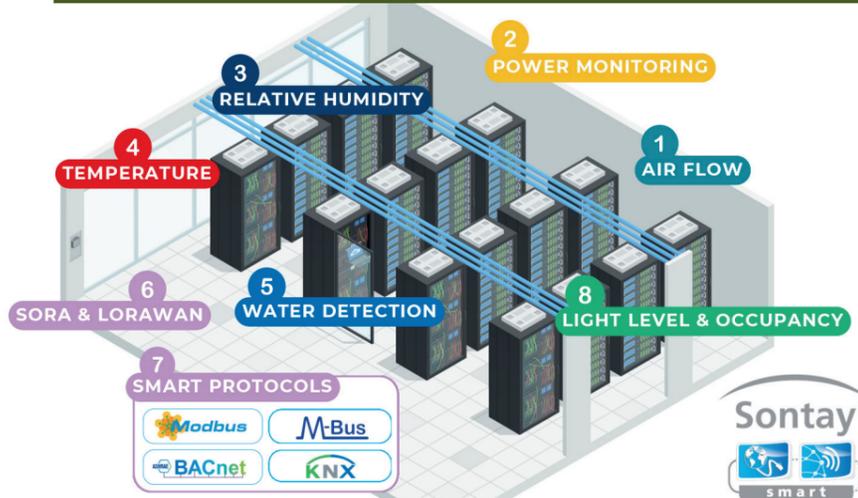
Sontay smart

Data centres demand precise, reliable control. With increasingly narrow environmental tolerances and rising energy costs, effective monitoring is critical to safeguard uptime and reduce waste.

Sontay's smart and traditional sensing range ensures rapid detection of thermal, humidity, airflow, and power anomalies. Helping integrators deliver scalable, standards-compliant BMS solutions.

SMART communicating products differ from conventional products in that they transfer values as data, rather than as analogue signals.

The automation systems for datacentres can vary from simple to extremely complex depending on the tier rating (1 to 4) or how critical the requirements are. Today, the ability to seamlessly integrate all mechanical and electrical controls, monitoring, and metering into a single platform using Smart communication devices, is a common requirement.

Given the high operating costs of data centres, improving energy efficiency can lead to substantial savings.

	Product Code	Applications	
1	FS-A	Air Flow	
2	PM-CT / PM-EM	Power Monitoring	
3	RH	Relative Humidity	
4	TT	Temperature	
5	WD	Water Detection	
6	RF	SORA & LoRaWAN	
7	SC	Smart Communication Protocols	
8	LL / OC	Light Level & Occupancy	

AIR-FLOW MONITORING
- Air flow must be monitored
- Ensures proper ventilation
- Supports system performance

RELATIVE HUMIDITY
- Optimum humidity required
- High = condensation risk
- Low = static & failure risk

WATER DETECTION
- Detect leaks or moisture early
- Use water detection sensors
- Protects equipment & uptime

PM-CS — Current Switches

The PM-CS range of current switches can be used to monitor motors, pumps or other electrical loads where a switched output is required. Their low minimum set point and small size make it ideal for monitoring small to medium motor loads. The output can be used for simple run/ fail detection, a normally open solid state switch operates when the current level sensed by the internal transformer exceeds the threshold value. Adjustable set point types, allow for easy detection of broken belts, drive belt slip or pump coupling shear. A typical HVAC motor that loses its load has a reduction of current draw of up to 50%. Fixed set point types, provide a cost-effect solution for monitoring the status of unit vents, exhaust fans, re-circulation pumps and other fixed loads where belt loss is not a concern. reduction of current draw of up to 50%. Fixed set point types, provide a cost-effect solution for monitoring the status of unit vents, exhaust fans, re-circulation pumps and other fixed loads where belt loss is not a concern. reduction of current draw of up to 50%. Fixed set point types, provide a cost-effect solution for monitoring the status of unit vents, exhaust fans, re-circulation pumps and other fixed loads where belt loss is not a concern.

FEATURES
- Load trending
- Voltage output versions self-powered, no supply required
- Dip-switch selectable ranges on 0-10Vdc version
- Unique wire clamp, for easy installation
- Split core versions for fast retrofit installation with no need to re-move conductor

SPECIFICATION

Ambient Relative Humidity	0 to 95% RH non-condensing
Ambient Temperature Range	-35 to +60°C
Gross Weight (kg)	0.12
Split core dimensions	65 x 50 x 30mm
Split core hole dimensions	13 x 13mm
Supply	Self-powered from monitored line
Trip setpoint	0.75A to 150A
Weight	100g max.
Ambient Temperature Range	-35 to +60°C
Weight	100g max.

Part code	Description
PM-CS-A-01	0.75 to 150A 30Vac/dc, split core
PM-CS-A-02	0.5 to 150A 30Vac/dc, solid core
PM-CS-A-03	0.75 to 150A 240Vac, split core

Part code	Description
PM-CS-F-01	0.35 to 150A 30Vac/dc, split core
PM-CS-F-02	0.25 to 150A 30Vac/dc solid core
PM-CS-F-03	0.50 to 150A 240Vac, split core

PM-CTR — Current Transducers

Current transducers provide accurate load trending information with a choice of 4-20mA, 0-5Vdc and 0-10Vdc output signals. They provide accurate, reliable and maintenance-free operation. Solid and split-core versions are available with current ratings up to 100A. Current versions are supplied with pre-wired 400mm tails and voltage versions have screw terminals. All versions have a unique self-gripping feature which allows the switch to literally clip on to a cable without the need for a base mounting plate.

FEATURES
- Load trending
- Voltage output versions self-powered, no supply required
- Dip-switch selectable ranges on 0-10Vdc version
- Unique wire clamp, for easy installation
- Split core versions for fast retrofit installation with no need to remove conductor

SPECIFICATION

Ambient Relative Humidity	0 to 95% RH non-condensing
Ambient Temperature Range	-35 to +60°C
Current accuracy output	99% (20-100% span)
Current supply output	Loop powered (9 to 35Vdc)
Gross Weight (kg)	0.1
Split core dimensions	65 x 50 x 30mm
Ambient Temperature Range	-35 to +60°C
Weight	100g

Part code	Description
4-20mA	
PM-CTR-01	Split core 0 to 20A current transducer
PM-CTR-02	Split core 0 to 50A current transducer
PM-CTR-03	Split core 0 to 100A current transducer
PM-CTR-04	Solid core 0 to 20A current transducer
PM-CTR-05	Solid core 0 to 50A current transducer
PM-CTR-06	Solid core 0 to 100A current transducer
0-5Vdc	
PM-CTR-07	Solid core 0 to 10A current transducer
PM-CTR-08	Solid core 0 to 20A current transducer
PM-CTR-09	Solid core 0 to 50A current transducer
PM-CTR-10	Solid core 0 to 100A current transducer
0-10Vdc	
PM-CTR-11	Split core range selectable 0-20 / 0-50 / 0-100A current transducer

Data sheets online: www.sontay.com

Power Monitoring

Sontay®

PM-CT — Current Transformers

The PM-CT range of ring type current transformers are for use with Sontay's PM-EM210 & PM-EM24 kWh meters and other suitable equipment.

The split core Current transformers are partially useful for retrofits, upgrades and temporary installations, as they can be fitted without any disruption to the existing installation.

SPECIFICATION

Ambient relative humidity	up to 95% RH non-condensing
Ambient Temperature Range	-30 to +85°C
Conformity	IEC185, BS7DTA, BSEB 60044-1
Frequency	50/60Hz
Insulation level	3kV (50Hz) for 1 minute (not PM-CT-M)
Overload	1.2 x rated current (continuous)
Weight	750g max.

Part code	Description
PM-CT-100SC	100A, 1VA Current Transformer
PM-CT-150SC	150A, 1.5VA Current Transformer
PM-CT-200SC	200A, 2.5VA Current Transformer
PM-CT-250SC	250A, 2.5VA Current Transformer
PM-CT-300SC	300A, 2.5VA Current Transformer
PM-CT-400SC	400A, 5VA Current Transformer
PM-CT-R500	500A, 15VA Current Transformer
PM-CT-R800	800A, 15VA Current Transformer
PM-CT-R100	100A, 10VA Current Transformer
PM-CT-R150	150A, 15VA Current Transformer
PM-CT-R250	250A, 15VA Current Transformer
PM-CT-R300	300A, 15VA Current Transformer
PM-CT-R400	400A, 15VA Current Transformer
PM-CT-R50	50A, 2.5VA Current Transformer

Part code	Description
PM-CT-M250	250A, 5VA Current Transformer
PM-CT-M300	300A, 5VA Current Transformer
PM-CT-M400	400A, 5VA Current Transformer
PM-CT-M500	500A, 10VA Current Transformer
PM-CT-M600	600A, 10VA Current Transformer
PM-CT-M800	800A, 10VA Current Transformer
PM-CT-500SC	500A, 5VA Current Transformer
PM-CT-600SC	600A, 5VA Current Transformer
PM-CT-800SC	800A, 51VA Current Transformer
PM-CT-M100	100A, 2.5VA Current Transformer
PM-CT-M150	150A, 2.5VA Current Transformer
PM-CT-M200	200A, 5VA Current Transformer

PM-EM210 — Energy Analyser (DIN-rail or panel mounted)

The PM-EM210-M is a compact energy meter that has a removable front LCD display that allows it to be either DIN-rail or panel mounted. The energy meter is designed for active and reactive energy metering. All operations, including programming and viewing up to seven display pages are performed using the two push buttons on the detachable display. It is possible to block the access to programming by means of a trimmer position on the rear of the display. Standard meters are non-MID. For billing use, add annex -B+D option. Extra system information is required please contact Sontay Support.

FEATURES
- Detachable display
- Multi-use housing for both Din-rail and panel mounting applications
- Compact size
- Modbus output
- Self-powered

SPECIFICATION

Ambient relative humidity	0 to 90% RH non-condensing
Ambient Temperature Range	-25 to +55°C
Display	2 lines
Frequency	45 to 65Hz
Housing	Nylon PA66, self-extinguishing UL 94 V-0
Modbus Output Type	RS485
Mounting	DIN-rail or panel
Protection	IP50 (front)
Pulse Output Type	Open collector
Refresh time	1/s
RS 485 address	Programmable, 1 to 247
Single-Phase Measurements	VLL, VLN, A, PF, kWh, Kvarh
System Measurements	W, var, PF,Hz, Phase-sequence
Weight	260g

Part code	Description
PM-EM210-M	Energy Analyser - Modbus Output
PM-EM210-P	Energy Analyser - Pulsed Output
Option (add to part code above)	
-B+D	MID Cert Annex B+D

APPLICATIONS
- 3-Phase, 4-wire balanced & unbalanced load
- 3-Phase, 3-wire balanced & unbalanced load
- 2-Phase, 3-wire
- 1-Phase, 2-wire

Data sheets online: www.sontay.com

PM-EM24 — Energy Analyser (DIN-rail)

The PM-EM24 DIN-rail mounted energy analyser is designed for active and reactive energy metering. When using the optional RS-485 ModBus output it is possible to connect up to three additional pulse inputs from other metering equipment enabling all consumption data to be read from just one meter.

PM-EM24 features eight user-selectable applications are available to allow fast setup, with lockable programme selector, and joystick control of up to 31 LCD display pages. Standard meters are non-MID. For billing use, add annex -D option. Extra system information is required please contact Sontay Support.

FEATURES
- Gas and water measurements and multi-tariff management in only one instrument
- Easy variable scrolling by means of the front joystick
- Pulsed or Modbus output options
- Two digital outputs (alarms or/and pulses) or RS485 communication port

SPECIFICATION

Ambient relative humidity	0 to 90% RH non-condensing
Ambient Temperature Range	-25 to +55°C
Baud rate output type	Programmable, 4800. 9600 bit/s
Display	3 lines (1 x 8 digit. 2 x 4 digit)
Display Refresh time	750m/s
Frequency	45 to 65Hz
Housing	Nylon PA66, self-extinguishing UL 94 V-0
Modbus Output Type	RS485
Mounting	DIN-rail or panel (optional PM-PMK)
Protection	IP50 (front)
Pulse Output Type	Open collector
Sampling rate	1600 samples /s @50Hz, 1900 samples /s @60Hz
Weight	360g

Part code	Description
PM-EM24-M	Energy Analyser - Modbus Output
-D	Annex-D Certification
PM-EM24-P	Energy Analyser - Pulsed Output
PM-PMK	Panel door mounting kit

APPLICATIONS
- Advanced LED indication of faults
- PCB self-test function
- DIN Rail mounting
- Fault finding LED indication
- Alarm output

PS — 24Vdc Output Supplies

Sontay's range of 24Vdc power supplies offer advanced protection, self diagnostics and self-test facilities to make installation and commissioning quicker and easier than ever before. 240Vac and 24Vac input versions are available, all featuring over-current and over-voltage protection, LED indication of a wide range of conditions, an optional alarm relay output for loss of input and on-PCB reset button.

FEATURES
- Advanced LED indication of faults
- PCB self-test function
- DIN Rail mounting
- Fault finding LED indication
- Alarm output

SPECIFICATION

Ambient relative humidity	0 to 95% RH non-condensing
Ambient Temperature Range	-10 to +50°C
LED indication	Power ON, low output voltage, high output voltage, output voltage within limits, reset button pressed, self-test in progress
Output	24Vdc @ 1A
Supply	240Vac and 24Vac
Weight	620g

Part code	Description
PS-24-24DC-1A	24Vac-24Vdc, 1A floating Supply module
PS-24-24DC-E	240Vac-24Vdc, 1A Supply module
PS-230-24DC-1A	24Vac-24Vdc, grounded Supply module

THE 24VAC INPUT TYPE IS AVAILABLE IN TWO VERSIONS:
1. PS-24-24DC-1A – the input 0V and the output 0V are NOT common.
2. PS-24-24DC-E – the input 0V and the output 0V are common on the PCB.

This allows the user a choice, depending on what type of field wiring is installed.

Data sheets online: www.sontay.com

WHEN PRECISION SAVES ENERGY AND LIVES

MAKE SURE IT IS SONTAY

RELATIVE HUMIDITY

AIR QUALITY & GAS DETECTION

TEMPERATURE

AIR FLOW

POWER MONITORING

WATER LEAK DETECTION

SMART SENSORS

SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX

LIGHT LEVEL & OCCUPANCY

PRESSURE

BENEFITS

SAFETY & HEALTH
Maintain clean and pressurised environments ·
Temperature stability for infection control ·

PRECISION
Consistent airflow and humidity control ·
Minimal tolerance for deviation ·

EFFICIENCY
· Smart monitoring manages high energy demands
· Maintains air purity and comfort

COMPLIANCE
· Meet NHS and HTM ventilation standards
· Use trusted, calibrated Sontay sensors

Hospitals & Healthcare Environments

Smart sensing for safety, hygiene, and comfort.

SCAN HERE

2 RELATIVE HUMIDITY
3 AIR FLOW & PRESSURE CONTROL
1 TEMPERATURE
4 AIR QUALITY & CO₂ DETECTION
6 SORA & LORAWAN
8 LIGHT LEVEL & OCCUPANCY
7 SMART PROTOCOLS
Modbus · M-Bus · BACnet · KNX
5 WATERLEAK DETECTION

Sontay smart
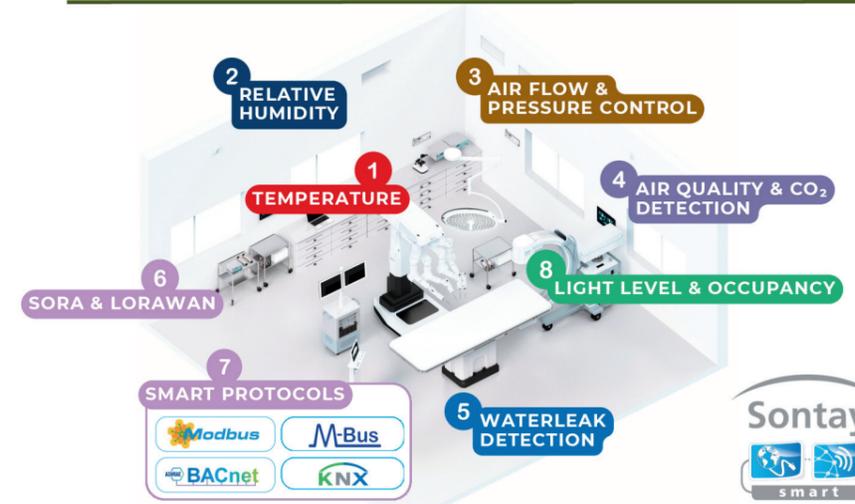
In healthcare environments, every breath of air and every degree of temperature matter.

Sontay's sensing solutions support reliable HVAC control, air purity, and comfort, helping hospitals and healthcare facilities maintain safety, energy efficiency, and compliance with strict environmental standards.

Hospitals and healthcare facilities rely on precise environmental control to protect patients, staff, and equipment. Sontay's smart and traditional sensors enable reliable monitoring of air pressure, humidity, temperature, and air quality, ensuring compliance and supporting optimal healing environments.

From isolation rooms to operating theatres, our sensing solutions help maintain stable conditions, improve energy efficiency, and support smart integration with BMS and IoT systems.

	Product Code	Applications	
1	TT	Temperature Monitoring	
2	RH	Humidity Monitoring	
3	AV / PA	Air Flow & Pressure Control	
4	GS-CO2 / AQ	Air Quality & CO₂ Detection	
5	WD	Water Leak Detection	
6	RF	SORA & LoRaWAN	
7	SC	Smart Communication Protocols	
8	LL / OC	Light Level & Occupancy Sensing	

AIR PRESSURE & FLOW CONTROL
Monitor room pressure to prevent cross-contamination and protect patients.

TEMPERATURE & HUMIDITY CONTROL
Precise control supports comfort, compliance, and energy efficiency.

AIR QUALITY & OCCUPANCY
CO₂ and occupancy sensing ensure ventilation only when needed.

PA-699 — Multi-range Air DP Sensor

The PA-699 range of differential pressure transmitters incorporates a proved ceramic fulcrum lever technology for pressure measurement. They deliver calibrated, temperature-compensated sensor signals, available as standard voltage or current outputs. They are ideal for registering low air flow in air conditioning systems and for the measurement of fine pressures in environmental, laboratory and clean room application (air and non-corrosive gases). The PA-699 has three field selectable ranges in one unit, providing versatility for a multitude of applications.

DUCT FIXING KIT

SPECIFICATION

Accuracy	±1.0max
Ambient Range	0 to 70°C
Current power supply	11 to 33 vdc
Diaphragm	Silicone
Housing	Polycarbonate PC
Protection	IP65
Rupture pressure	2 x overload at ambient temp.
Thermal effect	±0.02 TC zero point, ±0.03 TC Sensitivity
Voltage power supply	13.5 to 33Vdc or 24Vac ±15%
Weight	92g

FEATURES

- Adjustable measurement range
- IP65 housing
- Duct fixing kit included
- Compact construction

Part code	Description
PA-699-01	±30, ±50 & ±100Pa, 4-20mA Multi Range, Bi-directional
PA-699-02	0 to 30, 50, 100Pa, 4-20mA Multi Range
PA-699-04	0 to 100, 300, 500Pa, 4-20mA Multi Range
PA-699-06	0 to 500, 1000, 1600Pa, 4-20mA Multi Range
PA-699-08	0 to 1600, 2500, 5000Pa, 4-20mA Multi Range
Suffix (add to above part code)	
-V	0-10V voltage output
-LCD	Integral LCD option

Part code	Description
Accessories	
TEE	Tee Piece Air Pressure (Pack of 10)
PITOT	Aluminium pitot tubes (pair)
DFK	Duct fixing kit (supplied with the sensor, 2m of 5mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-S	Static Pressure Probe
PA-699-CAL *	Calibration certificate

Notes: * This option must be specified at time of sensor order. They are built to order and not available ex-stock.

PA–DPT 3 Wire — Multi-Range Air Differential Pressure Transmitter, 3-wire

DUCT FIXING KIT

The PA-DPT differential pressure transmitter is ideal for measuring filter conditions, as well as many other applications in ventilation/air conditioning systems in buildings, laboratory's and clean rooms (air and non-corrosive gases). Featuring field-selectable output signals (3-wire 4-20mA, 0-10Vdc or 2-10Vdc) and 8 pressure ranges, unidirectional or bi-directional via jumpers. An optional LCD display is also available. Sensor types 01 & 02 have manual re-zero facility whereas the 01-HA version has an auto zero function for automatic zero point calibration making it a virtually maintenance free sensor.

SPECIFICATION

Accuracy	1.5%AP + ±2Pa
Environmental operating temp	-20 to +50°C
Environmental storage	-20 to 60°C 0 to 95% non-condensing
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant ad UV stabilised)
Long Term Stability	0... ±8Pa (typical 1 year)
Measuring Element	MEMS
Output accuracy (mA)	±0.04mA typical, at 25°C, load 100Ω
Overpressure	Proof pressure 25kPa Burst pressure 30kPa
Power Supply	24Vac/dc ±10%
Pressure connection	5mm ID tubing
Protection	IP65
Response Time	8.0 or 0.8s selectable
Weight	240g

FEATURES

- User selectable measurement range and output type
- IP65 Housing
- Duct fixing kit included
- Re-zero facility

Part code	Description
PA-DPT-01	Air DP Sensor 1.5% Acc 0-25/50/100/150/250/300/500&±50Pa
PA-DPT-01-HA	Air DP Sensor 1% Acc 0-25/50/100/150/250/300/500&±50Pa
PA-DPT-02	Air DP Sensor 1.5% Acc 0-125/250/500/750/1250/1500/2500&±250Pa

Part code	Description
Suffix (add to above part code)	
-LCD	Integral LCD display
Accessories	
TEE	Tee Piece Air Pressure (Pack of 10)
PITOT	Aluminium pitot tubes (pair)
DFK	Duct fixing kit (supplied with the sensor, 2m of 5mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue PVC tube 8mm o/d x 1.5mm wall, 30m reel

PA-985 — Multi-range Air DP Sensor

The differential pressure transmitters of the 985 series are used to measure differential pressure, overpressure and vacuum. They provide up to 8 pressure ranges and 2 output signals, which are easily selectable by jumper or rotary selector switch.

WHY ENGINEERS CHOOSE PA-985

With field-selectable pressure modes and outputs, easy offset calibration, and a robust IP65 enclosure, the PA-985 is built for flexible installation and reliable long-term operation, even in demanding environments.

WHERE IT'S USED

- **Hospitals & isolation rooms:** Ensuring correct pressure differentials to prevent cross-contamination
- **Clean rooms & laboratories:** Maintaining controlled airflow to protect people, products, and processes
- **Ventilation & AHU monitoring:** Verifying airflow performance across ducts and filters
- **Building automation systems:** Supporting energy-efficient control of HVAC systems

FEATURES

- Configurable pressure ranges
- Output signal selection
- Piezoresistive Measuring element
- Optional switched output and display
- Can perform automated zero offset compensation

SPECIFICATION

Measuring Method	Piezoresistive pressure transducer
Supply Voltage	18 to 30Vac/dc 50-60Hz
Load for 0-10V output	≥ 1kΩ (≤ 10 mA)
Load for 4-20mA output	20 ... 500 Ω
Max current draw	25 / 110 mA, 50 / 170 mA (LCD)
Outputs	0-10V 4-20mA. non-switching
Pressure range 1	-50 to 50Pa -100 to 100Pa -500 to 500Pa, -1000 to 1000 0 to 100Pa 0 to 250Pa 0 to, 500Pa 0 to 1kPa 0 to 5kPa 0 to 25kPa 0 to 50kPa
Pressure range 2	0 to 250Pa 0 to 500Pa, 0 to 1000Pa, 0 to 2.5kPa, 0 to 10kPa, 0 to 50kPa, 0 to 100kPa
Overpressure	60kPa - 200kPa
Burst Pressure	100kPa - 400kPa
Linearity	<±0.5 FS, min ±1Pa
Long Term Stability	<±1% FS
Pressure medium	Air and non-combustible and non-aggressive gases
Pressure connections	Hose connection 6mm
Electrical connections	Plug-in terminals for wires & strands up to 1.5 mm^2
Environment temperature	-20 to 70°C -10 to 50°C (Auto zero)
Environmental humidity	0 to 95 % relative humidity non-condensing
Housing Material	ABS
IP Rating	IP65
Dimensions	81 x 83 x 41mm
Weight	125g
Suffix	-V (0-10V) -LCD

Part code	Description
PA-985-1000-AH	UL Air DP 0-1000Pa 0.5%LIN. 4-20mA&0-10V
PA-985-1000-AH-V	UL Air DP 0-1000Pa 0.5% ACC 0-10V
PA-985-100-B-AH	UL Air DP 0-100Pa 0.5%LIN. 4-20mA&0-10V
PA-985-500-AH-V	UL Air DP 0-500Pa 0.5%LIN 0-10V
PA-985-50-AH	UL Air DP 0-50Pa 0.5%LIN. 4-20mA&0-10V
PA-985A-25-AH	UL Air DP 0-25Pa 0.5%LIN. 4-20mA&0-10V
Suffix (add to above part code)	
-V	0-10V voltage output

PM-CS-F · PM-CS-A · RH/TEMPERATURE DUCT · Exhaust Air · Return Air · PA-985 · PA-699 · CO2 SENSOR DUCT · Supply Air · RH/TT-O · PA-DPT · PA-267 · Discharged Air · PM-CS-A · PM-CS-F

Data sheets online: www.sontay.com

Pressure

PA-DPT 2 wire — Multi-Range Air Differential Pressure Transmitter, 2-wire

DUCT FIXING KIT

The PA-DPT differential pressure transmitter is ideal for measuring filter conditions, as well as many other applications in ventilation/air conditioning systems in buildings, laboratory's and clean rooms (air and non- corrosive gases). Featuring a 2-wire 4-20mA output signal and 8 pressure ranges, unidirectional or bi-directional via jumpers. An optional LCD display is also available.

FEATURES
- User selectable measurement range
- 2-wire Loop powered 4-20mA output
- IP65 Housing
- Duct fixing kit included
- Manual Re-zero

Part code	Description
PA-DPT-04	Air DP sensor, 0 - 25/50/100/150/250/300/500Pa & ±50Pa
PA-DPT-05	Air DP sensor, 0 - 125/250/500/750/1250/1500/2500Pa & ±250Pa
Suffix (add to above part code)	
-LCD	Integral LCD display
-S	Static Pressure Probe

SPECIFICATION

Accuracy	1.5% AP + ±2Pa Ap = Applied Pressure
Conformity	EMC, CE & UKCA Marked
Country of origin	UK
Electrical connections	Terminals to suit 0.2-1.5mm² cables
Environmental humidity	0 to 95% non-condensing
Environmental operating temp	0 to +50°C
Environmental storage	-20 to 60°C
Housing Dimensions	125 x 105 x 85mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Long Term Stability	0… ±8Pa (typical 1 year)
Measuring Element	MEMS, no flow though
Output accuracy (mA)	±0.04mA typical, at 25°C, load 100Ω
Overpressure	Proof pressure 25kPa, Burst pressure 30kPa
Power Supply	24Vc ±10% (2-wire)
Pressure connection	5mm ID tubing

Part code	Description
Accessories	
TEE	Tee Piece Air Pressure (Pack of 10)
PITOT	Aluminium pitot tubes (pair)
DFK	Duct fixing kit (supplied with the sensor, 2m of 5mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-699-CAL *	Calibration certificate

PA-267 — Air DP Sensors

DUCT FIXING KIT

The PA-267 is designed for overpressure, under pressure, and differential pressure measurements of air and other neutral gases. It is recommended that for applications where control is involved, the high accuracy version is used. The measurement cell uses an advanced design of capacitive element to ensure excellent linearity and zero stability. The differential pressure to be measured induces a movement of the stainless steel diaphragm which is converted to an electronic output signal by a capacitance measurement and a unique electronic circuit.

FEATURES
- User selectable measurement range
- 2-wire Loop powered 4-20mA output
- IP65 Housing
- Duct fixing kit included
- Manual Re-zero

Part code	Description
PA-267-25	0 to 25Pa 4-20mA Transmitter
PA-267-50	0 to 50Pa 4-20mA Transmitter
PA-267-100	0 to 100Pa 4-20mA Transmitter
PA-267-300	0 to 300Pa 4-20mA Transmitter
PA-267-500	0 to 500Pa 4-20mA Transmitter
PA-267-1000	0 to 1000Pa 4-20mA Transmitter
PA-267-1600	0 to 1600Pa 4-20mA Transmitter
PA-267-2500	0 to 2500Pa 4-20mA Transmitter
PA-267-3000	0 to 3000Pa 4-20mA Transmitter

SPECIFICATION

Current Output	4-20mA, Load: 100 to 800Ω
Current power supply max	30Vdc + (0.004 x load resistance)
Current power supply min	9Vdc + (0.02 x load resistance)
Diaphragm	Stainless Steel 304 s/s
High accuracy	±0.40% fsd
Housing	Glass-filled Polycarbonate to UL94V-0
Operating Temperature	-18 to +65°C
Over pressure	68kPa
Pressure connection	Push fit for 6mm i/d tube
Protection	IP65
Standard accuracy	±0.1% fsd
Voltage Output	0-10Vdc (o/p impedance <100kΩ)
Voltage power supply	9-30 Vac or 12-40Vdc

Part code	Description
Suffixes (add to above part code)	
-V	0-10V voltage output
-B	Bi-directional
-AH	High accuracy
-LCD *	Integral LCD display
Accessories	
TEE	Tee Piece Air Pressure (Pack of 10)
PITOT	Aluminium pitot tubes (pair)
DFK	Duct fixing kit (supplied with the sensor, 2m of 5mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-BRK	DIN-rail bracket

PA-DPS — Air DP Switch

These are highly sensitive air differential pressure switches. Suitable for providing an indication of fan status and 'dirty filter' conditions. The switching setpoint is adjustable by means of a knob mounted under the main cover. Units are supplied complete with a duct fixing kit.

FEATURES
- Duct fixing kit included
- IP54 or IP65 housing option
- One screw needed for housing cover
- Scale in Pascal's

Part code	Description
IP54 Housing	
PA-DPS-83	50 to 500Pa DP switch
PA-DPS-85	200 to 1000Pa DP switch
PA-DPS-88	20 to 300Pa DP switch
PA-DPS-90	Air DP Switch 20-300Pa
PA-DPS-91	Air DP Switch 50-500pa
PA-DPS-92	Air DP Switch 100-1000pa
Accessories	
PA-DPS-B	Right Angled Mount Bracket (PA-DPS-8x only)

SPECIFICATION

Ambient relative humidity	0 to 95% RH non-condensing
Ambient Temperature Range	-20 to +85°C
Electrical rating (IP54)	1.5A (0.4)/250Vac AgCdO contacts
Electrical rating (IP65)	5A (0.4)/250Vac AgCdO contacts
Housing Material	Plastic moulding
IP54 Dimensions	85mm dia x 59mm
IP65 Dimensions	
Max operating pressure	5000Pa
Operating Range	50 to 500Pa
Pressure connection	6mm i/d push-on tubing
Protection	IP54
Weight	250g

Part code	Description
IP65 Housing	
PA-DPS-90W	20 to 300Pa DP Switch
PA-DPS-91W	50 to 500Pa DP Switch
PA-DPS-92W	100 to 1000Pa DP Switch
PA-DPS-94W	500 to 2000Pa DP Switch
Accessories	
TEE	Tee Piece Air Pressure (Pack of 10)
PITOT	Aluminium pitot tubes (pair)
DFK	Duct fixing kit (supplied with the sensor, 2m of 5mm i/d plastic tubing, 2 x pitot tubes, 4 x fixing screws)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue PVC tube 8mm o/d x 1.5mm wall, 30m reel

PL-PSA — Liquid Pressure Switch

The PL-PSA series of liquid pressure switches are suitable for the monitoring of flow failure in pumps, chillers, valves etc. Adjustable set point with adjustable differential. The PL-PSA range has a dial to show the liquid pressure. It is not recommended that this dial be used for accurate setting of the switch position.

FEATURES
- Duct fixing kit included
- IP54 or IP65 housing option
- One screw needed for housing cover
- Scale in Pascal's

SPECIFICATION

Ambient Temperature Range	-50 to +70°C
Differential	0.25 to 2 bar
Pressure connection	¼" BSP male
Protection	IP44
Range	-0.75 to +3 bar
Switch rating	230Vac @ 24(10)A
Weight	346g

Part code	Description
PL-PSA-1	-0.75 to +3 Bar
PL-PSA-2	-0.8 to +1.5 Bar
PL-PSA-3	-0.5 to +7 Bar
Accessories	
PL-PIG	2m of 6mm copper tubing + fitting
BRK	Bracket for PL-PSAx

Pressure

Pressure

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

PL-EPSA — Economy Liquid Pressure Switch

SPECIFICATION

Ambient Temperature Range	-20 to +65°C
Differential	0.7 to 4 bar
Dimension	83.5 x 90 x 44mm
Liquid temperature	-40 to +70°C
Pressure connection	1/4" BSP Male
Protection	IP44
Switch rating	8A @ 230Vac
Weight	400g

Part code	Description
PL-EPSA-1	Economy Liquid Pressure Switch -0.5 to 3 Bar
PL-EPSA-3	Economy Liquid Pressure Switch -0.2 to 7.5 Bar

The PL-EPSA series of liquid pressure switches are suitable for the monitoring of flow failure in pumps, chillers, valves etc. Adjustable set point with adjustable dierential. The PL-EPSA range has a dial to show the liquid pressure. It is not recommended that this dial be used for accurate setting of the switch position.

FEATURES
- Adjustable pressure range
- High rated SPDT contacts
- Shatter resistant contacts
- Captive terminal and cover screws

PL-FD113 — Liquid DP Switch

SPECIFICATION

Ambient Temperature Range	-10 to +70°C
Liquid temperature	70°C max.
Pipe connections	1/4" BSP female
Protection	IP30
Range	0.3 to 4.5 bar
Switch rating	3A @ 230Vac
Switching Differential	0.2 bar
Weight	800g

Part code	Description
PL-FD113	0.3 to 4.5 bar Liquid DP Switch
Accessories	
PL-FD113-PIG	Connection Kit

The PL-FD113 liquid differential pressure switch is suitable for the monitoring flow across pumps, chillers, valves etc. The set point is adjustable in the range 0.3 to 4.5bar, and is suitable for non-aggressive media such as water, air, oil, diesel, steam (with pig tail) etc. Approximate set point can be viewed on the dial at the front of the unit.

FEATURES
- Wide range and adjustable switching point
- Switches 24-240Vac/dc
- 1/4" BSP female connections
- Visible set point scale
- Single unit covers a wide pressure range

Note: The PL-FD113-PIG consist at 2m of 6mm copper tubing and 4 x commpression fittings (1/4")

PL-52x — Static Pressure Sensors

The PL-525 statis pressure sensors are suitable for use with a large range of liquids and gases compatible with the FPM (Viton) seal. The pressure transmitter is based on proven ceramic technology for exceptional performance speed and reliability. PL-520 pressure sensor is based upon the thick film technology where the pressure cell is fully welded. This sensor meets the high burst protection demands and is suitable for a wide range of applications.

Part code	Description	Part code	Description	
4-20mA Output (2-wire loop powered)		0-10Vdc Output		
PL-525-0.1	0 to 100 mbar	PL-525-0.1-V	0 to 100 mbar	Low Pressure
PL-525-0.2	0 to 200 mbar	PL-525-0.2-V	0 to 200 mbar	
PL-525-0.3	0 to 300 mbar	PL-525-0.3-V	0 to 300 mbar	
PL-525-0.6	0 to 600 mbar	PL-525-0.6-V	0 to 600 mbar	
PL-520-1	0 to 1 bar	PL-520-1-V	0 to 1 bar	
PL-520-1.6	0 to 1.6 bar	PL-520-1.6-V	0 to 1.6 bar	
PL-520-2.5	0 to 2.5 bar	PL-520-2.5-V	0 to 2.5 bar	
PL-520-4	0 to 4 bar	PL-520-4-V	0 to 4 bar	
PL-520-6	0 to 6 bar	PL-520-6-V	0 to 6 bar	
PL-520-10	0 to 10 bar	PL-520-10-V	0 to 10 bar	
PL-520-16	0 to 16 bar	PL-520-16-V	0 to 16 bar	
PL-520-25	0 to 25 bar	PL-520-25-V	0 to 25 bar	
PL-520-40	0 to 40 bar	PL-520-40-V	0 to 40 bar	

SPECIFICATION

Ambient Temperature Range	-30 to +85°C
Dimensions	105 x 65mm
Gross Weight (kg)	0.18
Media temperature	-15 to +125°C
Output	4-20mA
Pressure connection	1/2" BSP male
Protection	IP65
Response time	<2ms. 1ms typical
Supply Voltage	10Vdc to 30Vdc
Weight	105g

TECHNICAL SPECIFICATION

Supply Voltage	10Vdc to 30Vdc
Ambient Temperature Range	-30 to +85°C
Weight	105g
Output	4-20mA
Dimensions	105 x 65mm
Material	**Pressure connections:** S/S 1.4305/AISI 303,
	Sensor: Ceramic Al203 (96%), Sealing
	Material: FPM (Viton)

FEATURES
- Wide range and adjustable switching point
- Switches 24-240Vac/dc
- 1/4" BSP female connections
- Visible set point scale
- Single unit covers a wide pressure range

Part code	Description
Accessories	
PL-HS	Pressure Transmitter Heat Sink
PL-520-CAL *	Calibration certificate
PL-525-CAL *	Calibration certificate

Notes:
1. Heat Sink PL-HS can be used where media has a higher temperature than the sensor allows.
2. * This option must be specified at the time of sensor order. It is built to order and not available ex-stock.

Pressure

Pressure

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Data sheets online: www.sontay.com

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PL-625   Static Pressure Switch

SPECIFICATION

Contact system	Changeover contact
Electrical rating	6A(3A) @ 250 Vac
Max. operating pressure	1½ x range
Max. test pressure	10 bar
Media	Water. Air and steam (with pigtail siphon)
Operating Range	-10 to +80°C
Pressure connection	¼" BSP male
Protection	IP54
Weight	260g

The PL-625 range of pressure switches is suitable for use with liquids and gases. The unit has adjustable switching threshold. Reproducibility is ±10% of the switching point. The rugged mechanics are the assurance of high operating reliability, even in the presence of percussions or vibrations.

Part code	Description
PL-625-2.2	0.12 to 2.2 bar switch
PL-625-6	1 to 6 bar switch

FEATURES

- Suitable for liquids and gases
- Robust construction
- Adjustable switching differences
- ¼" BSP connection
- Spade connectors and gland supplied

PL-630   Differential Pressure Switches

SPECIFICATION

Contact system	Changeover contact
Electrical rating	1A(0.5A) @ 250Vac
Max. operating pressure and overload on one side (P1>P2)	with range ≤ 200 mbar: 10bar, with range 0.15 to 5.5 bar: 20 bar
Media	Water, air and steam (with pigtail siphon)
Operating Range	-10 to +80°C
Pressure connection	$1/_8$" BSP female
Protection	IP65
Weight	1.08kg

The PL-630-A range of differential pressure switches is suitable for use with liquids and gases. The unit has adjustable switching threshold. Reproducibility is ±10% of the switching point, but as a minimum ±0.8 mbar. The rugged mechanics are the assurance of high operating reliability, even in the presence of percussions or vibrations. Ideal for flow monitoring and proving applications in heating, ventilating and air-conditioning systems.

Part code	Description
PL-630-A-0.02	6 to 20 mbar Liquid DP switch
PL-630-A-0.06	15 to 60 mbar Liquid DP switch
PL-630-A-0.2	40 to 200 mbar Liquid DP switch
PL-630-A-1	0.15 to 1 bar Liquid DP switch
PL-630-A-3	1 to 3 bar Liquid DP switch
PL-630-A-5.5	2 to 5.5 bar Liquid DP switch
Accessories	
PL-630-PIG	Connection Kit

FEATURES

- Suitable for liquids and gases
- Robust construction
- Adjustable switching differences
- $1/_8$" BSP connection
- Spade connectors and gland supplied

PL-652   Low Range Differential Pressure Sensor

SPECIFICATION

Max. operating pressure overload on one side	10 bar (P1>P2)
Media	Water, air and steam (with pigtail siphon)
Operating Range	-10 to +80°C
Pressure connection	$1/_8$" BSP female
Protection	IP65
Supply Voltage	20 to 30 Vdc
Weight	940g

The PL-652 range of differential pressure transmitters are suitable for use with liquids and non-aggressive gases. The pressure or pressure differential to be monitored acts on a diaphragm, which in turn acts against a spring. As a result of the pressure action and resultant diaphragm movement a permanent magnet fastened on the diaphragm moves in the direction of the hall sensor arranged outside the pressure case. The sensor and transmitter are housed in a robust brass casing, sealed for IP65 protection.

FEATURES

- Output signal in current or voltage
- High over pressure safety margin
- High linearity. accuracy and repeatability
- Rugged IP65 case construction
- Suitable for mildly aggressive liquids & gases

Part code	Description
4-20mA Output	
PL-652-0.05	0 to 50 mbar Liquid DP Sensor
0-10Vdc Output	
PL-652-0.05-V	0 to 50 m bar Liquid DP Sensor
Accessories	
PL-652-CAL	Calibration certificate

Notes:
A mounting bracket is supplied with the sensor.
* This option must be specified at the time of sensor order.
It is built to order and not available ex-stock.

PL-692   Differential Pressure Sensor

SPECIFICATION

Media	Water, air and steam (with pigtail siphon)
Pressure connection	6mm compression
Protection	IP65
Response Time	<5ms
Supply Voltage	11 to 33Vdc
Temperature	Ambient & media -15 to +80°C
Weight	640g

The PL-692 range of differential pressure transmitters is suitable for use with liquids and non-aggressive gases. With unique ceramic sensing technology for no mechanical aging and creepage. The sensor and transmitter are housed in a robust stainless steel casing with a 1.5 meter flying lead for electrical connection and sealed for IP65 protection.

FEATURES

- Output signal in current or voltage
- High over pressure safety margin
- High linearity. accuracy and repeatability
- Rugged IP65 case construction
- Suitable for mildly aggressive liquids & gases

Part code	Description
4-20mA Output (2-wire loop powered)	
PL-692-0.1	0 to 100mbar Liquid DP sensor
PL-692-0.2	0 to 200mbar Liquid DP sensor
PL-692-0.4	0 to 400mbar Liquid DP sensor
PL-692-1	0 to 1 bar Liquid DP sensor
PL-692-2.5	0 to 2.5 bar Liquid DP sensor
PL-692-4	0 to 4 bar Liquid DP sensor
PL-692-6	0 to 6 bar Liquid DP sensor
PL-692-10	0 to 10 bar Liquid DP sensor
PL-692-16	0 to 16 bar Liquid DP sensor
0-10Vdc Output	
PL-692-0.1-V	0 to 100mbar Liquid DP sensor
PL-692-0.2-V	0 to 200mbar Liquid DP sensor
PL-692-0.4-V	0 to 400mbar Liquid DP sensor
PL-692-1-V	0 to 1 bar Liquid DP sensor
PL-692-2.5-V	0 to 2.5 bar Liquid DP sensor
PL-692-4-V	0 to 4 bar Liquid DP sensor
PL-692-6-V	0 to 6 bar Liquid DP sensor
PL-692-10-V	0 to 10 bar Liquid DP sensor
PL-692-16-V	0 to 16 bar Liquid DP sensor
Accessories	
PL-692-CAL *	Calibration certificate

Notes:
A mounting bracket is supplied with the sensor.
* This option must be specified at the time of sensor order.
It is built to order and not available ex-stock.

Pressure

Data sheets online: www.sontay.com

Pressure

Data sheets online: www.sontay.com

Sontay®

WHEN COMPLIANCE BECOMES EFFORTLESS

MAKE SURE IT IS SONTAY

SMART PROTOCOLS
Modbus BACnet

SMART COMMUNICATION

Clamp-on sensors deliver accurate hot & cold water readings without cutting pipes or disrupting service.

TEMPERATURE MONITORING

Industry-standard encrypted LoRaWAN® communication ensures safe, dependable data transfer.

CYBER SECURITY & RELIABILITY

Send data directly into BACnet IP, MQTT or Modbus, no separate portals, apps or duplicated reporting.

SMART BMS INTEGRATION

SORA CLAMP-ON TEMPERATURE SENSOR SORA HUB

LEGIONELLA MONITORING WITH SORA LORAWAN SOLUTION

BENEFITS

SAFETY & COMPLIANCE
Continuous monitoring reduces Legionella risk ·
Supports HSG274 compliance ·

EFFICIENCY
· Fewer site visits and manual checks
· Lower total cost than wired solutions

PRECISION
15-minute data for full traceability ·
Early alerts for unsafe temperatures ·

SCALABILITY
· Add IAQ, leak detection, TRVs, PIR & more
· Easy BMS integration (BACnet, Modbus, MQTT)

SORA and further LoRaWAN Devices

SCAN HERE

SORA HUB & SORA Clamp-On Sensors for smarter monitoring

Precise, wireless temperature monitoring for stored and recirculated water systems.

SCHOOLS & UNIVERSITIES
OFFICES
HOTELS
RESIDENTIAL BLOCKS
HEALTHCARE
LEISURE CENTRES
DATA CENTRES
ANY STORED/RECIRCULATED WATER SYSTEM

SORA	Product Code	Applications
1	**SORA Hub** RF-LW-HUB	LoRaWAN® Gateway for building-wide wireless coverage
2	**SORA-CLAMP-ON** RF-LW-T-C	Wireless clamp-on temperature sensor for hot/cold water
Optional Products, fully supported once the SORA Hub is installed.		
	RF-LW-TRV	LoRaWAN radiator valve for heating systems
	RF-LW-THLVBC-S	Indoor Air Quality / CO₂ Monitoring LoRAWAN
	RF-LW-WD-AM	LoRaWAN Water Leak Detection
	RF-LW-PULSE	LoRaWAN Pulse Counter / Energy Monitoring
	RF-LW-VZ	Water Shut-Off Valve LoRaWAN
	RF-LW-THPIR-SP	Wireless Thermostat

LEGIONELLA MONITORING
A smarter way to protect your building, reduce cost, and future-proof your compliance. *Make sure it's Sontay.*

SMART PROTOCOLS
Modbus BACnet

This combined SORA Hub + Clamp-On solution replaces costly service-based models with a one-time hardware investment that the customer owns. It reduces reliance on manual checks, minimises labour, eliminates recurring portal fees, and ties all compliance data into a single BMS-driven environment.

What the System Includes:
- SORA LoRaWAN® Gateway for site-wide wireless coverage.
- SORA Clamp-On Temperature Sensors for hot & cold-water systems.
- Direct data streaming into BMS or cloud via BACnet IP / MQTT / Modbus.

Typical Transmission:
Every 15 minutes for continuous temperature traceability and compliance auditing.

Maintaining safe water temperatures is essential for Legionella compliance (HSG274) across offices, healthcare facilities, education buildings, residential blocks, hotels and leisure centres. Traditional approaches rely on time-consuming manual checks or expensive service-based rental models.

The SORA Hub paired with SORA Clamp-On sensors offers a simple, scalable and low-cost alternative, delivering continuous monitoring without plumbing disruption.

Once installed, the LoRaWAN® infrastructure becomes a future-proof platform for expanding wireless sensing across the entire building.
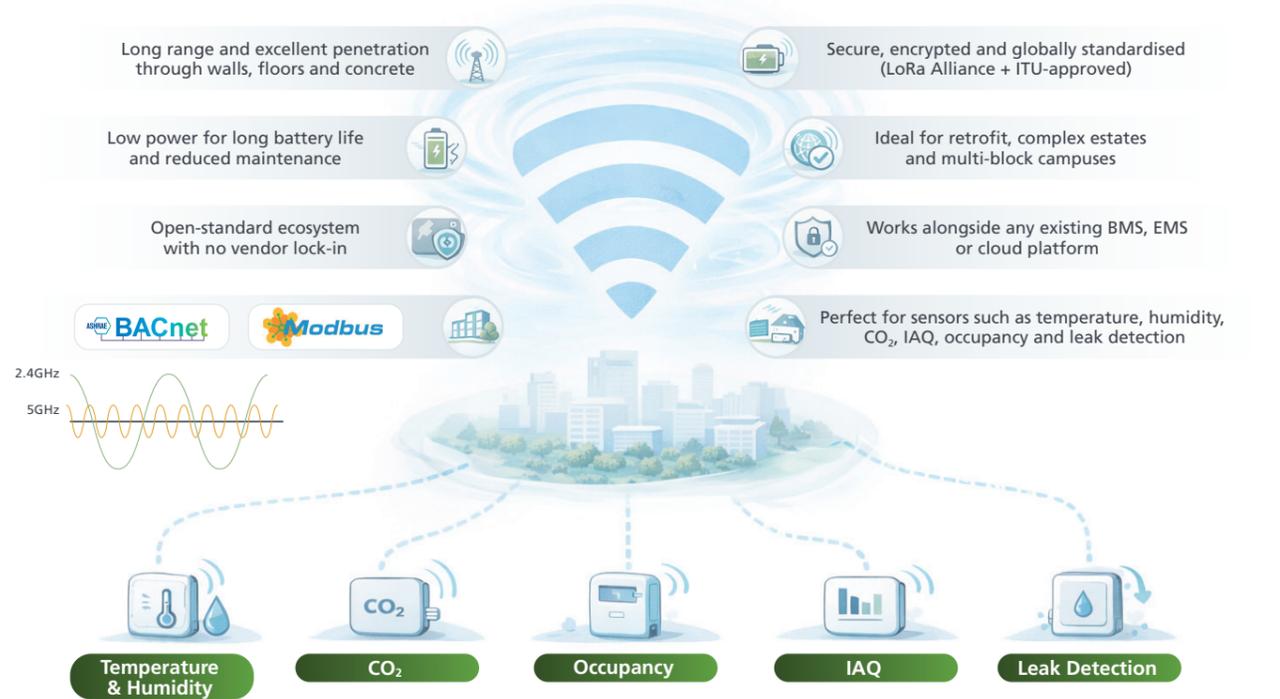
What is LoRaWAN?

LoRaWAN is a long-range, low-power wireless technology designed for building sensors. It delivers reliable communication through complex buildings while using very little energy, enabling multi-year battery life.

KEY ADVANTAGES

Long range and excellent penetration through walls, floors and concrete

Secure, encrypted and globally standardised (LoRa Alliance + ITU-approved)

Low power for long battery life and reduced maintenance

Ideal for retrofit, complex estates and multi-block campuses

Open-standard ecosystem with no vendor lock-in

Works alongside any existing BMS, EMS or cloud platform

Perfect for sensors such as temperature, humidity, CO_2, IAQ, occupancy and leak detection

BACnet Modbus

2.4GHz
5GHz

| Temperature & Humidity | CO_2 | Occupancy | IAQ | Leak Detection |

Why SORA is different?

Combining Sontay's sensing expertise with the power of LoRaWAN for wireless connectivity, offers unparalleled reliability for your projects. When time and cost are key in supporting your projects, SORA is your ideal solution.

SORA

LoRaWAN

SORA

Wireless Connectivity

Safety & Reliability

Time Savings

Cost Savings

Why LoRaWAN for BMS & Smart Buildings?

LoRaWAN technology is a game-changer for Building Management Systems (BMS) and smart buildings due to its long-range, low-power capabilities. It allows for the integration of a vast network of sensors, enabling real-time data collection and monitoring across large areas without the need for extensive wiring. This is particularly beneficial for retrofitting existing buildings, as it minimises disruption and costs.

| FOR SYSTEM INSTALLERS | FOR END USERS / BUILDING OWNERS |

No containment, no cabling, no ceiling or floor disruption

Ideal for heritage, live sites, hospitals and offices

Fast installation and commissioning

Seamless integration into BACnet/IP, Modbus or MQTT

Scalable: add devices in seconds without rewiring

Reduced installation risk, reduced labour, higher project margins

Sontay®
Measure
Improve
Sustain

Better energy efficiency through granular sensing

Improved comfort and indoor air quality

Real-time visibility of environmental conditions

Reduced ongoing costs and simplified maintenance

Flexible infrastructure that can grow with building needs

Compliance with ESG, WELL, RESET and more

INTERNATIONAL WELL BUILDING INSTITUTE™

RESET

| For System Installers | For End Users / Building Owners |

LoRaWAN brings installers and building owners onto the same page, faster to deploy, easier to scale, and designed to deliver long-term value with minimal disruption.

Smart Sensing

Smart Sensing

Sontay®

Case Studies

Our SORA and LoRaWAN devices are delivering significant improvements in occupant comfort and energy efficiency across a wide range of buildings. From healthcare environments to airports, the positive impact is clear and measurable.

Measure
Improve
Sustain

TEMPERATURE SENSORS	HUMIDITY SENSORS	CO₂ SENSORS	DIFFERENTIAL PRESSURE SENSORS	WIRELESS TEMP SENSORS	UNIVERSAL RADIATOR ADAPTER	LORAWAN IOT CONNECTIVITY	DEDICATED CUSTOMER SUPPORT
Monitor & maintain optimal indoor conditions.	Protect passenger comfort and prevent equipment damage.	Measure indoor air quality for healthy environments.	Ensure precise airflow in critical spaces.	10-year batteries for easy, low-maintenance monitoring.	Standardised across the facility for seamless, efficient installation.	Strong wireless link with future-ready IoT performance.	Dedicated support for an easy setup and data you can trust.

Smart Sensing at Scale:
Gatwick Airport

Benefits!

- Improved passenger comfort across terminals.
- Reduced energy consumption with efficient control.
- Protection of sensitive equipment and building infrastructure.
- Scalable, reliable sensing for one of the UK's busiest airports.

Did you know?

Gatwick handles over 40 million passengers a year and Sontay sensors help keep every journey comfortable and efficient.

LoRaWAN®

Smart & Seamless:
Enhancing Comfort in a Scottish Care Home

Benefits!

- **Lowest hassle, longest life:** 10-year battery-powered sensors reduce maintenance and disruption.
- **Fast installer-friendly setup:** Uniform radiators meant just one type of adapter, less complexity, faster roll-out.
- **Future-ready IoT network:** LoRaWAN ensures scalable, reliable wireless connectivity throughout the building.
- **Trusted delivery & support:** On-time installation combined with expert support means accurate, dependable data from day one.

Quick stat!

More than **30 apartments, one sensor** for easy comfort control.

Supporting comfort and health for vulnerable residents every day.

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

Smart Sensing

Ideal Applications

Our SORA LoRaWAN range is suited to any environment requiring long-range, low-disruption wireless sensing with fast, reliable BMS integration:

KEY ADVANTAGES

Commercial Buildings

Education

Industrial & Warehousing

Multi-building Estates

Healthcare & Laboratories
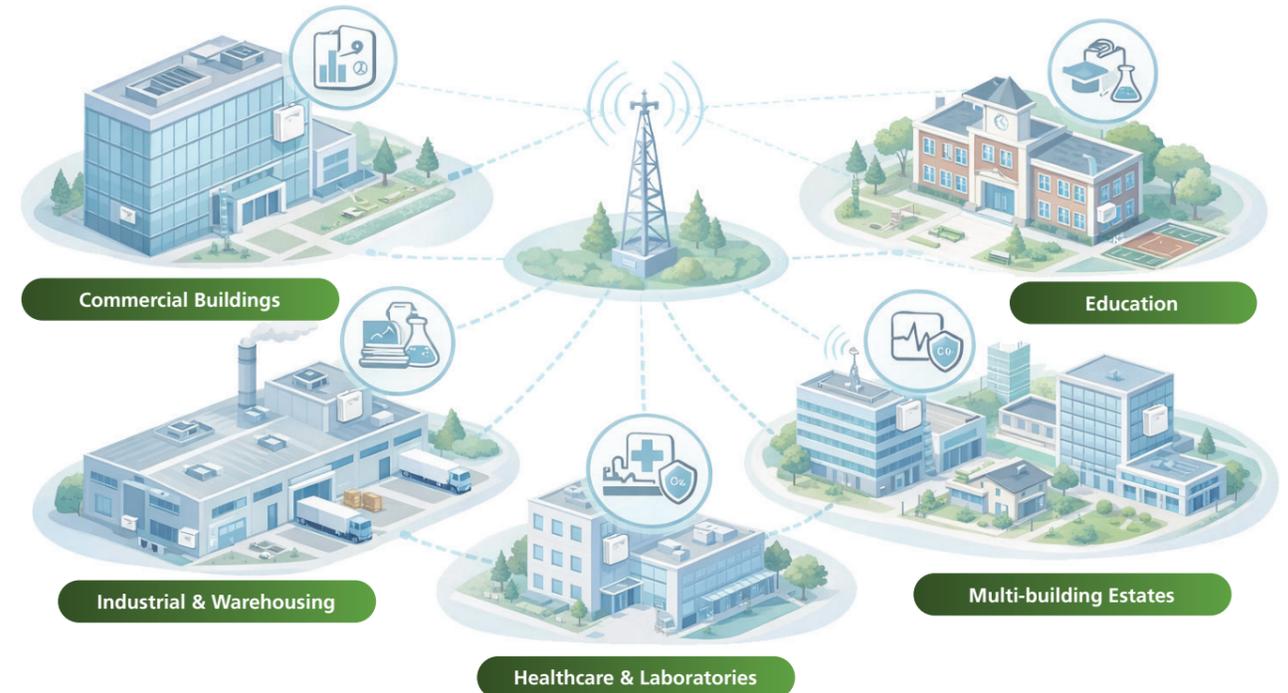
Commercial Buildings — HVAC, IAQ, energy optimisation and occupancy-driven control.

Education — Campus-wide monitoring with minimal installation disturbance.

Healthcare & Labs — Environmental compliance, IAQ, critical area visibility.

Industrial & Warehousing — Large-scale monitoring and remote plant areas.

Multi-building Estates — Connecting spread-out blocks and mixed infrastructure.

Smart Sensing

Why Sontay for your wireless needs?

At Sontay we have been providing unrivalled support for all BMS sensing needs for over 50 years and are forging the way with our wireless LoRaWAN devices. We are your trusted and reliable partner for all of your projects requiring a LoRaWAN solution.

SENSING IS WHAT WE DO!

Warranty

5-year warranty across the range

Support

Lifetime technical support

Expertise

UK-based expertise and fast response

BMS Platform

Seamless interoperability with BMS platforms

Installation

Proven installations across education, healthcare, commercial offices, labs

Solution

A complete solution for building controls

Long-term

Long-term roadmap of sensors, energy monitoring and integration tools

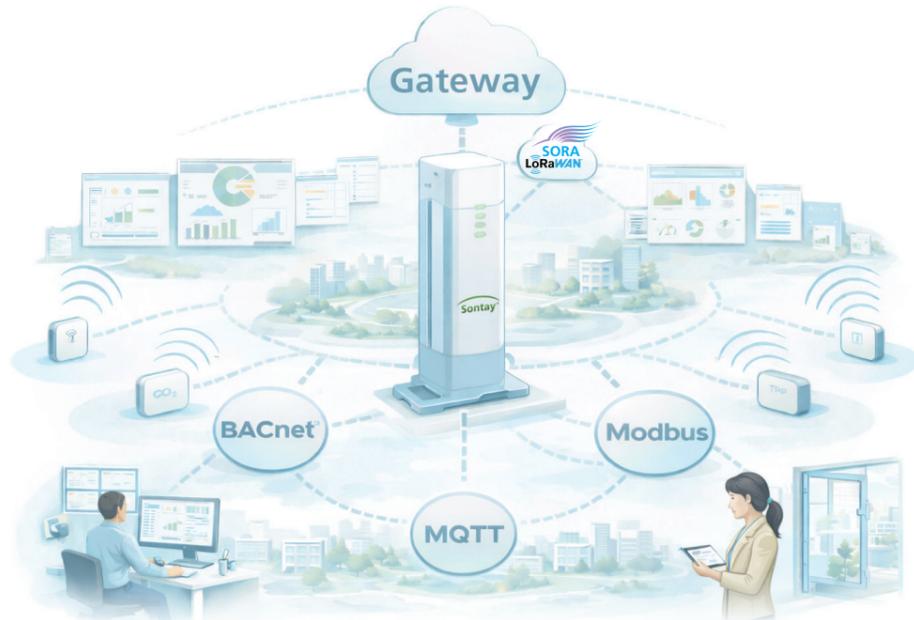<div style="writing-mode: vertical">Smart Sensing</div>

SORA & LoRaWAN Products

SORA® LoRaWAN brings intelligent, low-power wireless sensing to buildings without disruption — fast to install, easy to scale, and designed to support smart, reliable building management for healthier, more efficient spaces. Ready for the buildings of today and tomorrow.

TEMPERATURE & HUMIDITY

SORA Devices

5+ Year Battery Life

Part code	Description
Temperature only	
RF-LW-T-S	Space mounted temp sensor
RF-LW-T-D	Duct mounted temp sensor
RF-LW-T-I	Immersion temp sensor
RF-LW-T-C	Clamp-on temp sensor
RF-LW-T-O	Outside air temp sensor
RF-LW-T-OR	Outside air with rad shield temp sensor
RF-LW-T-555	Flying lead temp sensor
CO₂ only	
RF-LW-CO2-D	Duct mounted CO_2 sensor
Temperature & Humidity	
RF-LW-RH-D	Duct mounted temp and humidity sensor
RF-LW-RH-W	Wall mounted temp and humidity sensor
RF-LW-RH-O	Outside temp and humidity sensor
RF-LW-RH-S	Space mounted temp and humidity sensor
Temperature & CO₂	
RF-LW-CO2-T-S	Space mounted temp and CO_2 sensor
Temperature, Humidity & CO₂	
RF-LW-RHT-CO2-S	Space mounted CO_2, temp and humidity sensor

Accessories

RF-AERIAL-PM0.75	Aerial Extension c/w Bulk Head Fitting 0.75 Metre
RF-AERIAL-PM2	Aerial Extension c/w Bulk Head Fitting 2 Metre
RF-AERIAL-PM5	Aerial Extension c/w Bulk Head Fitting 5 Metre
RF-LS14500-S2	2 x Lithium AA size battery

RF-LW — LoRaWAN Thermostats

 FAN COIL THERMOSTAT LORAWAN

No battery required

The RF-LW-TH-FSSP Fan Coil Thermostat (FCT) is a LoRaWAN device for 2- and 4-pipe Fan Coil Units, accommodating 3-speed or ECM fans. Ideal for building retrofitting, it enhances energy efficiency and reduces heating/cooling expenses significantly. With its 4.2" e-ink fast refresh display it allows the end-user to change the target temperature and see current indoor conditions.

FEATURES
- Fast refresh e-ink display provides overview of the indoor environment
- Compatible with 2-pipe and 4-pipe Fan Coil Units (FCU)
- Works with 1-3-speed fans and ECM (0-10V) fans (FCU)

Part code	Description
RF-LW-TH-FSSP	Fan Coil Thermostat LoRaWAN
Power Requirement	110-230VAC (Included)

 WIRELESS THERMOSTAT LORAWAN

No battery required

Our RF-LW-THPIR-SP Wireless Thermostat is a stand-alone thermostat powered entirely by solar energy using an organic solar panel. The device features a 2.9" e-ink screen, sensor for movement (PIR), temperature and humidity sensor, LUX sensor and 3 buttons. The user can change the target temperature and see current indoor conditions. The device sends an uplink after any event as well as periodically.

FEATURES
- Motion Detection
- Organic Solar Panel charged by room light
- Integrates with BMS and other devices for optimum room control

Part code	Description
RF-LW-THPIR-SP	Wireless Thermostat LoRaWAN
Power Requirement	Solar-powered Lithium-ion capacitor (LIC) AND/OR 4xAA 1.5VDC batteries AND/OR USB-C

<div style="writing-mode: vertical">Smart Sensing</div>

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

Sontay®

AIR QUALITY

SORA Devices

LoRa is a wireless communication technology dedicated to long distance and low power consumption. Compared with other communication methods, LoRa spread spectrum modulation method greatly increases to expand the communication distance.

5+ Year Battery Life

Part code	Description
Temperature & CO₂	
RF-LW-CO2-T-S	Space mounted temp and CO₂ sensor
CO₂ only	
RF-LW-CO2-D	Duct mounted CO₂ sensor
Accessories	
RF-AERIAL-PM0.75	Aerial Extension c/w Bulk Head Fitting 0.75 Metre
RF-AERIAL-PM2	Aerial Extension c/w Bulk Head Fitting 2 Metre
RF-AERIAL-PM5	Aerial Extension c/w Bulk Head Fitting 5 Metre
RF-LS14500-S2	2 x Lithium AA size battery

FEATURES
- NFC for configuration
- Over air configuration, pairing mode
- Long-range communication
- Excellent battery life
- Easy to configure/install

RF-LW-TIAQ   LoRaWAN Indoor Air Quality Monitoring

Externally powered

Our Indoor Air Quality Monitor is a precision instrument which accurately measures up to 9 key environmental parameters including Temperature, Relative humidity, Light level, Particle Matter (PM1, PM 2.5, PM4 & PM10), Sound Level, Volatile organic compounds, Carbon Dioxide, Barometric Pressure. Up to two additional gas sensors may be fitted; one of which must be ozone if two sensors are required. Ammonia, Ozone, Formaldehyde, Carbon Monoxide, Nitrogen Dioxide, Hydrogen Sulphide, Sulphur Dioxide and Oxygen.

FEATURES
- Leading edge optical and digital sensors provide high accuracy and long life
- Drift free readings without further calibration
- Helping companies achieve WELL® and RESET® compliance
- Built in USB port for easy configuration
- Ultimate wireless connectivity through LoRaWAN
- Simple integration with BACnet and Modbus through gateway

Part code	Description
RF-LW-TIAQ	Indoor Air Quality Monitor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 1, 2.5, 4, 10 (MCERTS Certified). Carbon Dioxide - CO₂ IWBI WELL v2 Compliant
RF-LS14500-S2	4 x Lithium AA size battery OR 12-24VDC
RF-LW-TIAQ-CO2	Indoor Air Quality Monitor with ultrafine particle sensor. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10 Carbon Dioxide - CO₂ IWBI WELL v2 Compliant. Requires external power 12-24V DC.
Power Requirement	12-24V DC or via a PoE splitter
RF-LW-TIAQ-VAPE	Indoor Air Quality Monitor with vape/cigarette smoke detection function and ultrafine particles. Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM 0.1, 0.3, 0.5, 1, 2.5, 5, 10 Carbon Dioxide - CO2IWBI WELL v2 Compliant. Requires external power 12-24V DC.
Power Requirement	12-24V DC or via a PoE splitter
Accessories	
-SND	Sound monitoring option, available for all IAQ Models

RADON FEATURE

Radon, a naturally occurring radioactive gas that can enter buildings unnoticed and accumulate in enclosed spaces, where it poses a serious long-term health risk. As radon is invisible, odourless, and tasteless, reliable and specialised measurement is essential.

Part code	Description
RF-LW-TIAQ-R	IAQ Monitor Temperature, Relative Humidity, Volatile Organic Compounds, Barometric Pressure, Radon
RF-LW-TIAQ-RC	IAQ Monitor Temperature, Relative Humidity, Volatile Organic Compounds, Barometric Pressure, Carbon Dioxide, Radon
RF-LW-TIAQ-RCP	IAQ Monitor Temperature. Relative Humidity, Volatile Organic Compounds, Barometric Pressure, Carbon Dioxide, Particulate Matter- PM 1, 2.5, 4, 10, Radon
Power Requirement	1 x Lithium D-Cell 3.6V, or external power 12-24V DC

Smart Sensing

Data sheets online: www.sontay.com

RF-LW-TIAQ-OX   LoRaWAN Indoor Air Quality Monitoring Enhanced

Externally powered

Our Air Quality Monitor is a precision instrument which accurately measures up to 14 key environmental parameters including Temperature, Humidity, Light Level, VOC's, Carbon Dioxide, Particulate Matter (PM1, 2.5, 4 & PM10), Oxygen, Barometric Pressure, Ozone, Sound Level, plus up to 4 plug-in calibrated gas sensors from a range of over 200 gases / sensitivities.

FEATURES
- Built in USB port for configuration
- Multiple sensor options
- Vertical wall mounting or horizontal ceiling mounting
- Whisper quiet fan to draw air through the enclosure for sampling & monitoring

Part code	Description
RF-LW-TIAQ-OX	Air - Indoor Air Quality Monitor with Temperature, Relative Humidity, Light Level (LUX), VOC's, Barometric Pressure. CO₂. Oxygen. Particulate Matter - PM1, 2.5, 4, 10 (MCERTS Certified). IWBI WELL v2 Compliant.
Power Requirement	12-24V Volts DC. 1 Amp (max)

RF-LW-TOAQ   LoRaWAN Outdoor Air Quality Monitoring

2+ Year Battery Life

Outdoor air quality monitor measures key environmental parameters continuously and in real time with exacting accuracy. Using cutting-edge digital and gas sensing technology, the OAQ ensures drift-free reading without further calibration and extended instrument longevity.

Available with temperature, relative humidity, particulate matter, CO₂, Ozone, VOC's, barometric pressure, sound level and internationally approved Air Quality Index – AQI.

FEATURES
- Accurately measures up to ten key outdoor air quality parameters
- Powered via battery or an external source
- Optional Solar Power Supply (SPS)
- Optional gas sensor, CH₂O, CO, NO₂, H₂S, SO₂
- Optional sound sensor
- Communicates via outstanding LoRaWAN wireless technology
- Simple integration into BMS via BACnet or Modbus gateway

Part code	Description
RF-LW-TOAQ	Outdoor Air Quality MonitorTemperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM1, 2.5, 4, 10 (MCERTS Certified).EPA AQI Air Quality Index (based on NO₂ and O₃).
RF-LW-TOAQ-CO2	Outdoor Air Quality Monitor.Temperature, Relative Humidity, VOC's, Barometric Pressure. Particulate Matter - PM1, 2.5, 4, 10 (MCERTS Certified).EPA AQI Air Quality Index (based on NO₂ and O₃). Carbon Dioxide - CO₂
RF-LS14500-S2	4 x Lithium AA sized battery OR 12-24V Volts DC. 0.15 Amp (max) (2+ Years)

RF-LW-THLC-S   LoRaWAN Organic Solar Air Quality Sensor

No battery required

This clever sensor is equipped with temperature and humidity, LUX and NDIR CO₂ sensor. Featuring a 1.54" e-ink screen the device displays the current levels of CO₂ as well as historical trends.

The data is transmitted by LoRaWAN connectivity to a gateway which converts it to BACnet or Modbus to be utilised in any Building Management System to control demand-based ventilation.

FEATURES
- ABC calibration for accurate CO₂ measurement
- Solar power offers a maintenance free solution
- Simple and fast installation
- Ideal for school applications

Part code	Description
RF-LW-THLC-S	LoRaWAN Solar Air Quality Sensor

Smart Sensing

Data sheets online: www.sontay.com

Sontay®

INDOOR ENVIRONMENTAL SENSORS

RF-LW-THVB   LoRaWAN Wireless Indoor Environment Sensors

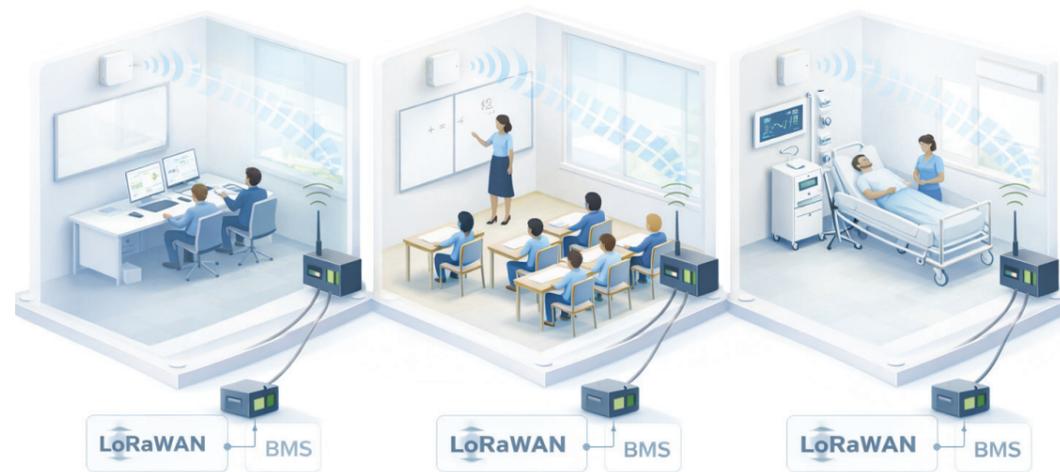| Part code	Description
RF-LW-THVB-S	Temperature, Humidity, VOC's, Barometric Pressure
RF-LW-THLVBPM-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressures, Motion (PIR)
RF-LW-THLVBC-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO_2
RF-LW-THLVBCM-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO_2, Motion (PIR)
RF-LS14500-S2	2 x Lithium AA-size battery (>3 Years)

3+ Year Battery Life

Part code	Description
RF-LW-THLVBS-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, Sound (dBA)
RF-LW-THLVBMS-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, Motion (PIR), Sound (dBA)
RF-LW-THLVBCS-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure, CO_2, Sound (dBA)
RF-LW-THLVBCMS-S	Temperature, Humidity, Light Level (LUX), VOC's, Barometric Pressure CO_2, Motion (PIR), Sound (dBA)
RF-LS14500-S2	Up to 4 x Lithium AA-size battery OR 2 pole Molex push button connector 12-24V DC (>3 Years)

FEATURES
- Multiple sensor options
- Built in USB port for power and configuration
- Battery or mains powered
- Long-range communication via LoRaWAN wireless technology
- Integration with any BMS through BACnet or Modbus through gateway

Wireless sensors measuring up to 8 air quality / environmental parameters. The sound monitoring sensors also have additional battery capacity, all the sensors can be externally powered if desired.

Leading edge digital sensors to provide high accuracy, long life, drift free readings without further calibration. The optical CO_2 sensor provides high accuracy readings with a sensor life of greater than 15 years.

LoRaWAN

easy integration through GATEWAY

Modbus

BACnet

LoRaWAN · BMS   LoRaWAN · BMS   LoRaWAN · BMS

Smart Sensing

Data sheets online: www.sontay.com

METERING

RF-LW-PULSE   LoRaWAN Pulse Counter

3+ Year Battery Life

This handy device counts meter pulses on three channels and transmits the accumulated data to the cloud using LoRaWAN wireless where it can be displayed and analysed. It is the easiest, fastest way to access your energy data in real time.

There are three S0 standard pulse inputs to collect data from electricity, gas, water, heat or any other pulse enabled meter. A Change-of-State feature can be optionally enabled. This will send a radio packet when any of the inputs change from open to closed, or closed to open.

FEATURES
- 3 channel meter pulse counting
- Change of state monitoring
- SO standard pulse duration counting
- Battery-powered, life span of 3+ years
- Simple, quick installation
- Easy configuration & and monitoring via USB
- Signal strength, battery level and meter pulse indicator 3-channel

Part code	Description
RF-LW-PULSE	Pulse Counter LoRaWAN
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

RF-LW-HARVY2   LoRaWAN Current sensor with 4 inputs

3+ Year Battery Life

Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply networks.

FEATURES
- Convenient metering of three-phase RMS currents from: electrical mains, sub-distribution boards, and/or directly from the machines
- Four independent inputs for clamp-on current transformers and voltage transformer
- CT &VC Used together can monitor: active power, power factor, reactive power, apparent power, mains voltage, mains frequency
- No external power supply or battery required (energy harvesting)
- Easy configuration via USB-C

Part code	Description
RF–LW–HARVY2	LoRaWAN Current sensor with 4 inputs
RF–LW–HARVY2–CT150	Current Transformer 150A Max 50mm
RF–LW–HARVY2–CT300	Current Transformer 300A Max 150mm
RF–LW–HARVY2–CT500	Current Transformer 500A Max 300mm
RF–LW–HARVY2–CT80	Current Transformer 80A Max 25mm
RF–LW–HARVY2–VC	Voltage converter

Smart Sensing

Data sheets online: www.sontay.com

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RF-LW-HM — LoRaWAN Heat Meters

The RF-LW-HM range of heat meters deliver accurate, reliable measurement of thermal energy consumption for residential, commercial and district heating applications. Using advanced ultrasonic and mechanical technologies, these meters ensure fair billing, long-term stability and low maintenance performance. The RF-LW-HM heat meters integrate seamlessly into modern smart building and energy management systems. Robust construction, flexible installation and MID-approved accuracy make them a trusted solution for precise heat and cooling metering.

FEATURES

- Ultrasonic flow measurement technology for high precision heat, cooling and combined metering, with no moving parts. Or inductive turbine measurement for trustworthy thermal energy calculation.
- LoRaWAN communication enables remote reading and integration with budling management systems.
- Multi digit LCD screens show energy consumption in kWh, MWh, MJ or GJ.

Part code	Description
RF-LW-HM-15-M	Heat Meter BSP DN15 QP1.5 Mechanical Battery Powered
RF-LW-HM-20-M	Heat Meter BSP DN20 QP2.5 Mechanical Battery Powered
RF-LW-HM-15-UC	Heat Meter BSP DN15 QP1.5 Ultrasonic Composite Battery Powered
RF-LW-HM-20-UC	Heat Meter BSP DN20 QP2.5 Ultrasonic Composite Battery Powered
RF-LW-HM-15-UB	Heat Meter BSP DN15 QP1.5 Ultrasonic Brass Battery Powered

Part code	Description
RF-LW-HM-20-UB	Heat Meter BSP DN20 QP2.5 Ultrasonic Brass Battery Powered
RF-LW-HM-25-UB	Heat Meter BSP DN25 QP3.5 Ultrasonic Brass Battery Powered
RF-LW-HM-15-UB-C	Heat Meter BSP DN15 QP1.5 Ultrasonic Brass Battery Powered Commercial
RF-LW-HM-20-UB-C	Heat Meter BSP DN20 QP2.5 Ultrasonic Brass Battery Powered Commercial
RF-LW-HM-25-UB-C	Heat Meter BSP DN25 QP3.5 Ultrasonic Brass Battery Powered Commercial

RF–LW–IO–16A — LoRaWAN Switch and Power Meter

The device is small enough to fit behind most wall switches and power equipment, enabling you to automate, track, and control your electrical appliances. This is possible as the device has 4 terminals L, N, N, Lout, and it works in a way that connects and disconnects Lout from L. With an overheating protection mechanism, it is ideal for rapid building retrofitting.

FEATURES

- Compact Design
- Firmware Upgrades Over The Air
- Class C End-device
- Safety First Design
- Internal temperature sensor and overheating protection

Part code	Description
RF–LW–IO-16A	16A Switch & Power Meter LoRaWAN

RF-LW-IO-16ADS — LoRaWAN Dry Switch

The device is small enough to fit behind most wall switches and power equipment, enabling you to automate, track, and control your electrical appliances. The device has 4 terminals L, N, I, O, connecting and disconnecting I from O. The 16A Dry Switch features an overheating protection mechanism, operates in LoRaWAN Class C and supports firmware upgrades over the air.

FEATURES

- Compact Design
- Simply acts as an On/Off switch
- Real time control with schedule set ups
- FUOTA (Firmware Upgrade Over The Air)
- 16A at 240VAC and 10A at 30VDC
- Internal temperature sensor and overheating protection

Part code	Description
RF–LW–IO-16ADS	16A Switch & Power Meter LoRaWAN

Data sheets online: www.sontay.com

RF-LW-WF — LoRaWAN clamp on flow meter

10 Year Battery Life

The RF-LW-WF is designed to simplify water management for property owners and facility managers. Its seamless compatibility with leading IoT platforms ensures you can integrate advanced water monitoring into your existing systems without disruption or costly upgrades. From water data collection, to leak alerts the RF-LW-WF makes managing water systems easier than ever.

FEATURES

- Non-invasive clamp on installation - no pipe cutting, welding or plumbing required
- Wireless connectivity via LoRaWAN and or M-bus for remote monitoring and data collection
- Long battery life (up to 10 years) and minimal maintenance required
- Built in leak detection.

Part code	Description
RF–LW–WF–C	LoRaWAN clamp on flow meter for copper piping
RF–LW–WF–P	LoRaWAN clamp on flow meter for plastic piping

RF-LW-WM — Wireless Water Meters

The product range includes digital SMART water meters, turbine (velocity) type single and multi-jet water meters with mechanical or magnetic transmission, Woltmann meters, with direct reading or complete with integrated modules for the remote transmission of the consumption data.

Part code	Description
RF–LW–WM–15–DSC	Water Meter BSP DN15 Q3 2.5m³/h Digital Single Jet Cold
RF–LW–WM–15–DSH	Water Meter BSP DN15 2.5m³/h Digital Single Jet Hot
RF–LW–WM–15–MMH	Water Meter BSP DN15 Q3 2.5m³/h Mechanical Multi Jet Hot
RF–LW–WM–15–MSH	Water Meter BSP DN15 Q3 2.5m³/h Mechanical Single Jet Hot
RF–LW–WM–20–DMC	Water Meter BSP DN20 Q3 4m³/h Digital Multi Jet Cold
RF–LW–WM–20–DSC	Water Meter BSP DN20 Q3 4m³/h Digital Single Jet Cold
RF–LW–WM–20–DSH	Water Meter BSP DN20 Q3 4m³/h Digital Single Jet Hot
RF–LW–WM–20–MMC	Water Meter BSP DN20 Q3 4m³/h Mechanical Multi Jet Cold
RF–LW–WM–20–MMH	Water Meter BSP DN20 Q3 4m³/h Mechanical Multi Jet Hot
RF–LW–WM–20–MSC	Water Meter BSP DN20 Q3 4m³/h Mechanical Single Jet Cold
RF–LW–WM–20–MSH	Water Meter BSP DN20 Q3 4m³/h Mechanical Single Jet Hot
RF–LW–WM–25–DMC	Water Meter BSP DN25 Q3 6.3m³/h Digital Multi Jet Cold
RF–LW–WM–25–MMC	Water Meter BSP DN25 Q3 6.3m³/h Mechanical Multi Jet Cold
RF–LW–WM–32–DMC	Water Meter BSP DN32 Q3 10m³/h Digital Multi Jet Cold
RF–LW–WM–32–MMC	Water Meter BSP DN32 Q3 10m³/h Mechanical Multi Jet Cold
RF–LW–WM–40–MMC	Water Meter BSP DN40 Q3 16m³/h Mechanical Multi Jet Cold
RF–LW–WM–F50–M–H	Water Meter PN16 Flanged DN50 Q3 40m³/h Hot
RF–LW–WM–F65–M–H	Water Meter PN16 Flanged DN65 Q3 63m³/h Hot

FEATURES

- Precise single-jet, multi jet and ultrasonic measurement technologies available, suitable for wide range of applications.
- 360° rotating dials easy to read from any angle during installation or maintenance.
- Wireless communication featuring LoRaWAN and M-BUS for remote connectivity.
- IP68 protection rating offers excellent resistance against dust, dirt and temporary submersion.

Data sheets online: www.sontay.com

Sontay®

LoRaWAN

LEAK DETECTION

RF-LW LoRaWAN Water Control

FLOOD SENSOR LORAWAN

WATER SHUT-OFF VALVE LORAWAN

10 Year Battery Life

12 Year Battery Life

Flood Sensor is a discreet device designed to quickly detect floods as they happen and within seconds sends notifications to your system as well as activate an audible alarm on the spot. Featuring a temperature sensor, an LED, and a Buzzer, the device enables you to immediately respond when a flood occurs.

T-Valve is LoRaWAN 1.0.1, a class A device that allows you to control the water flow remotely and prevents major water damage. With 3/4" and 1 1/4" versions, respectively DN20 and DN32, the device fits all standard plumbing systems and is suited to all building types. Equipped with buttons, LEDs, a Buzzer, and device status indicators you can also interact with it manually along with the core remote control functions.

FEATURES
- 10 year battery life
- Works with T-Valve to shut off water supply on detection of a flood

FEATURES
- 12 year battery life
- Drinking water certified
- Support legionella prevention

Part code	Description
RF-LW-WD-FLOOD	Flood Sensor LoRaWAN
Power Requirement	CR123A (10 Years)

Part code	Description
RF-LW-VZ	Water Shut-Off Valve LoRaWAN
Power Requirement	LiSO Cl2 ER26500 3.6V 9000mAh (Included) (12 Years)

Smart Sensing

Data sheets online: www.sontay.com

Data sheets online: www.sontay.com

Smart Sensing

RF-LW-WD LoRaWAN Water Detection

3+ Year Battery Life

Detects the presence of water leaks, flooding and condensation using water detection cable. Leakage or moisture is detected over the entire length of the cable, various cable lengths are available to facilitate leakage sensing over a wide area. When a leak is detected, a message is transmitted using long range LoRa wireless to generate an alarm so early action can be taken.

Part code	Description
RF-LW-WD-AM-3M	Water leak detector plus 3 metre detection cable plus 1m leader.
RF-LW-WD-AM-1M	Water leak detector plus 1 metre detection cable plus 0.5m leader
RF-LW-WD-AM-5M	Water leak detector plus 5 metre detection cable plus 0.5m leader
RF-LW-WD-AM-10M	Water leak detector plus 10 metre detection cable plus 0.5m leader
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

PRESSURE

RF-LW-DP1 LoRaWAN Pressure Sensing

3+ Year Battery Life

The RF-LW-DP1 measures differential pressure in the range of 0 to 5000Pa with industry leading accuracy of 0.1% of selected range. Our unique Multi-Range digital sensor allows multiple pressure ranges to be selected automatically. Differential Pressure data is transmitted using long range LoRa wireless where the device data can be displayed and analysed to reveal operational performance and generate alerts.

Part code	Description
RF-LW-DP1	Status with Differential Pressure 0 to 5000Pa
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

RF-LW-GP1 LoRaWAN Gauge Pressure Sensor

3+ Year Battery Life

Our RF-LW-GP1 measures gauge pressure with industry leading accuracy. It is a vital tool in areas where the need to monitor liquid or gas pressure is paramount, such as in laboratories and medical applications and BMS applications.

The one-piece 17-4ph stainless-steel construction is suitable for use in environments where material corrosion may occur such as contaminated water, steam, and mildly corrosive fluids.

Part code	Description
RF-LW-GP1	Status with Gauge Pressure 0 to 10 Bar
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

RF-LW-AV Air Velocity

3+ Year Battery Life

Our RF-LW-AV range measure air velocity in the range of 0 to 40m/s with industry leading accuracy of 0.1% of selected range. A unique Multi-Range digital sensor allows multiple ranges to be selected automatically or remotely. These sensors can be used to ensure that recommended air flow rates for public buildings and industrial plant are achieved.

Part code	Description
RF-LW-AV-100	Status with Air Flow. 100mm Air Velocity Probe
RF-LW-AV-200	Status with Air Flow. 200mm Air Velocity Probe
RF-LW-AV-300	Status with Air Flow. 300mm Air Velocity Probe
RF-LW-AV-400	Status with Air Flow. 400mm Air Velocity Probe
RF-LW-AV-500	Status with Air Flow. 500mm Air Velocity Probe
RF-LW-AV-600	Status with Air Flow. 600mm Air Velocity Probe
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

Sontay®

AUTOMATION

RF-LW — LoRaWAN Automation Devices

MULTI-PURPOSE BUTTON LORAWAN

OPEN/CLOSE SENSOR LORAWAN

10 Year Battery Life

10 Year Battery Life

The Multi-Purpose Button LoRaWAN allows you to control various smart functions with a single press. Through the app, you can configure the button to trigger climate control actions, like adjusting heating or cooling systems. For example, pressing the button can activate a pre-set temperature or switch the system to energy-saving mode when you leave. This makes managing your home's climate simple and efficient.

The Open/Close Sensor LoRaWAN helps monitor the opening and closing of doors or windows, which can be controlled via an app. The app lets you set up notifications and integrates with climate control systems to automatically adjust heating or cooling when a window or door is opened. This smart function helps maintain an efficient climate by reducing energy waste.

LoRaWAN Multipurpose Button is a simple but versatile device with many applications. Featuring a single button with 3 types of clicks and a temperature sensor, there are unlimited configuration options across industries and end customers. With a 10 year battery life, it has endless possibilities.

The Open/Close window and door detector can detect even slightly opened windows and doors, increasing the security and protection of any building, contributing to energy management and automation.

APPLICATIONS
- Hospital or nursing home call button
- Restaurants to call staff
- Hotels to request services

FEATURES
- Built in temperature sensor to support control of room temperature
- 10 year battery life
- Tool free installation

Part code	Description
RF-LW-BTN	Multi-Purpose Button LoRaWAN
Power Requirement	ER10280 (Included) (10 Years)

Part code	Description
RF-LW-OC	Open/Close Sensor LoRaWAN
Power Requirement	ER14250 or 1/2 AA (Included) (10 Years)

RF-LW-VC-IN — Active Output Sensor Convertor

This clever device measures Voltage (0-10V) or Current (0-20mA) and transmits the reading using long range LoRa wireless where the device data can be displayed and analysed. Any sensor or instrument with a 0-10V or 4-20mA signal can be instantly converted into a wireless device so that the information can be easily remotely acquired.

3+ Year Battery Life

Part code	Description
RF-LW-VC-IN	Status with Voltage (0-10V) or Current (0-20mA)
RF-LS14500-S2	2 X Lithium AA size battery (3+ Years)

RF-LW-TRV — LoRaWAN TRV Smart Radiator Thermostat

Vicki LoRaWAN® Smart Radiator Thermostat is tailored specifically to improve energy efficiency, achieve substantial cost savings and reduce the CO_2 footprint within all types of buildings through its remote temperature control capabilities and innovative data analytics.

With seamless integration into various BMS systems, through BACnet or Modbus protocols via a gateway, installation and control is effortless.

FEATURES
- Simple and fast installation
- 10 year battery life
- Remotely or manually adjust temperature in any room
- Temporarily stops heating when an open window is detected

10 Year Battery Life

Part code	Description
RF-LW-TRV-RUGGED	Thermostatic radiator valve
RF-LW-TRV-CALEFFI	Adapter for TRV to Cale i (Caleffi)
RF-LW-TRV-GIA	Adapter for TRV to Giacomini
RF-LW-TRV-M28	Adapter for TRV to M28
RF-LW-TRV-ORAS-STA	Adapter for TRV to ORAS Stabilla M28
RF-LW-TRV-ORAS-TER	Adapter for TRV to ORAS Thermostar M26
RF-LW-TRV-RA	Adapter for TRV to RA
RF-LW-TRV-RAV	Adapter for TRV to RAV
RF-LW-TRV-RAVL	Adapter for TRV to RAVL

LoRaWAN → easy integration through GATEWAY → Modbus / BACnet

GATEWAYS & BRIDGES

RF-LW-MODB — LoRaWAN ModBus Bridge

Externally powered

Our Modbus Bridge instantly converts wired Modbus devices such as meters, PLC's and sensors to LoRaWAN long range wireless. Any instrument, device or sensor with a wired Modbus RS485 interface can be read and converted to a LoRaWAN wireless device.

Part code	Description
RF-LW-MODB	Modbus Bridge - 32 Data Points
Power Requirement	Externally powered 12-24V DC (120mA max.)

Smart Sensing

Data sheets online: www.sontay.com

Gateways

Gateways link LoRaWAN® sensors to IP networks, forming the communication backbone of the system.

RF-LW-HUB — Indoor LoRaWAN 8-Channel Gateway

LoRa® Technology for Building Management Systems with BACnet™ Connectivity

Our Indoor LoRaWAN 8-Channel Gateway, powered by the mPower™ Edge Intelligence OS, serves as a gateway or access point, enabling seamless connectivity between LoRaWAN® IoT devices and network or cloud infrastructures.

This gateway offers robust in-building wireless coverage with various connectivity options, including Ethernet and optional 4G LTE Backhaul. It supports the LoRaWAN protocol, ensuring flexible integration depending on your specific model and configuration.

Part code	Description
RF-LW-HUB-E-BAC	Ethernet Only mPower/BACnet Programmable Access Point, 8-channel, 868 MHz w/external LoRa antenna and EU/GB Accessory Kit
RF-LW-HUB-EC-BAC	LTE Category 4 mPower/BACnet Programmable Access Point, 8-channel, 868 MHz w/external LoRa antenna and EU/GB Accessory Kit
RF-LW-HUB-E	Ethernet Only mPower Programmable Access Point w/external LoRa antenna and EU/GB Accessory Kit
RF-LW-HUB-EC	LTE Cat 4 mPower Programmable Access Point 8-channel, 868 MHz w/external LoRa antenna and EU/GB Accessory Kit
RF-LW-HUB-E-BAC-GL	Ethernet Only mPower/BACnet Programmable Access Point, 8-channel, 915 MHz w/external LoRa antenna and Global Accessory Kit
RF-LW-HUB-E-USAU	Ethernet Only mPower Programmable Access Point w/external LoRa antenna and US/AUS Accessory kit
RF-LW-HUB-EC-AU	LTE Cat 1 mPower Programmable Access Point 8-channel, AU915 MHz w/external LoRa antenna and AU Accessory Kit (Australia)

MODEL OPTIONS

Ethernet Only Models	· RF-LW-HUB-E-BAC · RF-LW-HUB-E · RF-LW-HUB-E-BAC-GL · RF-LW-HUB-E-USAU
LTE Models	· RF-LW-HUB-EC-BAC · RF-LW-HUB-EC · RF-LW-HUB-EC-AU
Accessory Kits	Include power supply, Ethernet cable, mounting bracket, and region-specific power blades, antennas.

INTERFACES

DC Power	5VDC, 2.5mm barrel power jack
Ethernet	RJ-45 (10/100)
SIM Card Holder	3FF Micro SIM
Reset Button	Recessed switch
LoRa Antenna	Female Reverse Polarity SMA (on select models)

HARDWARE SPECIFICATIONS

Processor	Cortex A7 with 512 MB SDRAM and 512 MB NAND flash memory, 568 MHz
Backhaul Options	Ethernet 10/100 BaseT (with LTE Category 4 for select models)
LoRaWAN	SX1303 baseband processor
LED Indicators	POWER, STATUS, LORA, CELL (select models)
Power	5 VDC, 2.5A
Dimensions	165 x 135 x 36 mm
Weight	1.5 kg
Chassis Type	PC-ABS
Mounting	Desk or wall mount
Operating Temperature	0°C to +70°C
Storage Temperature	-40°C to +85°C
Humidity	20% to 90%, non-condensing

QUALITY & COMPLIANCE

Certified Regions	
LoRaWAN	Certified in Australia/New Zealand, Canada, European Union, United Kingdom & United States.
Cellular	Certified in Canada, European Union, United Kingdom & United States.
EMC Compliance	
Regions Covered	Australia/New Zealand, Canada, European Union, United Kingdom & United States.
Standards	Compliance with standards such as CISPR 32, EN 301-489, and FCC Part 15.
LoRaWAN Specifications	
Sensitivity	-141dBm
Frequency Bands	· US915, AU915, AS923: 902-928 MHz, up to 30 dBm EIRP · EU868, IN868: 863-870 MHz, up to 27 dBm EIRP
Channel Plan	8 channels with support for multiple spreading factors (SF5-SF12)

CELLULAR WAN SPECIFICATIONS

Technology	4G LTE Category 4, with 3G HSPA+ fallback
Frequency Bands	
North America	4G (B2, B4, B5, B12, B13), 3G (B2, B4, B5)
Europe/UK	4G (B1, B3, B7, B8, B20, B28A), 3G (B1, B8), 2G (B3, B8)
Data Rates	Up to 150 Mbps downlink, 50 Mbps uplink
SIM Card	3FF Micro SIM
MNO Approvals	PTCRB, AT&T, Verizon, GCF, and others

SOFTWARE SPECIFICATIONS

Operating System	mPower Edge Intelligence (Yocto-based Linux)
Languages Supported	Python, C, C++, JavaScript, Node.js
Security Features	Secure Boot, signed firmware, VPN support, MAC filtering, firewall rules, user access control
Management Tools	MultiTech DeviceHQ, SNMP, LDAP, configuration restore
Connectivity	LoRa Network Server, LoRa Packet Forwarder, LoRaWAN MQTT application

Data sheets online: www.sontay.com

Smart Sensing

Gateway's

SORA Gateways unify LoRaWAN sensors and building systems, enabling secure integration and scalable remote oversight.

SORA Gateway Bridge

Simple, scalable integration of LoRaWAN devices into any BMS.
The Sontay Bridge delivers seamless, open-protocol integration of Sontay's LoRaWAN sensors into any modern BMS. Designed for rapid deployment and high interoperability, the Bridge converts all connected LoRaWAN points into BACnet/IP, Modbus TCP or MQTT, making it an ideal solution for retrofits, upgrades, and multi-building estates. With local data processing, advanced security, and zero ongoing licence costs, the Sontay Bridge provides a robust foundation for long-term IoT and BMS expansion.

EFFORTLESS BMS INTEGRATION

• The Bridge connects LoRaWAN sensors directly into your BMS using BACnet/IP, Modbus TCP or MQTT. All datapoints are auto-mapped and presented cleanly, reducing engineering time and allowing LoRaWAN devices to slot straight into existing control architectures with minimal effort.

LONG-RANGE WIRELESS COVERAGE

• When paired with Sontay LoRaWAN sensors, the Bridge provides strong indoor penetration across multi-floor and multi-block estates. LoRaWAN's long-range performance overcomes solid ceilings, risers, basements and extended layouts, making it ideal for offices, healthcare, education, heritage buildings and live sites.

LOW-POWER, LOW-MAINTENANCE SENSORS

• LoRaWAN devices operate on ultra-low power, enabling multi-year battery life. This provides a maintenance-light sensing network across HVAC, IAQ, occupancy, leak detection, metering and environmental monitoring. Fewer callouts, less disruption, and lower lifecycle cost.

SCALABLE AND FLEXIBLE ARCHITECTURE

• Each Sontay Bridge can handle thousands of datapoints and can be expanded easily as building needs evolve. New sensors can be added in seconds, and the network grows without additional cabling or structural changes. Perfect for phased rollouts, portfolio-wide adoption and future IoT requirements.

KEY BENEFITS

The Bridge provides enterprise-grade security:

• TLS encryption for all device-to-cloud communication
• No open inbound ports on the customer network
• Certificate-based authentication
• AWS-hosted, fully managed platform
• Compliance with EU RED V2 cybersecurity requirements
• GSM modem can be disabled on request

This ensures safe adoption of wireless technology within corporate IT and operational networks.

Part code	Description
RF-LW-HUB-EU868-100	SORA Hub 100 Points European Version
RF-LW-HUB-EU868-5000	SORA Hub 5000 Points European Version
Aerial extension for SORA Hub	
RF-LW-HUB-ANT-868	Antenna Extension for superior range & coverage
RF-AERIAL-PM0.75	Aerial Extension c/w Bulk Head Fitting 0.75 Meter
RF-AERIAL-PM2	Aerial Extension c/w Bulk Head Fitting 2 Meter
RF-AERIAL-PM5	Aerial Extension c/w Bulk Head Fitting 5 Meter

SORA Tower

A cloud-enabled, light-BMS platform for scalable LoRaWAN and multi-protocol integration.

The Sontay Tower is a powerful, cloud-connected device that brings LoRaWAN sensors and building systems together into a single, easy-to-manage environment. Positioned as a light BMS, it offers centralised visibility, remote management, dashboards, alarms and basic automation without the complexity of a full supervisory system. This makes it ideal for estates that need enhanced oversight and IoT capability without undertaking a full BMS upgrade.

With support for BACnet/IP, Modbus TCP and MQTT outputs, the Tower integrates seamlessly with existing control architectures while enabling remote configuration, historical data logging, and multi-building supervision via the Cloud. Its long-range LoRaWAN connectivity makes it well suited to distributed estates, campuses and hard-to-reach areas where wiring is impractical.

FEATURES

• The Light-BMS functionality – dashboards, alarms, schedules and automation delivered via the cloud.
• Unified integration – converts LoRaWAN sensor data into BACnet/IP, Modbus TCP or MQTT.
• Scalable architecture – supports high device counts across larger or multi-building estates.
• Remote oversight – configure, monitor and diagnose sites centrally with minimal engineer visits.
• Secure and managed – encrypted communication, AWS-hosted platform, certificate authentication.
• Low-disruption deployment – wireless sensing eliminates cabling, containment and invasive works.

Part code	Description
RF-LW-TOWER-1YRSUB	SORA Hub 1 year 4G data subscription
RF-LW-TOWER-3YRSUB	SORA Hub 3 year 4G data subscription
RF-LW-TOWER-5YRSUB	SORA Hub 5 year 4G data subscription
RF-LW-TOWEREU868-100	SORA Hub 100 points EU + 1 year subscription
RF-LW-TOWEREU868-5000	SORA Hub 5000 points EU + 1 year subscription

Data sheets online: www.sontay.com

Smart Sensing

Sontay®

smart

smart

SMART COMMUNICATION SENSORS

BACnet
Modbus

- Save time and cost on installation through smart connectivity.
- Our Smart Communications sensors offer total environmental sensing in one single space sensors.
- Installation of all sensors is over one twisted pair cable and configuration is simple.
- All option outputs are available via BACnet MS/TP or Modbus RTU.

SC-S	Smart Communication Space Sensor

EXAMPLES

| -SP, MS & FS | -CO₂ | -Light Level & PIR Sensor | -SP |

Space Sensors

SPECIFICATION

Supply voltage	24Vac/dc ±10%	
Communication	RS-485 (EIA-485) Protocol selectable via DIP switch	
BACnet MS/TP	9k6 to 78k8bps or auto baud rate detection	
Modbus RTU	9k6 to 57k6bps Selectable parity and stop bit configuration	
Measurement Ranges		
	T:	-20°C to +110 units (°C or °F), 5 pre-set ranges plus one user configurable range
	RH:	0 to 100% RH
	CO_2:	0 to 2,000 or 5,000ppm CO_2 (user selectable)
	CO:	0 to 500ppm CO
	IAQ:	0 to 1,000ppb TVOC
	LL:	0 to 10,000lux
	PIR:	PIR occupancy status, off delay 0-900 seconds user configurable
User Interfaces	SP:	Set point adjuster 0-100%, user configurable
	FS:	Fan speed slider 5-stages Off, Lo, Med, Hi, Auto
	MS:	Momentary switch button Active/Inactive
	LCD Display:	Showing T, RH, CO2 or IAQ (if fitted) measured variable
	LED:	"Traffic light" LED user configurable
Input options	AI:	Analogue Input 0-10Vdc linear or NTC thermistor (10K3A1) sensor
	DI:	VFC or pulse count, user selectable
Output options	AO:	3x Analogue Output 0-10V, configurable
	DO:	2x Digital Output, 24Vac Triac
Environmental	Housing:	0 to +50°C 0 to 95% non-condensing
Housing	Material:	ABS (flame retardant)
	Colour:	Polished white finish
	Dimensions:	115 x 85 x 30mm
	Protection:	IP30

SC	Smart Communication Plant Sensor

EXAMPLES

Humidity

| Plant | Immersion | Outside Air | Outside | Duct | Plant |

Plant Sensors

SPECIFICATION

Supply voltage	24Vac/dc ±10%	
Communication	RS-485 (EIA-485) Protocol selectable via DIP switch	
BACnet MS/TP	9k6 to 78k8bps or auto baud rate detection	
Modbus RTU	9k6 to 57k6bps Selectable parity and stop bit configuration	
Measurement Ranges		
	Temp.:	-20°C to +110 units (°C or °F) 5 pre-set ranges plus one user configurable range
	RH:	0 to 100% RH
	CO_2:	0 to 2,000 or 5,000ppm CO_2 (user selectable)
	CO:	0 to 500ppm CO
	IAQ:	0 to 1,000ppb TVOC
	LL:	0 to 10,000lux
	PIR:	PIR occupancy status, off delay 0-900 seconds user configurable
User Interfaces	LCD Display:	Showing T, RH, CO2 or IAQ (if fitted) measured variable
	LED:	"Traffic light" LED user configurable for any sensing variable or network value
Input options	AI:	Analogue Input 0-10Vdc linear or NTC thermistor (10K3A1) sensor
	DI:	VFC or pulse count, user selectable
Output options	AO:	3x Analogue Output 0-10V, configurable
	DO:	2x Digital Output, 24Vac Triac
Environmental	Housing:	-30 to +60°C 0 to 95% non-condensing
	Media:	-10 to +50°C
Housing	Material:	PC (Halogen Free Flame Retardant, UV stabilized)
	Colour:	Basalt grey
	Dimensions:	125 x 105 x 85mm
	Protection:	IP65

SPACE SENSOR

Part code							Description
SC - S -	x	x	x	x	x	x	**Space Temperature**
							Configuration Sensing Options RH/CO₂
	0						- none
	1						- RH
	2						- CO_2
	3						- CO_2 and Traffic Light LED
	4						- RH and CO_2
	5						- RH, CO_2 and Traffic Light LED
							Configuration Sensing Options CO/IAQ
		0					- none
		1					- CO
		2					- IAQ
		3					- CO and IAQ
							Configuration User Indication
			0				- none
			1				- LCD Display
			2				- Light Level Sensor
			3				- PIR Sensor
			4				- Light Level and PIR Sensor
							Configuration Interface Options
				0			- none
				1			- SP
				2			- MS
				4			- SP and MS
				5			- SP and FS
				6			- FS and MS
				7			- SP, MS and FS
							Configuration Digital Outputs
					0		- none
					1		- 2x DO
							Configuration Analogue Outputs
						0	- none
						1	- 3x AO

DUCT SENSOR

Part code							Description
SC - D -	x	x	x	0	x	x	**Duct Temperature and RH**
							Configuration Sensing Options CO₂
	0						- none
	1						- CO_2
	2						- CO_2 and Traffic Light LED
							Configuration Sensing Options CO/IAQ
		0					- none
		1					- CO
		2					- IAQ
		3					- CO and IAQ
							Configuration User Indication
			0				- none
			1				- LCD Display
							Configuration Digital Outputs
					0		- none
					1		- 2x DO
							Configuration Analogue Outputs
						0	- none
						1	- 3x AO

IMMERSION / DUCT TEMPERATURE

Part code							Description
SC - I -	0	0	x	0	x	x	**Immersion/Duct Temperature**
							Configuration User Indication
			0				- none
			1				- LCD Display
							Configuration Digital Outputs
					0		- none
					1		- 2x DO
							Configuration Analogue Outputs
						0	- none
						1	- 3x AO

PLANT SENSOR

Part code							Description
SC - W -	x	0	x	0	x	x	**Plant Temperature**
							Configuration Sensing Options RH
	0						- none
	1						- RH
							Configuration User Indication
			0				- none
			1				- LCD Display
			2				- Light Level Sensor
			3				- PIR Sensor
			4				- Light Level and PIR Sensor
							Configuration Digital Outputs
					0		- none
					1		- 2x DO
							Configuration Analogue Outputs
						0	- none
						1	- 3x AO

OUTSIDE WALL SENSOR (RAD SHIELD)

Part code							Description
SC - O -	x	0	x	0	x	x	**Outside Temperature (Radiation Shield)**
							Configuration Sensing RH
	0						- none
	1						- RH
							Configuration User Indication
			0				- none
			1				- LCD Display
			2				- Light Level Sensor *
			3				- PIR sensor *
			4				- Light Level and PIR Sensor *
							Configuration Digital Outputs
					0		- none
					1		- 2x DO
							Configuration Analogue Outputs
						0	- none
						1	- 3x AO

Note: Not available for RH configurations.

Other Sensor types are available, please contact us.

Data sheets online: www.sontay.com

SC-S Smart Communication Space Sensor

SC Smart Communication Plant Sensor

Smart Sensing

Sontay®

smart

smart

PA-DPT-MOD   Air DP Sensor

The PA-DPT-MOD differential pressure transmitter is ideal for measuring filter conditions, as well as many other applications in ventilation/air conditioning systems in buildings, laboratory's and clean rooms (air and non-corrosive gases).

FEATURES

- Duct fixing kit included
- Snap-fit cover

SPECIFICATION

Power Supply	24Vac/dc ±10%
Measurement ranges	-250 to 2500Pa
Accuracy	<125Pa = 1% + ±2Pa
	>125Pa = 1% + ±Pa
Pressure Connections	Push fit for 6mm ID tubing
Housing	Material: PC (Halogen Free Flame Retardant, UV stabilized)
	Dimensions: 125 x 105 x 85mm
Environmental	Housing -40°C to 70°C
	0 to 95% RH non-condensing
	Media: -20 to 50°C
Protection	IP65
Weight	300g

Note: A duct fixing kit (DFK) is supplied with the sensor, consisting of 2m and 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.

Part code	Description
PA-DPT-MOD	Air DP 1% Acc -250 to 2500Pa ModBus
Accessories	
DFK	Duct fixing kit
TEE	Tee Piece Air Pressure 6mm Pack of 10
PITOT	Aluminium pitot tube (pair)
PA-TUBE-CLEAR	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	PVC tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	PVC tube 8mm o/d x 1.5mm wall, 30m reel

SC-FS-IOT   Fieldserver BACnet Internet of Things Gateway

The BACnet Internet of Things Gateway offers all you would expect from a high end Explorer product and more. It not only automatically discovers BACnet IP and BACnet MS/TP networks, but with Monitor View and Historian features, device data points can be precisely tracked and logged for analysis. Additionally it also acts as a Wifi Access Point for remote access from any mobile device without user restrictions. Cellular data (SIM card required) is an option.

SPECIFICATION

Power	12-24Vdc, 240mA at 12V
Communication	Serial RS-485, galvanic isolation
	Ethernet: 10/100BaseT, MDIX, DHCP
	Wifi: 802.11 b/g/n
	Cellular: 3G and GPS
Ambient	Temperature -40 to +75°C
	Humidity 5 to 90% RH non condensing
Dimensions	102 x 68 x 28mm
Weight	200g

FEATURES

- Eliminate all custom engineering development time and expense
- Register gateways through SMC's tenant based IoT Cloud Platform
- Monitor and control devices
- Generate cloud-based notifications/alarms via SMS and/or emails to keep users informed as soon as events occur
- Retrieve 30 days of data stored in the gateway by viewing the dashboard or download as csv, JSON or RESTful API

Part code	Description
SC-FS-IOT-BAC	BACnet Internet of Things Gateway
SC-FS-IOT-BAC-W	BACnet Internet of Things Gateway (WiFi)
SC-FS-IOT-BAC-C	BACnet Internet of Things Gateway (WiFi and cellular)

Smart Sensing

Data sheets online: www.sontay.com

SC-FS-ROUTER-BAC   Fieldserver BACnet Router

- Routing between BACnet MS/TP (RS-485) and BACnet IP (Ethernet)
- Available in single port (32 devices) or dual port (64 devices).
- Easy installation with DeviceFind™, one page configuration via webbrowser and device discovery button
- SMC Cloud connects your device to the cloud, allowing remote access for diagnostics, monitoring, alarming & configuration
- Wifi connectivity (-BACW) and BACnet Explorer for easy commissioning

SPECIFICATION

Power	9-30Vdc or 12-24Vac, 240mA at 12V
	12-24Vdc, 240mA at 12V (-BACW)
Ambient	Temperature -40 to +75°C
	Relative Humidity 5 to 90% RH non condensing
Communication	Serial RS-485, galvanic isolation
	Baud rate 4k8, 9k6, 19k2, 38k4, 57k6, 115k2
	Ethernet: 10/100BaseT, MDIX, DHCP
	Wifi (-BACW) only: 802.11 b/g/n
Dimensions	115 x 74 x 41mm
	102 x 68 x 28mm
Weight	200g

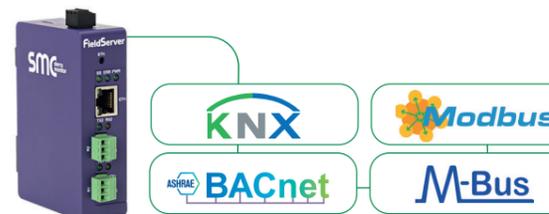| Part code	Description
SC-FS-ROUTER-BAC2	Fieldserver BACnet Router (Dual Port)
SC-FS-ROUTER-BACW	Fieldserver Wifi BACnet Router (Single Port)

SC-FS-EZ   Fieldserver EZ Gateways into BACnet/Modbus

- **M-Bus:** M-Bus Explorer and Device Profiles App allow each M-Bus device to be auto-discovered, templatised and presented to quickly configure new M-Bus devices. This makes each corresponding M-Bus device into a virtual BACnet device within the EZ Gateway, thereby providing granular visibility and control over each device via BACnet.
- **Modbus:** Supports virtual nodes allowing each Modbus device connected to a single EZ Gateway to be seen as a separate device on the BACnet network. The webinterface is used to configure the local network settings and create profiles for Modbus devices.
- **KNX:** The EZ Gateways KNX interface is compatible with all KNX certified products. Easy data mapping via built in KNX data map graphical user interface and import of XML and ESF files.

SPECIFICATION

Power	9-30Vdc or 12-24Vac.
Ambient	Temperature -40 to +75°C
	Relative Humidity 5 to 90% RH non condensing
Communication	Serial RS-485, galvanic isolation
	Baud rate 4k8, 9k6, 19k2, 38k4, 57k6, 115k2
	Ethernet: 10/100BaseT, MDIX, DHCP
Dimensions	115 x 74 x 41mm
Weight	200g

Part code	Description
SC-FS-EZ1-MBUS-MOD-BAC	M-Bus to Modbus/BACnet 16 devices, 500 points
SC-FS-EZ2-MBUS-MOD-BAC	M-Bus to Modbus/BACnet 32 devices, 1000 points
SC-FS-EZ3-MBUS-MOD-BAC	M-Bus to Modbus/BACnet, 64 devices, 5000 points
SC-FS-EZ3-MOD-BAC	Modbus to BACnet, 500 points
SC-FS-EZ4-MOD-BAC	Modbus to BACnet, 1000 points
SC-FS-EZ1-KNX-BAC	KNX to BACnet, 500 points
SC-FS-EZ2-KNX-BAC	KNX to BACnet, 1000 points

## SC-FS-QS-2x10-F   Quickserver 2xx0 Series Full Function Gateways

- **The Quickserver** is a high performance, fully configurable, cost effective Building and Industrial Automation gateway for integrators to easily interface devices to networks.
- **The Quickserver FS-QS-2XX0-F series:** is available at four different point capacities. Each Quickserver is preloaded with 140 different drivers, such as Modbus, BACnet, SNMP, EtherNet/IP and many more.
- **See our webpage for the complete list. www.sontay.com**

SPECIFICATION

Power	9-30Vdc or 24Vac, 250mA at 12Vdc
Ambient	Temperature: -20 to +70°C
	Relative Humidity: 10-95% non condensing
Communication	2x RS-485, galvanic isolated
	Baud rate: 9k6, 19k2, 34k8, 57k6, 76k8
	Ethernet: 10/100 Base T, MDIX, DHCP
Installation	DIN rail mount
Dimensions	102 x 28 x 68mm
Weight	200g

Part code	Description
SC-FS-QS-2010-F	Quickserver 2xx0 Series Full Function, 250 points
SC-FS-QS-2210-F	Quickserver 2xx0 Series Full Function, 500 points
SC-FS-QS-2310-F	Quickserver 2xx0 Series Full Function, 3000 points
SC-FS-QS-2410-F	Quickserver 2xx0 Series Full Function, 5000 points

Smart Sensing

Data sheets online: www.sontay.com

Sontay®

SC-IO-10x — Smart Remote IO Modules
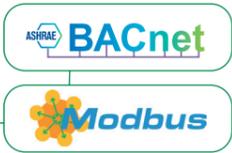
Sontays new range of mini Smart IO Modules offer extension to any BACnet or Modbus network when you require additional inputs & outputs. They allow easy integration of non-intelligent inputs and outputs to BACnet or Modbus network protocols.

FEATURES

- **SC-IO-100:** 8 Universal Inputs
- **SC-IO-102:** 4 Universal Inputs - 2 Binary Outputs - 2 Analogue Outputs
- Manual output override switches on SC-IO-102
- DIN-rail mounting
- LED status for power & inputs/outputs

COMMUNICATION

- Selectable BACnet or Modbus communication
- MAC address set via DIP switch or network
- Copy & broadcast configuration to other SC-IO-10x modules (BACnet only)

SPECIFICATION

Supply voltage	24Vac/dc
Supply current	3VA (175mA @ 24Vac)
Inputs (12 bits resolution)	SC-IO-100: **8 Universal inputs,** 0-10Vdc, Thermistor, on/off or 4-20mA
	SC-IO-102: **4 Universal inputs:** 0-10Vdc, pulsed signal (20mA drive), on/off or 4-20mA
	SC-IO-102: **2 Universal outputs:** 0-10Vdc, pulsed signal (20mA drive) or on/off
	SC-IO-102: **2 Binary outputs:** Normally open/closed or direct/reverse independent common per relay 5A resistive
BACnet	MS/TP, 9600, 19200, 38400 or 57600
	Selectable parity & stop bits
Modbus	RTU slave, 9600, 19200, 38400 or 57600
	Selectable parity & stop bits
	No parity, 2 stop bit
	Even parity, 1 stop bit
	Odd parity, 1 stop bit
Ambient	Temperature: 0 to 50°C
	RH: 5 to 95% RH. non-condensing
Housing	Material: ABS
	Dimensions: 81 x 125 x 58mm
Protection	IP30
Weight	200g

Part code	Description
SC-IO-100	Smart Communication IO Module 8 U/I
SC-IO-102	Smart Communication IO Module 4 U/I, 2 U/O & 2 B/O

SC-IO-24 — Smart I/O Modules
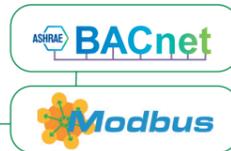
The Sontay Smart Communication I/O-Modules extend your system when your application requires additional inputs and outputs on a physical controller. Integrating 20 IO points to the BMS provides a simple and cost effective expansion of a new or existing controller.

FEATURES

- 8 Universal and 2 Digital Inputs
- 2 Universal, 2 Analogue and 6 Digital Outputs
- Manual override of the outputs, all supEVSised via the network
- Automatic baud rate detection and automatic device instance configuration (BACnet)
- Connects to any Modbus master controller
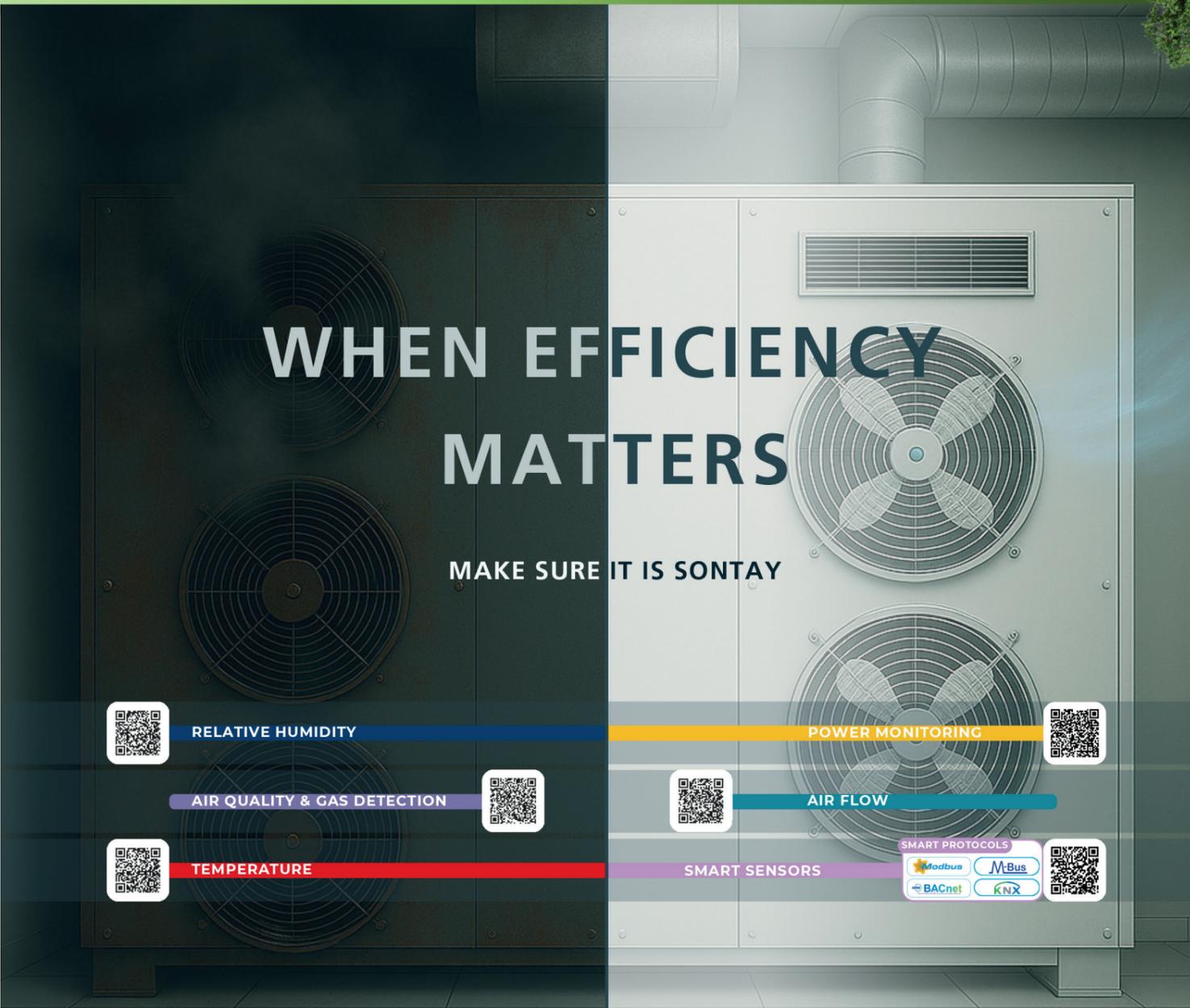- LED for power up and input/output status
- DIN rail mounting

COMMUNICATION

- **Selectable communication protocol via Dip switch:** BACnet MS/TP or Modbus RTU
- Copy & broadcast configuration to other Sontay SC-IO-24 via BACnet
- Selectable MAC address via DIP switches or via network

SPECIFICATION

Supply voltage	24Vac/dc ±10%
Supply current	8VA (0mA @ 24Vac)
Inputs	8 x Universal (12-bit resolution) 0-10Vdc, Thermistor On/off (VFC), 4-20mA, 2 x Digital (12-bit resolution) Normally open/closed or direct/reverse
Outputs	2 x Universal (12-bit resolution) 0-10Vdc, Pulsed signal (20mA drive), On/off, 4-20mA, 2 x Analogue (12-bit resolution) 0-10Vdc, 6 x Digital relay, Normally open/closed, Independent common per relay, 5A resistive
BACnet	MS/TP (BAS-C): 9k6, 19k2, 38k4 or 76k8 bps or auto baud rate detection
Modbus	RTU Slave @ 9k6, 19k2, 38k4 or 57k6, Selectable parity and stop bit conf, No parity, 2 stop bit, Even parity, 1 stop bit, Odd parity, 1 stop bit
Ambient	Temperature: 0 to 50°C
	RH: 5 to 95% RH. non-condensing
Housing	Material: ABS
	Dimensions: 160 x 126 x 57mm
Protection	IP30
Weight	400g

Part code	Description
SC-IO-24	Smart Communication IO Module BACnet / ModBus

WHEN EFFICIENCY MATTERS

MAKE SURE IT IS SONTAY

RELATIVE HUMIDITY

POWER MONITORING

AIR QUALITY & GAS DETECTION

AIR FLOW

TEMPERATURE

SMART SENSORS

SMART PROTOCOLS

RELATIVE HUMIDITY & TEMPERATURE SENSORS

BENEFITS

AIR QUALITY
Monitor CO$_2$ and humidity in real time ·
Prevent over-ventilation & improve comfort ·

EFFICIENCY
· Control temperature and pressure precisely
· Reduce energy waste and optimise performance

PRECISION
Maintain stable supply air conditions ·
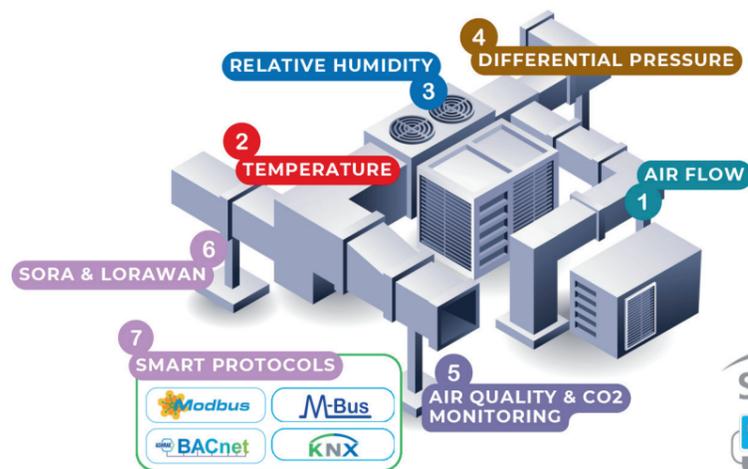Ensure comfort, performance, & compliance ·

INTEGRATION
· Connect seamlessly with BMS or IoT platforms
· Supports BACnet, Modbus, KNX & LoRaWAN

![Sontay®]

Sontay Sensors
for Air Handling Units

Sontay's sensing solutions ensure your AHU operates with precision.

Air Handling Units form the heart of every HVAC system, mixing, filtering, heating, cooling, and distributing air throughout a building. To perform efficiently, they rely on precise measurement and intelligent control of environmental variables.

Sontay's reliable sensing range supports every aspect of AHU operation from temperature and humidity to airflow, pressure, and indoor air quality. Our smart and traditional sensors help you design BMS systems that deliver consistent comfort with maximum energy efficiency.

- Improve comfort and occupant well-being.
- Optimise energy use and reduce running costs.
- Prevent downtime with reliable environmental data.
- Support compliance with indoor air quality standards.

Real-world impact:
At Gatwick Airport, Sontay sensors were chosen to support a major BMS upgrade, selected for their quality, ease of installation, and seamless compatibility with modern HVAC systems.

	Product Code	Applications	
1	FS-W	Air Flow Monitoring	
2	TT	Temperature Control	
3	RH	Relative Humidity	
4	PA / PS	Differential Pressure	
5	AQ / GS-AQ-CO2	Air Quality & CO₂ Monitoring	
6	RF / SORA	SORA & LoRaWAN	
7	SC	Smart Communication Protocols	

AIR QUALITY & VENTILATION
- Clean, stable air is essential
- Protects sensitive equipment
- Boosts overall efficiency

TEMPERATURE & HUMIDITY CONTROL
- Precise control is critical
- Prevents overheating
- Maintains equipment efficiency

ENERGY MONITORING & EFFICIENCY
- Effective power management
- Lowers operating costs
- Improves performance

RH-S   Space Relative Humidity and Temperature Sensor

The RH-S uses the latest high accuracy RH & T elements, and offers options such as set point adjust & momentary switch, together with a multi-line backlit LCD display. It allows effective control strategies to improve indoor environments, save energy and protect building fabric from moisture and condensation. A 0-10Vdc override status input option is also available, allowing occupancy indication on the display. A valuable feature of this sensor is, when in 3-wire mode, it automatically detects the controller input type, 4-20mA or 0-10Vdc. This removes the requirement for output jumpers. 2-wire loop powered is selectable via a DIP switch. It also provides on-board LED indication for power up status and set output mode. The terminal blocks are pluggable and allow tool free installation (ferrules required).

FEATURES
- Slim design for room applications
- High stability and reliability
- Auto detection 0-10Vdc or 4-20mA outputs, loop powering via DIP
- Direct thermistor option available
- LCD display and user interface options
- Easy installation: Two part, push-in spring terminal blocks

SPACE SENSORS ±3%

Part code	Description
RH-S	Space Mounted T and RH Sensor ±3%
RH-S-EN	Space Mounted Enthalpy and Dewpoint Sensor

SPACE SENSORS ±2%

Part code	Description
RH-S-AH	Space Mounted T and RH Sensor High Accuracy ±2%

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting, 4-20mA (2-wire via DIP
AH accuracy	±2% (20 to 60% RH)
Dewpoint output ranges	-50 to 50°C
Enthalpy output ranges	-20 to +250kj/kg
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Other accuracy	±3% (20 to 60% RH)
Other options	PTC/NTC Element: Any Sontay resistive type
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
RH output ranges	0 to 100%
Setpoint optional passive outputs	11-1kΩ/0-10kΩ. Linear
Temperature Accuracy	±0.5% (20 to 40°C)
Temperature Output range	0 to 40°C as standard. Others available on request. Range of 0 to +50°C
Weight	180g

Notes:
1. *-T version uses a thermistor element for direct measurement of temperature. Please specify thermistor type when ordering.
2. When using the -x option, they are not compensated for internal heating.
3. Please see pages 90-93 for Thermistor Types and Compatibility Chart.
4. RH-S-EN outputs only enthalpy and dewpoint values.
5. **Plain Front, no user interface options available (SP/MS/LCD)

Part code	Description
Suffixes (add to part code)	
-T*	Direct resistive temperature output
-SP	11-1kΩ/0-10kΩ set point
-MS	Momentary switch
-LCD	Integral LCD display
-TR	Custom temperature output range
-5V	0 - 5V option
-BLK**	Black space housing

Part code	Description
Accessories	
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

Relative Humidity & Temperature Sensors

Sontay®

RH-S-UN — Space Relative Humidity Sensor

A valuable feature of this sensor is its ability to automatically detect what the controller input is set to, 4-20mA or 0-10Vdc. This removes the requirement for output jumpers that can be inadvertently set incorrectly. On board LED indication of which output type is in operation is provided. Also available with passive resistive output for temperature, along with other passive outputs.

FEATURES
- Auto-detection 0-10Vdc or 4-20mA output, 3-wire only
- Fully configurable LCD Display
- Resistive temperature output option
- No jumpers or DIP-switches to select output type
- Direct thermistor option available

SPACE SENSORS ±3%

SPECIFICATION

Accuracy (typical)	±3% (20 to 80% RH)
Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
Environmental Housing	0 to 50°C, 0 to 95% non-condensing
Fanspeed	Resistive
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (Flame retardant)
Output range	0 to 100% Relative humidity
Override optional passive outputs	VFC
Power Supply	24Vac/dc ±10%
Protection	IP30
PTC/NTC Element	Any Sontay Resistive type
Setpoint optional passive outputs	1-11kΩ
Weight	180g

Notes:
1. *-T* version uses a thermistor element for direct measurement of temperature. Please specify thermistor type when ordering.
2. When using the -T option, they are not compensated for internal heating.
3. Please see pages 90-93 for Thermistor Types and Compatibility Chart.
4. * -T version uses a thermistor element for direct measurement of temperature. Please specify thermistor type when ordering.
5. **Plain Front, no user interface options available (SP/MS/LCD)

Part code	Description
RH-S-UN	Space Mounted RH Sensor

Part code	Description
Suffixes (add to part code)	
-T*	Direct resistive temperature output
-LCD	Integral LCD display
-MS	Momentary Switch
-SP	1-11kΩ set point
-BLK**	Black Space Housing

Part code	Description
Accessories	
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

RH-CAL — Calibration

Calibration is available for Sontay's RH range of sensors. Sontay can provide test certificates for 3-point calibration, with additional points if required.

Part code	Description
RH-CAL	3-Point RH Calibration at 30, 50 & 70% RH at 20°C

RH — Duct Mounted RH & T Sensors

The RH-D range of humidity and temperature sensors offer the latest technology high precision and accuracy RH & T element. A valuable feature of this sensor is when in 3-wire mode it automatically detects the controller input type, 4-20mA or 0-10Vdc. This removes the requirement for output jumpers. 2-wire loop powering selectable via DIP switch. It also provides on-board LED indication for power up status and set output mode. The terminal blocks are pluggable and allow tool free installation (ferrules required). An optional multi-line backlit LCD display is available, along with a direct PTC/NTC sensing element.

FEATURES
- Robust sensor enclosure
- Easy installation with LED indication, test button and autooutput mode detection (3-wire)
- Supports 2-wire loop powering or 3-wire installation
- Pluggable terminal blocks and tool free installation

DUCT SENSORS

SPECIFICATION

Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting, 4-20mA (2-wire via DIP
AH accuracy	±2% (20 to 80% RH)
Dewpoint output ranges	-50 to +50°C
Duct probe dimensions	240 x 20mm dia
Enthalpy output ranges	-20 to +250kj/kg
Housing Dimensions	125 x 105 x 85mm
Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Other accuracy	±3% (20 to 80% RH)
Passive temp. output	PTC/NTC Element: Any Sontay resistive
Power Supply	24Vac/dc ±10%
RH output ranges	0 to 100%
Temperature Accuracy	±0.5°C (20 to 40°C)
Temperature Output range	-20 to 50°C as standard, Others available on request
Wall probe dimensions	90 x 20mm dia
Weight	Duct: 240g / Wall: 220g / Outside: 1.16kg / Remote probe: 230g

Part code	Description
RH-D	Duct Mounted T and RH Sensor ±3%
RH-D-AH	Duct Mounted T and RH Sensor High Accuracy ±2%
RH-D-EN	Duct Mounted Enthalpy and Dewpoint Sensor

WALL SENSORS

Part code	Description
RH-W	Wall Mounted T and RH Sensor ±3%
RH-W-AH	Wall Mounted T and RH Sensor ±2%
RH-W-EN	Wall Mounted Enthalpy and Dewpoint Sensor

Notes:
1. * -T version uses a thermistor element for direct measurement of temperature. Please specify thermistor type when ordering.
2. Please see pages 85-88 for Thermistor Types and Compatibility Chart.
3. -EN versions only output enthalpy and dewpoint values.

Part code	Description
Suffixes (add to part code)	
-T *	Direct resistive temperature output
-TR	Custom temperature output range
-LCD	Integral LCD display
Accessory	
DPA	Duct probe adjustment flange (for RH-D only)

OUTSIDE

Part code	Description
RH-O	Outside Mounted T and RH Sensor ±3%
RH-O-AH	Outside Mounted T and RH Sensor ±2%
RH-O-EN	Outside Enthalpy & Dewpoint Transmitter

REMOTE

Part code	Description
RH-R	Remote Probe T and RH Sensor ±3%
RH-R-AH	Remote Probe T and RH Sensor ±2%
RH-R-EN	Remote Probe Enthaply and Dewpoint Sensor

Relative Humidity & Temperature Sensors

Data sheets online: www.sontay.com

Sontay®

RH-x-UN   Wall Mounted RH Sensor

The RH-x-UN range offers a cost-effective single output for relative humidity measurement. These can also include a combination of familiar passive options such as temperature, set point adjustment, momentary switch and fan speed, plus an LCD display.

A unique feature of the sensor is its ability to automatically detect what sort of controller input it is connected to, 4-20mA or 0-10Vdc, removing the requirement for output jumpers which can be inadvertently set incorrectly. Just connect it to the controller input and it does the rest. PCB LED indication of which output type is in operation is provided, with diagnostic LED patterns for determining faults.

FEATURES

• Auto-detection 0-10Vdc or 4-20mA output, 3-wire only

• Fully configurable LCD Display

• Resistive temperature output option

• No jumpers or DIP-switches to select output type

• Direct thermistor option available

DUCT SENSORS

Part code	Description
RH-D-UN	Duct Mounted RH Sensor ±3%

WALL SENSORS

Part code	Description
RH-W-UN	Wall Mounted RH Sensor ±3%

OUTSIDE

Part code	Description
RH-O-UN	Outside Mounted RH Sensor ±3%

SPECIFICATION

Accuracy (typical)	±3% (20 to 80% RH)
Active outputs	0-10Vdc or 4-20mA (3-wire) self-detecting
Duct probe dimensions	210 x 20mm dia.
Environmental Housing	-30 to 60°C, 0 to 95% RH non-condensing
Environmental Media	-10 to 50°C
Housing Dimensions	125 x 105 x 85mm
Material	PC (Halogen Free Flame Retardant, UV stabilized)
Other protection	IP65
Output range	0 to 100% Relative Humidity
Passive temp. output	PTC/NTC Element: Any Sontay resistive
Power Supply	24Vac/dc ±10%
Shield dimensions	200 x 118mm dia.
Wall probe dimensions	90 x 20mm dia.
Wall protection	IP54
Weight	Duct: 240g Wall: 220g Outside: 1.16kg

Notes:
1. * -T version uses a thermistor element for direct measurement of temperature. Please specify thermistor type when ordering.
2. Please see pages 90-93 for Thermistor Types and Compatibility Chart.

Part code	Description
Suffixes (add to part code)	
-T *	Direct resistive temperature output
-LCD	Integral LCD display
Accessory	
DPA	Duct probe adjustment flange (for RH-D-UN only)

RH-SH   Humidistats

The RH-SH range of humidista's are designed for wall or ductmounts for the ON/OFF control of humidification and dehumidification equipment, or the initiation of alarms or override controls. High quality sensing elements ensure accurate measurement and switching differential.

FEATURES

• Concealed or exposed set point adjustment

• Suitable for swimming pool environments

SPECIFICATION

Case construction	ABS
Differential	4% RH
Duct switch rating	15(2)A @ 24 to 250Vac
Operating Range	30-100% RH
Probe Dimensions	225 x 19mm dia.
Protection	RH-SH-xD IP65
Room switch rating	2A @ 250Vac
Weight	300g max.

Part code	Description
Room Humidistats	
RH-SH-1R	Single-stage, concealed set point adjust.
RH-SH-1RE	Single-stage, exposed set point adjust.
Duct Humidistats	
RH-SH-1D	Single-stage, concealed set point adjust.
RH-SH-1DE	Single-stage, exposed set point adjust.

ST   General Purpose Thermostats

EXAMPLES

Immersion   Capillary   Wall & Duct   Strap-on

General Purpose Thermostats

Sontay's range of thermostats are well suited for a number of applications of temperature control or safety cut-out in pipe work systems, calorifiers, duct work systems, green houses and many other installations. They all have the set-point adjustment under the cover to prevent unauthorised tampering.

FEATURES

• Robust housing

• Immersion sensors supplied with pocket

• Ideal for many applications

• Volt free contacts

• Concealed adjustment

SPECIFICATION

Ambient relative humidity	0 to 95% non-condensing
Ambient Temperature Range	-35 to +65°C
Capillary length (ST-C)	1.5m
Capillary weight	340g
Duct weight	700g
Housing Material	ABS (flame resistant)
Immersion pocket dimensions (ST-I)	130mm thread ½" BSP
Immersion pocket material (ST-I)	Stainless Steel
Immersion weight	580g
Protection	IP43
Sensing element	Liquid filled copper element
Switch rating	24 to 250Vac @ 16(4)A

Part code	Description	
Capillary		
ST-C-01M	50 to 140°C	Manual Reset
Duct		
ST-D-01A	-35 to +35°C	Auto Reset
ST-D-02A	0 to 90°C	Auto Reset
ST-D-03A	-30 to +30°C	Auto Reset
ST-D-04M	0 to +90°C	Manual Reset
Immersion		
ST-I-01A	0 to 120°C	Auto Reset
ST-I-02M	0 to 110°C	Manual Reset
ST-I-03M	20 to 90°C	Manual Reset
Wall		
ST-W-01A	-30 to +30°C	Auto Reset
Strap-on		
ST-S-02A	0 to 90°C	Auto Reset
Accessory		
ST-IMM-PKT	Replacement stainless steel pocket (ST-I range only)	

Relative Humidity & Temperature Sensors

ST-FRE — Capillary Frost Thermostats

The ST-FRE range of frost thermostats provide a switch output based on the average temperature detected along a two or six metre capillary sensor. A common application is for frost protection on fresh air intakes or airconditioning systems, to prevent the icing up of filters, fans and coils. The capillary is fixed in a matrix across the duct, in a position downstream of the pre-heater or frost coil.

FEATURES
- Easy adjustment of setpoint
- Setting indicator
- IP65 option

Part code	Description
IP44 Thermostat	
ST-FRE-1	Auto reset, 6m capillary, Frost Thermostat
ST-FRE-1-IP65	Auto reset, 6m capillary, Frost Thermostat
ST-FRE-2	Manual reset, 6m capillary, Frost Thermostat
ST-FRE-2-IP65	Manual reset, 6m capillary, Frost Thermostat

SPECIFICATION

Ambient Range	50°C max.
Contact Configuration	SPST open-on-rise
Housing Material	ABS V0
Operating Voltage	200/240Vac @50/60Hz
Protection	IP20
Sensor system	Bi-metallic
Switching current	250Vac @ 10(2)A
Switching Differential	<1°K
Temperature Range	5 to 35°C
Weight	220g

Note: All these thermostats include metal capillary fixing clips as standard.

Part code	Description
IP65 Housing and Thermostat	
ST-FRE-3	Auto reset, 2m capillary, Frost Thermostat
ST-FRE-3-IP65	Auto reset, 2m capillary, Frost Thermostat
ST-FRE-4	Manual reset, 2m capillary, Frost Thermostat
ST-FRE-4-IP65	Manual reset, 2m capillary, Frost Thermostat
Accessories	
ST-DFK	Pack of six additional plastic capillary fixing clips
BRK	Mounting bracket for ST-FREx

ST-TY — Space Thermostats

The ST-TY series of wall mounting space thermostats are suitable for heating and/or cooling and frost protection applications.

FEATURES
- Tamperproof option
- Bi-metallic switch mechanism for reliability

ST-RSTAT

Part code	Description	Range
ST-RSTAT1	Thermostat Space with Dial	10-30°C
ST-RSTATT	Thermostat Space Tamperproof	5-30°C

HEATING STAT SPECIFICATION – ST-TY92-C1

Contact configuration	SPST open-on-rise
Temperature range	5 to 35°C
Switching current:	250Vac @ 10(2)A

FROST STAT SPECIFICATION – ST-TY92-C1F

Contact configuration	SPST open-on-rise
Temperature range	-5 to +15°C
Switching current	250Vac @ 10(2)A

HEATING OR COOLING STAT SPECIFICATION – ST-TY92-C3T & ST-TY92-C3

Contact configuration	SPDT
Temperature range	5 to 35°C
Switching current	250Vac @ 3(1)A

COMMON SPECIFICATION

Operating voltage	220/240Vac @ 50/60Hz
Switching differential	<1°K
Sensor system	Bi-metalic
Housing material	ABS V0
Ambient range	50°C max.
Protection	IP20
Dimensions	ST-TY92-C3T 78 x 78 x 36mm max. Others: 82 x 82 x 32mm max.
Weights	ST-TY92-C3T 120g,

Part code	Description	Range
ST-TY92-C1	Heating Thermostat	5 to 35°C
ST-TY92-C1F	Frost Thermostat	–5 to +15°C

Data sheets online: www.sontay.com

TT-512 — Low Profile Temperature Sensors

The TT-512 range of low profile button temperature sensors are used for measuring air temperature in indoor space where style or a robust solution is required. Their discreet appearance offers reliable temperature monitoring without being obtrusive.

These sensors are particularly effective in applications where anti-ligature sensors are required for the safety of the building occupants. Due to the robust design and materials, the sensors are also tamperproof. They are available in either white plastic or stainless steel finishes and contain either a high quality Thermistor, Platinum or Nickel sensing element.

11.5mm
R4.5mm
Ø9mm
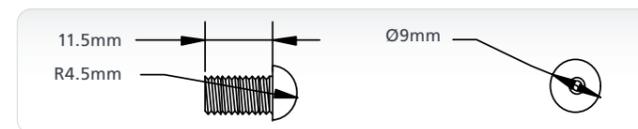
SPECIFICATION

Cable Dimensions	2 or 5 meters
Environmental Housing	-10 to +60°C, 0 to 95% RH non-condensing
Material	Black plastic
Mounting	M6, Nut supplied
Output Type	Resistive
Protection	IP20
Weight	8g

Part code			Description
Stainless Steel	**White Plastic**	**Black Plastic**	
TT-512-SS-A	TT-512-WP-A	TT-512-BLK-A	10K3A1, Trend, Cylon, Distech, Heatmiser
TT-512-SS-B	TT-512-WP-B	TT-512-BLK-B	10K4A1, Andover, Delta Controls
TT-512-SS-C	TT-512-WP-C	TT-512-BLK-C	20K6A1, Honeywell
TT-512-SS-D	TT-512-WP-D	TT-512-BLK-D	PT100A, Serck
TT-512-SS-E	TT-512-WP-E	TT-512-BLK-E	PT1000A, Cylon
TT-512-SS-F	TT-512-WP-F	TT-512-BLK-F	Ni1000A, Sauter
TT-512-SS-G	TT-512-WP-G	TT-512-BLK-G	Ni1000A/TCR (LAN1), Siemens
TT-512-SS-L	TT-512-WP-L	TT-512-BLK-L	TAC1, TAC
TT-512-SS-M	TT-512-WP-M	TT-512-BLK-M	2.2K3A1, Johnson Controls
TT-512-SS-N	TT-512-WP-N	TT-512-BLK-N	3K3A1, Alerton
TT-512-SS-P	TT-512-WP-P	TT-512-BLK-P	30K6A1, Drayton
TT-512-SS-Q	TT-512-WP-Q	TT-512-BLK-Q	50K6A1
TT-512-SS-Z	TT-512-WP-Z	TT-512-BLK-Z	10K NTC, Carel
Suffix (add to part code)			
-5M	5m probe length		
-LSZH	Low Smoke Zero Halogen option		

TT-515 — Low Profile Plate Sensors

The TT-515 range of low profile plate sensors are used for measuring air temperature in indoor space where style or a robust solution is required. Their discreet appearance offers reliable temperature monitoring without being obtrusive.

These sensors are particularly effective in applications where anti-ligature sensors are required for the safety of the building occupants. Due to the robust design and materials, the sensors are also tamperproof. They are available in either white plastic or stainless steel finishes and contain either a high quality Thermistor, Platinum or Nickel sensing element. Sensor types compatible with most controls manufacturers' equipment are available.

FEATURES
- Anti-ligature & tamperproof
- Wide range of sensing element types
- White plastic or stainless steel finishes
- Discreet temperature measurement
- For direct mounting onto a standard UK back box

SPECIFICATION

Ambient housing range	-10 to +60°C, 0 to 95% RH non-condensing
Housing Dimensions	85 x 85mm
Housing Material	Stainless Steel
Mounting	Flush, to standard UK wall box
Output Type	Tesistive
Protection	IP20
Weight	220g

Part code		Description
Stainless Steel	**White Plastic**	
TT-515-SS-A	TT-515-WP-A	10K3A1, Trend, Cylon, Distech, Heatmiser
TT-515-SS-B	TT-515-WP-B	10K4A1, Andover, Delta Controls
TT-515-SS-C	TT-515-WP-C	20K6A1, Honeywell
TT-515-SS-D	TT-515-WP-D	PT100A, Serck
TT-515-SS-E	TT-515-WP-E	PT1000A, Cylon
TT-515-SS-F	TT-515-WP-F	Ni1000A, Sauter
TT-515-SS-G	TT-515-WP-G	Ni1000A/TCR (LAN1), Siemens
TT-515-SS-H	TT-515-WP-H	SAT1, Satchwell
TT-515-SS-K	TT-515-WP-K	STA1, Landis & Staefa
TT-515-SS-L	TT-515-WP-L	TAC1, TAC
TT-515-SS-M	TT-515-WP-M	2.2K3A1, Johnson Controls
TT-515-SS-N	TT-515-WP-N	3K3A1, Alerton
TT-515-SS-P	TT-515-WP-P	30K6A1, Drayton
TT-515-SS-Q	TT-515-WP-Q	50K6A1
TT-515-SS-R	TT-515-WP-R	100K6A1, York >40°C
TT-515-SS-S	TT-515-WP-S	SAT2, Satchwell
TT-515-SS-T	TT-515-WP-T	SAT3, Satchwell
TT-515-SS-W	TT-515-WP-W	SIE1, Siebe
TT-515-SS-Y	TT-515-WP-Y	STA2, Landis & Staefa
TT-515-SS-Z	TT-515-WP-Z	10K NTC, Carel

Data sheets online: www.sontay.com

Relative Humidity & Temperature Sensors

Sontay®

TT-518 — Thimble Temperature Sensors

The TT-518 range of thimble temperature sensors are used for measuring air temperature in indoor spaces. They are available in various finishes, plastic, aluminium, stainless steel and brass. Units contain either a high quality thermistor, Platinum or Nickel sensing element. Sensor types compatible with most controls manufacturers' equipment are available.

FEATURES

• Wide range of sensing element types
• 2m Screened flying lead as standard
• Plastic, aluminium, brass and stainless steel finishes
• Discreet temperature measurement

⚠️ **Note for ALL sensors with CVO output options:**
The stated ambient range overrides any CVO output details.

SPECIFICATION

Ambient housing range	-10 to +60°C, 0 to 95% RH, non-condensing
Current Output	4 to 20mA
Metal dimensions	30mm overall x 19mm dia.
Other thread	m16 x 1.5 x 12mm
Passive output types	Resistive
Plastic dimensions	45mm overall x 22mm dia.
Plastic thread	M16 x 1.5 x 25mm
Protection	IP30
Voltage output types	0-10Vdc
Weight	8g

Part code	Description
Passive Output	
TT-518-A	10K3A1, Trend, Cylon, Distech, Heatmiser
TT-518-B	10K4A1, Andover, Delta Controls
TT-518-C	20K6A1, Honeywell
TT-518-D	PT100A, Serck
TT-518-E	PT1000A, Cylon
TT-518-F	Ni1000A, Sauter
TT-518-G	Ni1000A/TCR (LAN1), Siemens
TT-518-H	SAT1, Satchwell
TT-518-K	STA1, Landis & Staefa
TT-518-L	TAC1, TAC
TT-518-M	2.2K3A1, Johnson Controls
TT-518-N	3K3A1, Alerton
TT-518-P	30K6A1, Drayton
TT-518-Q	50K6A1
TT-518-S	SAT2, Satchwell
TT-518-T	SAT3, Satchwell
TT-518-W	SIE1, Siebe
TT-518-Y	STA2, Landis & Staefa
TT-518-Z	10K NTC, Carel
Active Output	
TT-518-CVO	*Selectable:* 4-20mA/0-10Vdc * *Output ranges:* -10 to +40°C or -10 to +110°C (selectable)
TT-518-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp, scaling) *, Scaled to customer specification in the range of -10 to +60°C
Suffixes (add to part code)	
-AL	Aluminium thimble
-SS	Stainless steel thimble
-BLK	Black Thimple
-BR	Brass thimble
-5M	5m cable length
-LSZH	Low Smoke Zero Halogen option

TT-D — Duct Temperature Sensors

The TT-D are used to measure air temperature in ducts. The sensing element is fitted into a stainless steel probe. A flange plate is available for adjustment of penetration depth (order as TT-DFP).

Part code	Description
Passive Output	
TT-D-A	10K3A1, Trend, Cylon, Distech
TT-D-B	10K4A1, Andover, Delta Controls
TT-D-C	20K6A1, Honeywell
TT-D-D	PT100A, Serck
TT-D-E	PT1000A, Cylon
TT-D-F	Ni1000A, Sauter
TT-D-G	Ni1000A/TCR (LAN1), Siemens
TT-D-H	SAT1, Satchwell
TT-D-K	STA1, Landis & Staefa
TT-D-L	TAC1, TAC
TT-D-M	2.2K3A1, Johnson Controls
TT-D-N	3K3A1, Alerton
TT-D-P	30K6A1, Drayton
TT-D-Q	50K6A1

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-10 to +100°C
Housing Dimensions	80 x 79 x 44mm
Housing Material	PC (Halogen Free Flame Retardant, UV stabilized)
Passive output types	Resistive
Probe Dimensions	65, 150 or 250mm x 6mm dia.
Probe Material	Stainless steel 304
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	160g

Part code	Description
Passive Output	
TT-D-R	100K6A1, York >40°C
TT-D-S	SAT2, Satchwell
TT-D-T	SAT3, Satchwell
TT-D-W	SIE1, Siebe
TT-D-Y	STA2, Landis & Staefa
TT-D-Z	10K NTC, Carel
Active Output	
TT-D-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C (selectable)
TT-D-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C
Suffixes (add to part code)	
-65	65mm Probe length
-250	250mm Probe length
Accessory	
TT-DFP	Duct flange plate

TT-DA — Duct Averaging Temperature Sensors

The TT-DA temperature sensors are used for measuring temperature in ducts where an average reading across the air flow is required. Sensing elements are housed in a nylon tube, and spaced at intervals along the standard 2.2m length.

Part code	Description
Passive Output	
TT-DA-A	10K3A1, Trend, Cylon, Distech
TT-DA-B	10K4A1, Andover, Delta Control
TT-DA-C	20K6A1, Honeywell
TT-DA-D	PT100A, Serck
TT-DA-E	PT1000A, Cylon
TT-DA-F	Ni1000A, Sauter
TT-DA-G	Ni1000A/TCR (LAN1), Siemens
TT-DA-H	SAT1, Satchwell
TT-DA-K	STA1, Landis & Staefa
TT-DA-L	TAC1, TAC
TT-DA-M	2.2K3A1, Johnson Controls
TT-DA-N	3K3A1, Alerton

SPECIFICATION

Output types	Passive: Resistive, Current: 4 to 20mA, Voltage: 0 to 10Vdc
Probe	Material: Nylon 12
	Dimensions: 2.2m x 8mm dia.
Housing	Material: PC (Halogen Free Flame Retardant, UV stabilized) Dimensions: 80 x 79 x 44mm
Environmental	Housing -30 to +70°C, 0 to 95% RH, non-condensing Media -10 to +100°C
Protection	IP65
Weight	220g

Part code	Description
Passive Output	
TT-DA-P	30K6A1, Drayton
TT-DA-Q	50K6A1
TT-DA-R	100K6A1, York >40°C
TT-DA-S	SAT2, Satchwell
TT-DA-T	SAT3, Satchwell
TT-DA-W	SIE1, Siebe
TT-DA-Y	STA2, Landis & Staefa
TT-DA-Z	10K NTC, Carel
Active Output	
TT-DA-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C – selectable
TT-DA-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C
Suffix (add to part code)	
-5M	5m probe length

Relative Humidity & Temperature Sensors

Sontay®

TT-TDA — True Duct Averaging Temperature Sensors

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-10 to +100°C
Housing Dimensions	125 x 165 x 85mm
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Probe Dimensions	2050mm (50mm collar x ¼" dia)
Probe Material	Copper
Protection	IP65
PT100B output types	Resistive output type
Voltage output types	0 to 10Vdc
Weight	420g

Sontay's true duct averaging sensor contains a PT100B element, which measures at point along the full length of the copper tube.

Part code	Description
Passive Output	
TT-DTA-PT100B	PT100B Thermistor Output
Active Output	
TT-DTA-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C ((selectable)
TT-DTA-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C

TT-O — Outside Air Temperature Sensors

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	160g

Note: A calibration certificate is available on CVO Types see page 79.

The TT-O range are use for measuring outside air temperature. The sensors are housed in IP65 rated enclosures. The TT-O should always be situated in a sheltered position on a north facing wall.

FEATURES
- Weatherproof Housing
- Wide range of sensing element types
- Hinged lid with the facility of tamper proofing

Part code	Description
Passive Output	
TT-O-A	10K3A1, Trend, Cylon, Distech
TT-O-B	10K4A1, Andover, Delta Controls
TT-O-C	20K6A1, Honeywell
TT-O-D	PT100A, Serck
TT-O-E	PT1000A, Cylon
TT-O-F	Ni1000A, Sauter
TT-O-G	Ni1000A/TCR (LAN1), Siemens
TT-O-H	SAT1, Satchwell
TT-O-K	STA1, Landis & Staefa
TT-O-L	TAC1, TAC
TT-O-M	2.2K3A1, Johnson Controls

Part code	Description
Passive Output	
TT-O-N	3K3A1, Alerton
TT-O-P	30K6A1, Drayton
TT-O-Q	50K6A1
Passive Output	
TT-O-R	100K6A1, York >40°C
TT-O-S	SAT2, Satchwell
TT-O-T	SAT3, Satchwell
TT-O-V	SAT4, Satchwell
TT-O-W	SIE1, Siebe
TT-O-Y	STA2, Landis & Staefa
TT-O-Z	10K NTC, Carel
Active Output	
TT-O-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C – selectable
TT-O-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp.), Scaled to customer specification in the range of -10 to +100°C

Data sheets online: www.sontay.com

TT-OR — Outside Air Temperature Sensors with Radiation Shield

The TT-OR has the element fitted into a PTFE radiation shield, designed to provide fast response times to changes in outside air temperature and to protect the element from the effects of direct sunlight.

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	160g

Part code	Description
Passive Output	
TT-OR-M	2.2K3A1, Johnson Controls
TT-OR-N	3K3A1, Alerton
TT-OR-P	30K6A1, Drayton
TT-OR-Q	50K6A1
TT-OR-R	100K6A1, York >40°C
TT-OR-S	SAT2, Satchwell
TT-OR-T	SAT3, Satchwell
TT-OR-V	SAT4, Satchwell
TT-OR-W	SIE1, Siebe
TT-OR-Y	STA2, Landis & Staefa
TT-OR-Z	10K NTC, Carel
Active Output	
TT-OR-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C – selectable
TT-OR-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C

Part code	Description
Passive Output	
TT-OR-A	10K3A1, Trend, Cylon, Distech
TT-OR-B	10K4A1, Andover, Delta Controls
TT-OR-C	20K6A1, Honeywell
TT-OR-D	PT100A, Serck
TT-OR-E	PT1000A, Cylon
TT-OR-F	Ni1000A, Sauter
TT-OR-G	Ni1000A/TCR (LAN1), Siemens
TT-OR-H	SAT1, Satchwell
TT-OR-K	STA1, Landis & Staefa
TT-OR-L	TAC1, TAC

TT-I — Immersion Temperature Sensors

Immersion sensors are used for measuring the temperature of liquids in pipework. The sensing element is housed in a stainless steel probe fitted to an IP65 rated enclosure, for direct mounting into TT-PO-521 or TT-PO-HP range of stainless steel pockets.

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Probe Dimensions	65, 150 or 250mm x 6mm dia.
Probe Material	Stainless Steel 304
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	160g

Part code	Description
Passive Output	
TT-I-A	10K3A1, Trend, Cylon, Distech
TT-I-B	10K4A1, Andover, Delta Controls
TT-I-C	20K6A1, Honeywell
TT-I-D	PT100A, Serck
TT-I-E	PT1000A, Cylon
TT-I-F	Ni1000A, Sauter
TT-I-G	Ni1000A/TCR (LAN1), Siemens
TT-I-H	SAT1, Satchwell
TT-I-L	TAC1, TAC
TT-I-M	2.2K3A1, Johnson Controls
TT-I-N	3K3A1, Alerton
TT-I-P	30K6A1, Drayton
TT-I-Q	50K6A1
TT-I-R	100K6A1, York >40°C

Part code	Description
Passive Output	
TT-I-S	SAT2, Satchwell
TT-I-T	SAT3, Satchwell
TT-I-W	SIE1, Siebe
TT-I-Y	STA2, Landis & Staefa
TT-I-Z	10K NTC, Carel
Active Output	
TT-I-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C – selectable
TT-I-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C
Suffixes (add to part code)	
-65	65mm probe length
-100	100mm probe length
-250	250mm probe length

Data sheets online: www.sontay.com

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TT-IH — High Temperature Immersion Sensors

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Probe Dimensions	65, 150 or 250mm x 6mm dia.
Probe Material	Stainless Steel 304
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	160g

The TT-IH is for use in high temperature applications up to 400°C. The sensor consists of a stainless steel probe fitted to an aluminium head, and connected by a 1 m cable to a plant housing where terminations and transmitters are located. The TT-IH is available in two standard probe lengths of 150 mm or 250 mm, for direct mounting into the TT-PO-521 or TT-PO-HP range of stainless steel pockets.

Note: A calibration certificate is available on CVO Types see page 79.

Part code	Description
Active Output (150mm Probe)	
TT-IH-CVO	Selectable: 4-20mA/0-10Vdc Output ranges: -10 to +40°C , -10 to +110°C, -10 to +160°C or 0 to 400°C – selectable
TT-IH-CVO-C	Selectable: 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +400°C
Suffix (add to part code)	
-250	250mm probe length
Accessory	
TT-DFP	Duct flange plate

Part code	Description
Passive Output (150mm Probe)	
TT-IH-D	PT100A Sensor
TT-IH-E	PT1000A Sensor

TT-C — Clamp On Temperature Sensors

SPECIFICATION

Cable Dimensions	2 meters
Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	200g

The TT-C range of temperature strap-on sensors are used on pipe work systems to detect liquid temperature where fitting an immersion sensor is not practical. The sensor is housed in a 50mm long probe with two metres of PTFE 2-core cable as standard connecting the probe to an IP65 housing for termination. Units contain either a high quality thermistor, Nickel or Platinum sensing element.

Part code	Description
Passive Output	
TT-C-A	10K3A1, Trend, Cylon, Distech
TT-C-B	10K4A1, Andover, Delta Controls
TT-C-C	20K6A1, Honeywell
TT-C-D	PT100A, Serck
TT-C-E	PT1000A, Cylon
TT-C-F	Ni1000A, Sauter
TT-C-G	Ni1000A/TCR (LAN1), Siemens
TT-C-H	SAT1, Satchwell
TT-C-L	TAC1, TAC
TT-C-M	2.2K3A1, Johnson Controls
TT-C-N	3K3A1, Alerton
TT-C-P	30K6A1, Drayton
TT-C-Q	50K6A1
TT-C-R	100K6A1, York >40°C
TT-C-S	SAT2, Satchwell

Part code	Description
Passive Output	
TT-C-T	SAT3, Satchwell
TT-C-W	SIE1, Siebe
TT-C-Y	STA2, Landis & Staefa, Distech
TT-C-Z	10K NTC, Carel
Active Output	
TT-C-CVO	Selectable: 4-20mA/0-10Vdc Output ranges: -10 to +40°C or -10 to +110°C (selectable)
TT-C-CVO-C	Selectable: 4-20mA/0-10Vdc (custom temp. scaling), Scaled to customer specification in the range of -10 to +100°C
Suffix (add to part code)	
-5M	5m cable length
Accessory	
BAND	Additional Metal Band

TT-554 — Remote Probe Sensors

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-10 to +60°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Lead Length	2 meters (5 meter option)
Passive output types	Resistive
Probe Dimensions	150 x 6mm
Probe Material	Stainless steel
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	125g

The TT-554 range of reamote probe temperature sensors are perfect for tight locations, hard to access areas or for applications where the usual duct (TT-D) or immersion (TT-I) sensor will not fit. A 150mm probe is used with either the TT-PO-521 or TT-DFP duct flange plate. Units contain either a high quality thermistor, Platinum or Nickel sensing element. Sensor types compatible with most controls manufacturers' equipment are available.

Part code	Description
Passive Output	
TT-554-A	10K3A1, Trend, Cylon, Distech
TT-554-B	10K4A1, Andover, Delta Controls
TT-554-C	20K6A1, Honeywell
TT-554-D	PT100A, Serck
TT-554-E	PT1000A, Cylon
TT-554-F	Ni1000A, Sauter
TT-554-G	Ni1000A/TCR (LAN1), Siemens
TT-554-L	TAC1, TAC
TT-554-M	2.2K3A1, Johnson Controls
TT-554-P	30K6A1, Drayton
TT-554-Z	10K NTC, Carel

Part code	Description
Active Output	
TT-554-CVO	Selectable: 4-20mA/0-10Vdc Output ranges: -10 to +40°C or -10 to +110°C (selectable)
TT-554-CVO-C	Selectable: 4-20mA/0-10Vdc (custom temp. scaling) *, Scaled to customer specification in the range of -10 to +100°C
Suffix (add to part code)	
-5M	5 meter cable length
-65	65 mm probe length
-250	250 mm probe length
-LSZH	Low Smoke Zero Halogen option
Accessories	
TT-DFP	Duct flange plate
TT-PO-521	Stainless steel immersion pocket

Notes: Custom lengths available.
1. * These units are supplied with the transmitter in the plant housing.
2. A calibration certificate is available on CVO Types see page 79.

TT-555 — Flying Lead Temperature Sensors

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-10 to +60°C, 0 to 95% RH non-condensing
Environmental Media	-10 to +60°C
Passive output types	Resistive
Probe Dimensions	25 x 6mm dia.
Probe Material	Stainless steel
Protection	IP40 (with-R option at IP68)
Voltage output types	0 to 10Vdc
Weight	80g

The flying lead range of temperature sensors are designed to measure air temperature in small duct spaces such as VAV boxes, fan coil units or other restricted spaces. The standard cable length is two metres of 2-core screened cable with a 5 meter option. Longer lengths can be made to order (at extra cost). Units contain either a high quality thermistor, Nickel or Platinum sensing element. Plastic tips also available on request.

Part code	Description
Passive Output	
TT-555-A	10K3A1, Trend, Cylon, Distech
TT-555-B	10K4A1, Andover, Delta Controls
TT-555-C	20K6A1, Honeywell
TT-555-D	PT100A, Serck
TT-555-E	PT1000A, Cylon
TT-555-F	Ni1000A, Sauter
TT-555-G	Ni1000A/TCR (LAN1), Siemens
TT-555-H	SAT1, Satchwell
TT-555-K	STA1, Landis & Staefa
TT-555-L	TAC1, TAC
TT-555-M	2.2K3A1, Johnson Controls

Part code	Description
TT-555-N	3K3A1, Alerton
TT-555-P	30K6A1, Drayton
TT-555-Q	50K6A1
Passive Output	
TT-555-R	100K6A1, York >40°C
TT-555-S	SAT2, Satchwell
TT-555-T	SAT3, Satchwell
TT-555-W	SIE1, Siebe
TT-555-Y	STA2, Landis & Staefa
TT-555-Z	10K NTC, Carel
Active Output	
TT-555-CVO	Selectable: 4-20mA/0-10Vdc * Output ranges: -10 to +40°C or -10 to +110°C (selectable)
TT-555-CVO-C	Selectable: 4-20mA/0-10Vdc (custom temp. scaling) *, Calibration to customer specification in the range of -10 to +60°C
Suffixes (add to part code)	
-5M	5m cable length
-LSZH	Low Smoke Zero Halogen option
-R	Cap potted (waterproof)

Data sheets online: www.sontay.com

Relative Humidity & Temperature Sensors

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TT-CD — Direct Clamp-On Temperature Sensors

The TT-CD clamp-on sensor is used for direct connection to measure pipe temperature. The sensing element is enclosed in a moulded nickel contact bar on the underside of the main housing. Units contain either a high quality thermistor, Nickel or Platinum sensing element.

Part code	Description
Passive Output	
TT-CD-A	10K3A1, Trend, Cylon, Distech
TT-CD-B	10K4A1, Andover, Delta Control
TT-CD-C	20K6A1, Honeywell
TT-CD-D	PT100A, Serck
TT-CD-E	PT1000A, Cylon
TT-CD-F	Ni1000A, Sauter
TT-CD-G	Ni1000A/TCR (LAN1), Siemens
TT-CD-H	SAT1, Satchwell
TT-CD-L	TAC1, TAC
TT-CD-M	2.2K3A1, Johnson Controls

SPECIFICATION

Current Output	4 to 20mA
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Environmental Media	-30 to +100°C
Housing Dimensions	80 x 79 x 44mm
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Passive output types	Resistive
Protection	IP65
Voltage output types	0 to 10Vdc
Weight	180g

Note: A calibration certificate is available on CVO Types see page 79.

Part code	Description
Passive Output	
TT-CD-N	3K3A1, Alerton
TT-CD-P	30K6A1, Drayton
TT-CD-Q	50K6A1
TT-CD-R	100K6A1, York >40°C
TT-CD-S	SAT2, Satchwell
TT-CD-T	SAT3, Satchwell
TT-CD-W	SIE1, Siebe
TT-CD-Y	STA2, Landis & Staefa
TT-CD-Z	10K NTC, Carel
Active Output	
TT-CD-CVO	*Selectable:* 4-20mA/0-10Vdc *Output ranges:* -10 to +40°C or -10 to +110°C (selectable)
TT-CD-CVO-C	*Selectable:* 4-20mA/0-10Vdc (custom temp. scaling), Calibration to customer specification in the range of -10 to +100°C
Accessory	
BAND	Additional Metal Band

TT-EBB — External Black Bulb Sensor

The TT-EBB sensor is used for radiant heat in outdoor spaces. Black bulb temperature sensors are used to calculate comfort temperature which is specified as the average of the conductive temperature and the radiant temperature. Units contain either a high quality thermistor, platinum or nickel sensing element.

SPECIFICATION

Resistive output type	Resistive
Housing Material	PC (Halogen Free Flame Retardant, UV Stabilized)
Black bulb material	Anodised Aluminium
Housing Dimensions	125 x 105 x 85mm
Black bulb dimensions	17.5 x 37mm dia.
Environmental Housing	-30 to +70°C, 0 to 95% RH non-condensing
Protection	IP65
Weight	160g

$$T \text{ comfort} = \frac{(T \text{ radiant} + T \text{ conductive})}{2}$$

Part code	Description
Passive Output	
TT-EBB-A	10K3A1, Trend, Cylon, Distech
TT-BBE-B	10K4A1, Andover, Delta Control
TT-BBE-C	20K6A1, Honeywell
TT-BBE-D	PT100A, Serck
TT-BBE-E	PT1000A, Cylon
TT-BBE-F	Ni1000A, Sauter
TT-BBE-G	Ni1000A/TCR (LAN1), Siemens
TT-BBE-H	SAT1, Satchwell
TT-BBE-K	STA1, Landis & Staefa

Part code	Description
Passive Output	
TT-BBE-L	TAC1, TAC
TT-BBE-M	2.2K3A1, Johnson Controls
TT-BBE-N	3K3A1, Alerton
TT-BBE-P	30K6A1, Drayton
TT-BBE-Q	50K6A1
TT-BBE-S	SAT2, Satchwell
TT-BBE-T	SAT3, Satchwell
TT-BBE-W	SIE1, Siebe
TT-BBE-Y	STA2, Landis & Staefa
TT-BBE-Z	10K NTC, Carel

Data sheets online: www.sontay.com

TT-S — Space Temperature Sensors

This range of innovative space sensors is designed to meet the exacting standards of today's architects, specifiers and building owners. Its unique low profile, curved style allows it to blend seamlessly into the architecture of modern and older buildings alike. The TT-S can be supplied with a wide range of user interface options such as setpoint adjustment and momentary switches etc. To give the customer additional functionality. Sontay also offers a complete range of customised user interfaces for every requirement.

FEATURES

- Designed to be aesthetically pleasing
- Blends into the fabric of any building
- Meets exacting standards of today's specifiers
- LCD display options on -ACT models

TT-S

SETPOINT

SETPOINT AND LCD DISPLAY

SPECIFICATION

Current Output	4 to 20mA (2- or 3-wire)
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Housing colour	Polished White finish
Housing Material	ABS (Flame Retardant)
Momentary switch	N/O push button
Passive output types	Resistive
Protection	IP30
Set-point	2-wire 11-1kΩ/0-10Ω linear
Voltage output types	0 to 10Vdc
Weight	120g

Part code	Description
Passive Output	
TT-S-A	10K3A1, Trend, Cylon, Distech
TT-S-B	10K4A1, Andover, Delta Controls
TT-S-C	20K6A1, Honeywell
TT-S-D	PT100A, Serck
TT-S-E	PT1000A, Cylon
TT-S-F	Ni1000A, Sauter
TT-S-G	Ni1000A/TCR (LAN1), Siemens
TT-S-H	SAT1, Satchwell
TT-S-K	STA1, Landis & Staefa
TT-S-L	TAC1, TAC
TT-S-M	2.2K3A1, Johnson Controls
TT-S-N	3K3A1, Alerton
TT-S-P	30K6A1, Drayton
TT-S-Q	50K6A1
TT-S-S	SAT2, Satchwell
TT-S-T	SAT3, Satchwell
TT-S-W	SIE1, Siebe
TT-S-Y	STA2, Landis & Staefa
TT-S-Z	10K NTC, Carel
Active Output	
TT-S-ACT	Selectable: 4-20mA/0-10Vdc, output range 0 to 40°C
TT-S-ACT-TR	Selectable: 4-20mA/0-10Vdc, (customer temp. scaling), between -10 to +50°C
Accessories	
-SP	2-wire, 11-1kΩ/0-10Ω setpoint
-MS	Momentary Switch
-LCD*	Integral Display
-LEDG**	24V Green LED
-BLK***	Black Housing

Notes:
A calibration certificate is available on **-ACT** Types see page 79.
* Only available on **-ACT** types
** Not available on **-ACT** types
*** Plain front, no user interface options available (SP/MS/LCD/LEDG)

Data sheets online: www.sontay.com

Sontay®

TT-CVO Active Sensors 3-wire 4-20mA/0-10Vdc

A range of active temperatures gives a 3-wire 0-10Vdc or 4-20mA output based on a 10K3A1 thermistor. They offer advantages over the traditional PT100a-based active output sensors in the speed of reaction, physical robustness, and absence of self-heating. The sensors are available with an output of -10 to +40°C.

FEATURES
- Duct
- Outside
- Outside with Radiation Shield
- Immersion
- Clamp-on
- Flying Lead

DUCT

OUTSIDE WITH RADIATION SHIELD

OUTSIDE

IMMERSION

CLAMP-ON

FLYING LEAD

SPECIFICATION

Accuracy	±0.4°C @ 25°C
Conformity	EMC, CE & UKCA Mark
Country of origin	UK
Environmental Housing	-30 to 70°C, 0 to 95% non-condensing
Housing Dimensions	80 x 79 x 44mm
Housing Material	PC (Halogen free, flame retardant & UV stabilized)
Media	-10 to +60°C (TT-555), -30 to +100°C (others)
Output range	-10 to +40°C
Power Supply	24Vac/dc
Probe	TT-D & TT-I S/S 65, 100, 150, 250mm x 6mm dia, TT-OR PTFE 40 x 16mm dia, TT-C Die-cast zinc, 2 meter lead, TT-555 S/S 30 X 6mm dia.
Protection	IP65
Weight	200g max

Part code	Description
Passive Output	
TT-D-UN	Active Duct Sensor
TT-O-UN	Active Outside Air Sensor
TT-OR-UN	Active Outside Air Sensor with Rad. Shield
TT-I-UN	Active Immersion Sensor
TT-C-UN	Active Clamp-on Sensor
TT-555-UN	Active Flying Lead Sensor
Suffix (add to part code TT-D & TT-I only)	
-65	Active Duct Sensor
-100	Active Duct Sensor
-250	Active Duct Sensor
-65	Active Immersion Sensor
-100	Active Immersion Sensor
-250	Active Immersion Sensor

TT-BB Black Bulb Temperature Sensors

The TT-BB range of black bulb temperature sensors are used for radiant heat in indoor spaces. They are used to calculate comfort temperature which is specified as the average of the conductive and the radiant temperature. Units contain either a high quality thermistor, Nickel or Platinum sensing element.
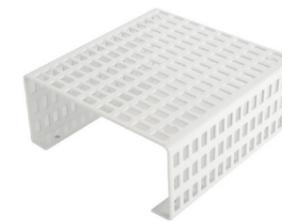
SPECIFICATION

Black bulb material	Anodised aluminium
Bulb dimensions	17.5 x 37mm dia.
Environmental Housing	0 to 50°C, 0 to 95% RH non-condensing
Housing colour	Polished white finish
Housing Dimensions	115 x 85 x 30mm
Housing Material	ABS (Flame Retardant)
Output Type	Resistive
Protection	IP30
Weight	120g

$$T \text{ comfort} = \frac{(T \text{ radiant} + T \text{ conductive})}{2}$$

Part code	Description
TT-BB-A	10K3A1, Trend, Cylon, Distech
TT-BB-B	10K4A1, Andover, Delta Controls
TT-BB-C	20K6A1, Honeywell
TT-BB-D	PT100A, Serck
TT-BB-E	PT1000A, Cylon
TT-BB-F	Ni1000A, Sauter
TT-BB-G	Ni1000A/TCR (LAN1), Siemens
TT-BB-H	SAT1, Satchwell
TT-BB-K	STA1, Landis & Staefa
TT-BB-L	TAC1, TAC
TT-BB-M	2.2K3A1, Johnson Controls
TT-BB-N	3K3A1, Alerton
TT-BB-P	30K6A1, Drayton
TT-BB-Q	50K6A1
TT-BB-S	SAT2, Satchwell

Part code	Description
TT-BB-T	SAT3, Satchwell
TT-BB-W	SIE1, Siebe
TT-BB-Y	STA2, Landis & Staefa
TT-BB-Z	10K NTC, Carel
Interface Options	
-SP	2-wire, 11-1kΩ/0-10Ω setpoint
-MS	Momentary switch
-LEDG	24V Green LED
-BLK *	Black housing
Accessory	
DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10)

Note: A Sensor Guard (TT-GD) is available – see below.
* Plain front, no user interface available (SP/MS/LEDG)

TT-GD Space Sensor Guard

The TT-GD is designed to protect TT-S and TT-BB temperature sensors from accidental damage.

FEATURES
- Robust construction
- Easy fixing

SPECIFICATION

Material	Powder coated mild steel
Weight	180g

Part code	Description
TT-GD	Space Sensor Guard

TT-CAL
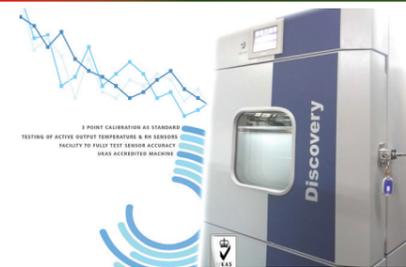
In house calibration is available for Sontay's RH range of sensors using our state of the art environmental chamber. Sontay can provide test certificates for 3-point calibration, with additional points if required -CVO & -ACT types ONLY.

Part code	Description
TT-CAL	3-Point Temp Calibration at 15, 25 & 35°C

Relative Humidity & Temperature Sensors

Data sheets online: www.sontay.com

Sontay®

TT-PO — Immersion Sensor Pockets

POCKETS THAT CAN WITHSTAND HIGHER PRESSURES AND FLOW RATES

TT-PO-521 and TT-PO-HP range of stainless steel pockets are for use with immersion sensors TT-I and TT-IH. The two part welded TT-PO-521 pockets are intended for low flow applications. They may be used in applications such as sumps or storage tanks or low flowing water in pipes. For applications requiring installation in high flowing water, the TT-PO-HP should be used. Pockets are designed to accept Sontay TT-I and TT-IH sensors. These pockets can be installed in any system that is constructed from compatible materials whose operating pressures and flow rates are within the specified ranges.

For applications requiring installation in high flowing water, the TT-PO-HP should be used. Pockets are designed to accept Sontay TT-I and TT-IH sensors. These pockets can be installed in any system that is constructed from compatible materials whose operating pressures and flow rates are within the specified ranges.For applications requiring installation in high flowing water, the TT-PO-HP should be used. Pockets are designed to accept Sontay TT-I and TT-IH sensors. These pockets can be installed in any system that is constructed from compatible materials whose operating pressures and flow rates are within the specified ranges.

TT-PO - 250mm Pockets

High Performance

Standard

TT-PO - 150mm Pockets

High Performance

Standard

TT-PO - 65mm Pockets

Standard

SPECIFICATION

Material	Stainless Steel 316
Max.pressure (out to in)	16 bar
Temperature Range	-20 to +400°C
Water velocity max. (o to 100°C)	3.7m/s
Weight	140g

Part code	Description
65mm Pockets	
TT-PO-521-65	Stainless Steel Immersion Pocket
100mm Pockets	
TT-PO-521-100	Stainless Steel Immersion Pocket
150mm Pockets	
TT-PO-521	Stainless Steel Immersion Pocket
TT-PO-HP	High Performance Stainless Steel Immersion Pocket
250mm Pockets	
TT-PO-521-250	Stainless Steel Immersion Pocket
TT-PO-HP-250	High Performance Stainless Steel Immersion Pocket

Industry requirements, recently introduced, are for pockets that can withstand higher pressures and flow rates.

To ensure these standards are met we have worked hard to supply a robust stainless steel pocket at a similar price to the brass version.

Our new range of stainless steel pockets offer the robustness and reliability you would expect, with an exceptionally competitive price.

High Performance Pocket

Fast Flowing Water Pipes

High Pressure Tanks

Our customers asked us for a 65mm version which we now supply in our standard range.

A high performance version is available for those projects that require that extra strength, such as for fast flowing water.

Data sheets online: www.sontay.com

UI-500 — Interface Options

INDIVIDUAL SOLUTIONS

In addition to our standard range of sensors we are able to manufacture user interface equipment to your specifications. Typically this would be a single or twin gang plate styled to match other equipment on a project. We can fit a large range of devices to UI-500 products including sensors, setpoint adjustments and LCDs.

THE EXAMPLES ON THIS PAGE ARE JUST A FEW OF THE TYPES, DESIGNS AND OPTIONS WE CAN SUPPLY. PLEASE CONTACT THE SALES SUPPORT TEAM FOR MORE INFORMATION OR TO DISCUSS YOUR REQUIREMENTS.

CUSTOMISED INTERFACE SOLUTIONS

All of our user interface products are designed and built to your exact requirements.

From custom engraving to LCD displays, switches and setpoints, we can supply a solution that fits your needs.

If you have a requirement, please call our technical support on **+44 (0) 1732 861218** or email support@sontay.com.

UI-AA-I-F — Alarm Annunciators

The UI-AA-I-F is used in conjunction with one analogue or VFC signals to provide local audible and visual alarm facilities. The units can accept voltage, current and VFC switched inputs. Adjustment of alarm threshold and the time delay before an alarm is standard. A mute button silences the audible alarm, whilst the visual alarm will not reset until the monitored parameter returns to within its desired range.

FEATURES
- LEDs for OK/alarm indication
- Audible alarm mute button
- Alarm output relay

SPECIFICATION

Input signals	0-10Vdc, 4-20mA. relay or 24Vac
Alarm delay time (sec)	5 to 45 secs
Relay output	SPC O. 6A @ 240Vac
Buzzer output	85dB @ 1 metre
LED indication	Green = OK, flashing red = alarm
Power supply	24Vac/dc ±15%
Housing	Panel mounting or UK standard single gang box
Ambient range	-10 to +40°C
Protection	IP32
Dimensions	85 x 85 x 37mm
Weight	140g

Part code	Description
UI-AA-1-F	1-channel Interface Panel

Data sheets online: www.sontay.com

Sontay

WHEN CONTROL REALLY MATTERS

MAKE SURE IT IS SONTAY

ROTARY SHOE VALVES

ZONE VALVES & ACTUATORS

DAMPER, VALVE & FAILSAFE ACTUATORS

VALVES & ACTUATORS

BENEFITS

CONTROL STABILITY
Smooth modulation without hunting ·
Improved flow balance & response ·

ENERGY EFFICIENCY
· Better coil & circuit performance
· Reduced pumping & overshoot losses

PRECISION
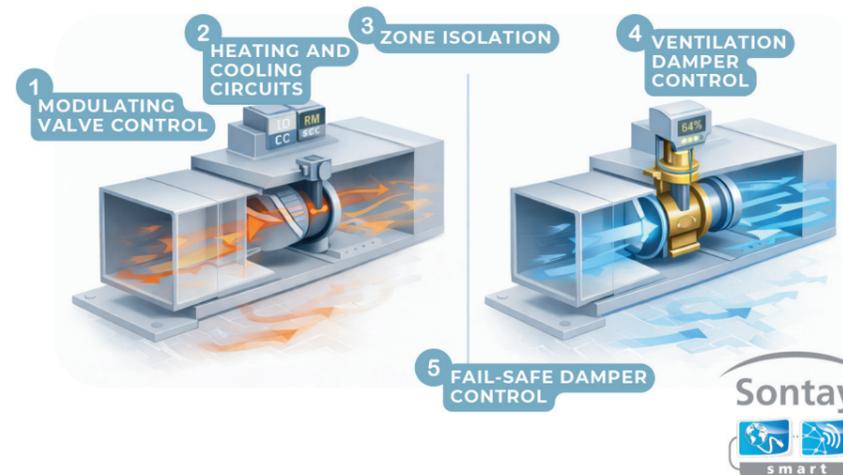Correct sizing using Kv data ·
Accurate temperature control & comfort ·

RELIABILITY
· Reduced wear, noise & callbacks
· Strong foundation for commissioning

SCAN HERE

Sontay Valves & Actuators for HVAC Systems

A wide range of actuators is available to suit different system requirements and control philosophies.

1 MODULATING VALVE CONTROL
2 HEATING AND COOLING CIRCUITS
3 ZONE ISOLATION
4 VENTILATION DAMPER CONTROL
5 FAIL-SAFE DAMPER CONTROL

Sontay smart

Sontay Valves & Actuators for HVAC Systems. Valves and actuators control water flow and air distribution in HVAC systems, converting control signals into precise mechanical movement. Correct selection and sizing are essential for stable control and energy efficiency.

Applications
- AHUs
- Ventilation & damper control
- Heating & cooling circuits
- Zone control
- Plant rooms

Valve Control
Supports modulating and ON / OFF control. Correct sizing using Kv data ensures smooth operation and efficient system performance.

Actuator Control Available with:
- 24V / 230V supply
- Modulating, ON / OFF, Raise / Lower
- Fail-safe and auxiliary switches

VA Damper Actuators
Reliable damper control with torque ratings from 5Nm to 30Nm.

System Integration
Integrates with Sontay temperature, pressure, flow, and smart communication ranges for efficient, stable HVAC control.

	Product Code	Applications	
1	VR-F	Modulating valve control	
2	VR-G	Heating & cooling circuits	
3	VZ	Zone isolation (ON / OFF)	
4	VA	Ventilation damper control	
5	VA-FS	Fail-safe damper control	

FLOW & BALANCING CONTROL
- Stable water flow
- Accurate temperature control

ZONE & CIRCUIT CONTROL
- ON / OFF and modulating control
- Supports zoning and demand control

VENTILATION & DAMPER CONTROL
- Controlled air volume
- Efficient air distribution

VA — Damper Actuators

Sontay's range of damper actuators are suitable for many applications including motorised control of dampers in ventilation systems. They are available with either on/off, floating (raise/lower) or modulating control signal input and various torque ratings. A failsafe (spring return) damper actuator is also available in a 20Nm torque rating. All units can have optional auxiliary switch(es) fitted and the direction of rotation can be reversed and the angle of mechanical travel can be limited.

FEATURES
- Position indication
- Maintenance-free
- Mechanical set rotation limits
- Reversible rotation

5NM TYPES

Part code	Description
5Nm Actuators	
VA-05A-24	24V On/off, raise/lower
VA-05A-24S	24V On/off, raise/lower with auxillary switch
VA-05A-230	230V On/off, raise/lower
VA-05A-230S	230V On/off, raise/lower with auxillary switches
VA-05M-24	24V Modulating

8NM, 10NM & 15NM TYPES

Part code	Description
8Nm Actuators	
VA-08A-24	24V On/off, raise/lower
VA-08A-24S	24V On/off, raise/lower with auxillary switch
VA-08A-230	230V On/off, raise/lower
VA-08A-230S	230V On/off, raise/lower with auxillary switch
10Nm Actuators	
VA-10M-24	24V Modulating
VA-10M-24S	24V Modulating with auxillart switch
15Nm Actuators	
VA-15A-24	24V On/off, raise/lower
VA-15A-24S	24V On/off, raise/lower with auxillary switch
VA-15A-230	230V On/off, raise/lower
VA-15A-230S	230V On/off, raise/lower with auxillary switch
VA-15M-24	24V Modulating
VA-15M-24S	24V Modulating with auxillart switch

20NM & 30NM & FAIL SAFE TYPES

Part code	Description
20Nm Actuators	
VA-20A-24S	24V On/off, raise/lower with auxillary switch
VA-20A-230S	230V On/off, raise/lower with auxillary switch
VA-20M-24S	24V On/off, raise/lower with auxillary switch
30Nm Actuators	
VA-30A-24	24V On/off, raise/lower
VA-30A-24S	24V On/off, raise/lower with auxillary switch
VA-30A-230S	230V On/off, raise/lower with auxillary switch
VA-30M-24S	24V Modulating with auxillart switch
Failsafe (Spring Return) Actuators	
VA-FA-24-N	24V On/off, raise/lower
VA-FA-24S-N	24V On/off, raise/lower with auxillary switch
VA-FA-230-N	230V On/off, raise/lower
VA-FA-230S-N	230V On/off, raise/lower with auxillary switch

SPECIFICATION

Ambient relative humidity	5 to 95 RH
Ambient Temperature Range	-20 to +50°C
Angle of rotation	95° (mechanically limitable)
Aux. switch rating	240V @ 5(2.5)A
Control signals	On/off, raise/lower and modulating (0-10Vdc)
Drive times (seconds)	60 to 120
Power Supply	24Vac @ 50/60Hz or 24Vdc ±20%, 80 to 265Vac @ 50/60Hz
Protection	IP42
Weight	0.5kg

General Note for Torque Requirement

For air dampers the following rule of thumb can be used in the absence of damper manufacturers' guidelines.

Torque	Duct area
5Nm	Up to 1m²
8Nm	Up to 1.6m²
10Nm	Up to 2m²
15Nm	Up to 3m²
20Nm	Up to 4m²
30Nm	Up to 6m²

Data sheets online: www.sontay.com

Valves & Actuators

VR-G — 3-Port Screwed Brass Rotary Shoe Valves

VR-G-LKN-1

SPECIFICATION

Body material	Brass DZR, CW 602N
Diverting leak rate	<0.02% of flow
Flow type	Mixing or diverting
Fluid temperature	-10 to +110°C
Mixing leak rate	<0.05% of flow
Nominal pressure	PN10
O-ring material	EPDM
Rangeability	100:1
Required Motor torque	5Nm
Shaft & bushing material	PPS
Weight	2.05kg max.

These brass rotary shoe valves are made of a special brass alloy (DZR) allowing use in heating and cooling systems, for both mixing and diverting applications. Valves are available from ½" to 2" sizes with internal threads.
Note: These are not tight shut-off valves.

FEATURES
- PN10
- Internal threaded connections
- Compact size

Part code	Description
3-port. Screwed Valves	
VR-G-01	½" BSP, 0.4 Kvs¾
VR-G-02	½" BSP, 0.63 Kvs
VR-G-03	½" BSP, 1.0 Kvs
VR-G-04	½" BSP, 1.63 Kvs
VR-G-05	½" BSP, 2.5 Kvs
VR-G-06	½" BSP, 4.0 Kvs
VR-G-07	¾" BSP, 2.5 Kvs
VR-G-08	¾" BSP, 4.0 Kvs
VR-G-09	¾" BSP, 6.3 Kvs
VR-G-10	1" BSP, 6.3 Kvs
VR-G-12	1 ¼" BSP, 16.0 Kvs
VR-G-13	1½" BSP, 25.0 Kvs
VR-G-14	2" BSP, 40.0 Kvs
Linkage Kit	
VR-G-LKN-1	For VA 5Nm actuators

Actuator Selection

Valve Body	24V R/L On/Off	230V R/L On/Off	24V Mod.	Linkage
All VR-G	VA-05A-24	VA-05A-230x	VA-05M-24	VR-G-LKN-1

VR-F — 3-Port Flanged Iron Rotary Shoe Valves

SPECIFICATION

Body material	Cast Iron
Flow type	Mixing or diverting
Fluid temperature	-10 to +110°C
Max. pressure drop	DN50: 50kPa. DN65 to DN150: 30kPa
O-ring material	EPDM
Pressure class	PN6
Rangeability	100:1
Required Motor torque	10Nm
Spindle & slipper material	Brass DZR, CW 602N
Weight	37kg max.

These cast iron rotary shoe valves are used in heating systems for mixing or diverting applications. Valves sizes from 50 to 150mm and PN6. Note: These are not tight shut-off valves.

Part code	Description
3-port. Flanged Valves	
VR-F-P3-F100-K225	100mm, 225 Kvs
VR-F-P3-F125-K280	125mm, 280 Kvs
VR-F-P3-F150-K400	150mm, 400 Kvs
VR-F-P3-F50-K60	50mm, 60 Kvs
VR-F-P3-F65-K90	65mm, 90 Kvs
VR-F-P3-F80-K150	80mm, 150 Kvs
Linkage Kit	
VR-LKN-2	For VA Actuators from 5 to 15Nm

Actuator Selection

Valve Body	24V R/L On/Off	230V R/L On/Off	24V Mod.	Linkage
VR-F-P3-F50	VA-05A-24x	VA-05A-230x	VA-05M-24	VR-LKN-2
Others	VA-15A-24x	VA-15A-230x	VA-15M-24x	VR-LKN-2

Data sheets online: www.sontay.com

Valves & Actuators

Sontay®

VZ — Zone Valves and Actuators

SPECIFICATION

Body rating	2.5Mpa
Close running time	5 seconds
Fluid temperature	0 to 94°C
Housing cover	Flame retardant ABS
Housing plate	Casting alominium alloy
Max. electrical load	Aux. switch 3A, 125 to 250Vac
Open running time	10 seconds
Operation	Normally closed, spring return
Power Consumption	6W
Supply	230Vac and 24Vac options
Valve body material	Forged Brass
Voltage tolerance	±10%
Working Humidity	non-condensing
Working Temp	0 to 60°C

This series of zone valves are designed for on/off control of fluid flow in a variety of heating and cooling applications, including AHUs and FCUs. They feature a reliable synchronous motor and a spring return mechanism to provide power failsafe position and fitted with an auxiliary switch as standard.

Part code	Description
2-port Valves	
VZ-2N-15	½" BSP Zone Valve
VZ-2N-20	¼" BSP Zone Valve
VZ-2N-25	1" BSP Zone Valve
3-port Valves	
VZ-3-15	½" BSP Zone Valve
VZ-3-20	¼" BSP Zone Valve
VZ-3-25	1" BSP Zone Valve

Part code	Description
Actuators	
VZ-SM230	24Vac Actuator with Auxillary switch
VZ-SM24	230Vac Actuator with Auxillary switch

Valves & Actuators
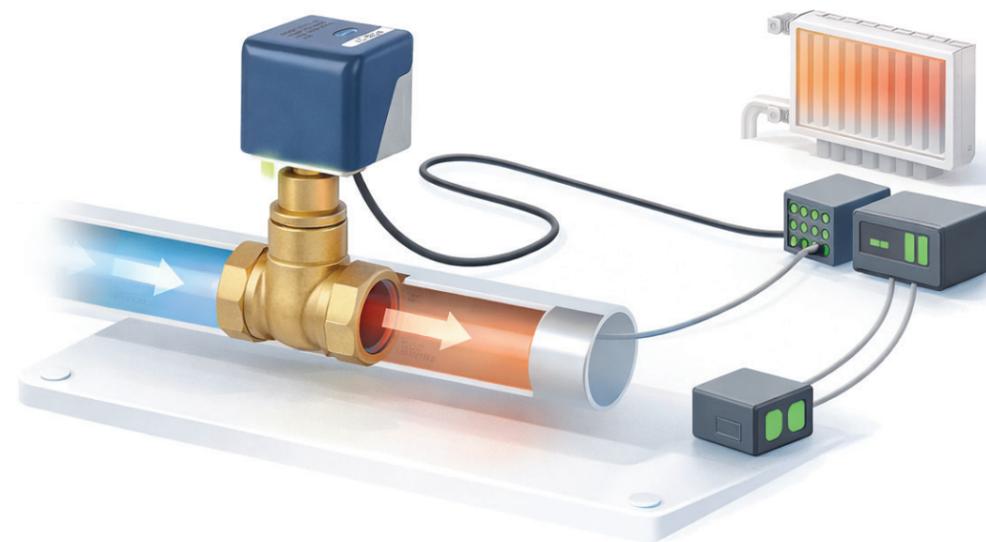
Data sheets online: www.sontay.com

WHEN PROTECTION IS CRITICAL

MAKE SURE IT IS SONTAY

EMERGENCY PRODUCTS   WATER LEAK DETECTION

WATER DETECTION & EMERGENCY PRODUCTS

BENEFITS

EARLY LEAK DETECTION

Detect water leaks before damage occurs ·
Protect buildings, equipment & critical systems ·

FAST EMERGENCY RESPONSE

· Immediate alarm & shutdown capability
· Limits spread of water and secondary damage

SYSTEM RELIABILITY

Continuous monitoring of high-risk areas ·
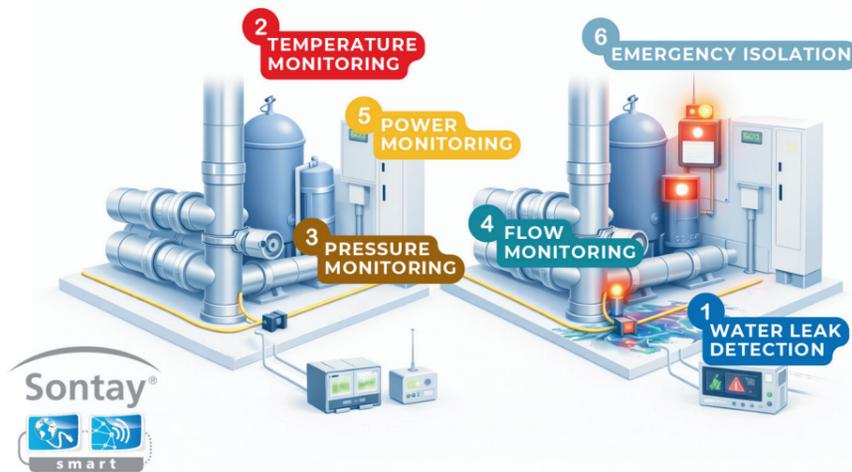Minimises downtime & maintenance ·

INTEGRATION & CONTROL

· Easy integration with BMS and alarm systems
· Supports local alerts and remote monitoring

Sontay

Protecting against
Water Damage

Early leak detection and emergency response for critical environments.

2 TEMPERATURE MONITORING
6 EMERGENCY ISOLATION
5 POWER MONITORING
3 PRESSURE MONITORING
4 FLOW MONITORING
1 WATER LEAK DETECTION

Sontay smart

Sontay Water Detection & Emergency Products.
Water detection and emergency products help protect buildings and equipment from leaks and water ingress. Early detection enables rapid response, reducing damage and downtime. Reliable monitoring is essential in areas where leaks may go unnoticed.

Applications
- Plant and boiler rooms
- Data and server rooms
- Mechanical and electrical rooms
- Underfloor and raised floors
- Pipework, valves, and pumps

Water Detection
Early leak identification using point sensors and detection cables to prevent escalation.

Emergency Response
Supports local alarms and system alerts for fast intervention or shutdown.

Monitoring & Protection
Provides continuous monitoring in high-risk areas to support safety and operational resilience.

System Integration
Integrates with building management and alarm systems for clear indication and coordinated response.

	Product Code	Applications	
1	WD	Water leak detection (point & cable)	
2	TT	Temperature monitoring in plant areas	
3	PA-DP	Pressure monitoring for system integrity	
4	FS-W	Flow monitoring to detect abnormal conditions	
5	PM-CT / PM-EM	Power monitoring for critical equipment	
6	VA / VZ	Emergency isolation via valves or actuators	

LEAK DETECTION
- **Point & cable-based monitoring**
- **Early warning of water ingress**

EMERGENCY ALERTS
- **Local alerts & system indication**
- **Supports emergency actions**

SYSTEM PROTECTION
- **Reduces downtime & repair costs**
- **Protects equipment and infrastructure**

EP–SW Emergency Stop Buttons

EP-KL

EP-SW-11

The EP-SW range of emergency stop buttons are for manual close down of gas systems in the event of fire or other emergency they are usually located at exits to gas plant rooms. All units are 'push' to activate a latching switch, which is released by either a 'twist' or 'key'. The main housing is bright yellow with red push button for easy identification. The units are fitted with one contact switch.

SPECIFICATION
Reset type	Key
Switch rating	15 to 41Vac, 4A. 13 to 110Vdc, 0.5A
Weight	220g

The EP-SW-11 is for use in gas safety circuits. Units consist of a ventilated high temperature glass filled resin case, with electrical connection terminals and a thermal fuse. The fuse is manufactured to fail at 72°C thus causing an open circuit between the two terminals. Replacement fuses are available

Part code	Description
EP-KL	Stop Button - Key lock
EP-SW-11	Stop Button - Twist Knob

EP-SW-72 Fusible Thermal Link

SPECIFICATION
Dimensions	62.5 x 62.5 x 41mm
Entry	20mm Diameter
Gross Weight (kg)	0.04
Housing	High temperature flame retardant glass filled resin
Melting Point	72°C
Protection	IP20
Rating	250Vac @ 5A
Weight	60g

FEATURES
- Fast acting thermal fuse @ 72°C
- Easy access to terminals and thermal fuse

Part code	Description
EP-SW-72	Electro-Thermal Link
EP-SW-72-F	Electro-Thermal Link-spare fuse

EP-FS Fireman's Switches

SPECIFICATION
Conformity	LVD, CE & UKCA Marked
Connections	4x 100mm flying Leads
Country of origin	UK
Gross Weight (kg)	0.18
Operating Range	-20 to +55°C
Switch rating	2A @ 250Vac
Dimensions (mm)	87 x 87 x 52mm
Keys	2 supplied (removable in all positions)

The EP-FS are a range of safety switches for use in the event of fire or other emergency. Usually they are located at exits to gas plant rooms. Units are key operated with a 2 or 3-position switches. The key is removable in all switch positions.

FEATURES
- 2 or 3 Position switches
- 2 keys supplied
- Key removable in all positions

Part code	Description
EP-FS-1	Firemans Switch Red 2 Position
EP-FS-2	Firemans Switch Red 3 Position

Data sheets online: www.sontay.com

Water Detection & Emergency Products

Sontay®

WD — Water Leak Detection

The WD-x range are designed to detect water leaks either at localised points using the WD-PS point sensor or larger areas with the WD-CS cable sensor. The surface of the WD-RS rain sensor can be heated to avoid false detection alarms resulting from dew forming, the detector can be swivelled on the mounting bracket and is held in place by a wing nut.

All these sensors must be used with the WD-AMX range of modules and should not be directly connected to a BMS controller. As the cable excitation used is an isolated AC signal which ensures the detector cable will not be subject to oxidation or erosion over time, avoiding the degradation problems associated with DC systems.

FEATURES
- WD-CS is easy to lay and detects along its entire length
- More than one WD-CS or WD-PS can be connected to a WD-AMX
- Self-contained heater to avoid nuisance alarms of WD-RS
- Detects water leaks under floors or isolated plant rooms
- Rain detector to automatically close windows

WD-AMX

SPECIFICATION
Ambient relative humidity	0 to 80% RH non-condensing
Ambient Temperature Range	0 to 40°C
Audible alarm	85db @ 2.3kHz at 10cm
Maximum cable run	200m - including detection cable
Output	SPDT relay 12A @ 230Vac
Power Supply	24Vac/dc ±10%
Protection	IP30
Supply Current	50mA max
Weight	100g

WD-CS

WD-PS

Part code	Description
Modules	
WD-AMX-1	24Vac/dc Controller with buzzer
WD-AMX-2	230Vac Controller with buzzer
Sensors	
WD-CS-2M	Water Cable Sensor, 2m cable, 3m leader
WD-CS-5M	Water Cable Sensor, 5m cable, 3m leader
WD-CS-10M	Water Cable Sensor, 10m cable, 3m leader
WD-CS-15M	Water Cable Sensor, 15m cable, 3m leader
WD-CS-20M	Water Cable Sensor, 20m cable, 3m leader
WD-CS-25M	Water Cable Sensor, 25m cable, 3m leader
WD-PS	Water Point Sensor, 2m
WD-RS	Rain Sensor with internal heater, 2m leader
WD-RS-5M	Rain Sensor with internal heater, 5m leader
Accessory	
WD-FC	Pack of 20 fixing clips for WD-CS

Note: Other WD-CS lengths available.
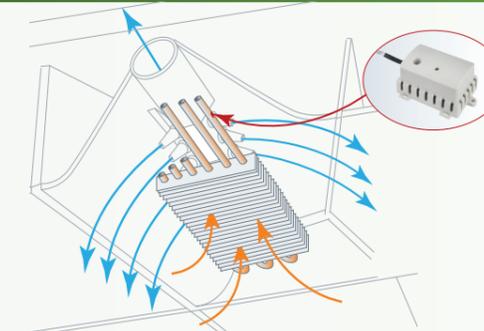
WD-RS

Data sheets online: www.sontay.com

WD-CPS — Condensation Prevention Sensor

Sontay's Condensation Prevention sensors provide the closest safeguard of condensation as it calculates the actual dewpoint based on the ambient relative humidity and the temperature of the surface.

A condensation prevention sensor can give early indication of the onset of condensation so that preventative action can be taken. >>>

WD-CPS — CONDENSATION PREVENTION SENSOR

Sontay's range of condensation prevention and detection devices are designed to provide a switched output signal to detect or even prevent the onset of condensation on chilled surfaces such as chilled beams. All devices come with 2m cable length and are mounted to chilled surfaces using screws or heavy-duty nylon straps. The WD-CPS Condensation Prevention Sensor provides the closest safeguard of condensation as it calculates the actual dewpoint based on the ambient relative humidity and the temperature of the surface. The user can even adjust the switching point within a range of ±3°C of the dewpoint. It also outputs the measured level condensation using a 4-20mA control signal and gives additional LED indication on its status.

SPECIFICATION
VFC Output	24Vac/dc @ 1A resistive SPDT
Current Output	Dry<3mA, wet>12mA
Power Supply	24Vdc ±5% or 24Vac ±10%, 20mA max. current draw
Cable Dimensions	2 meters
Mounting Plate	Stainless steel
Dimensions	73 x 48 x 30mm
Weight	80g

FEATURES
- Microcontroller based for reliable condensation prevention control
- Switches its output at the actual dewpoint
- Adjustable switching point
- LED indication

Part code	Description
WD-CPS	Condensation Prevention Sensor - 2m Lead
WD-CPS-5M	Condensation Prevention Sensor - 5m Lead

WD-CPS-UN — CONDENSATION PREVENTION SWITCH

The WD-CPS-UN Condensation Prevention Switch monitors the relative humidity and changes the state of the VFC to prevent "indoor rain" at a fixed set point and before it causes any damage to the building structure. It is a very cost effective solution to protect buildings and assets from any condensation.

SPECIFICATION
Output	VFC 24ac/dc @1A resistive SPDT
Power Supply	24Vdc ±5% or 24Vac ±10%, 20mA max. current draw
Cable Dimensions	2 meters
Mounting Plate	Stainless steel
Dimensions	73 x 48 x 30mm
Weight	80g

FEATURES
- Microcontroller based for reliable condensation prevention control
- Switches at 85% RH

Part code	Description
WD-CPS-UN	Condensation Prevention Switch - 2m lead

Data sheets online: www.sontay.com

Thermistor Types and Compatibility Chart

Element Code	Element Type	Manufacturer	Room	Outside	Duct	Immersion	Flying Lead
A	10K3A1	Aquatrol	✓	✓	✓	✓	✓
		Honeywell	T8120B	T7416A, T7043E	✓	T7106A, T7043F	T7076D
		Johnson	✓	✓	TE-6361V TE-636GV-1	✓	✓
		Satchwell	✓	DOT10K2, DOS10K2	DDT10K1	DWT10K1, DST10K1	✓
		Seachange	SEN/PTR/ROM	SEN/PR/OAT	SEN/PR/DCT	SEN/PR/IMM	SEN/FL
		Trend	TB-TS	TB-TO	TB-TD	TB-TI	✓
		Cylon	✓	✓	✓	✓	✓
		Distech Controls	✓	✓	✓	✓	✓
		Heatmiser	✓	✓	✓	✓	✓
		Ambiflex				ITN0120 (Hot water)	
		Phoenix Contact	✓	✓	✓	✓	✓
		Tridium	✓	✓	✓	✓	✓
		Easy IO	✓	✓	✓	✓	✓
B	10K4A1	Andover	TTS-S Series	✓	TT-O Series	TT-I Series	✓
		Siebe	✓	✓	✓	✓	✓
		York <40°C	✓	✓	✓	✓	✓
		Delta Controls	✓	✓	✓	✓	✓
		Phoenix Contact	✓	✓	✓	✓	✓
		Tridium	✓	✓	✓	✓	✓
C	20K6A1	Honeywell	T7460H, T7470A AF20, DRF20-S RF20	AF20 DAF20 T7416A1022	LF20	VF20T, VF20NT VF20L, VF20LN WPF20, T7425A	KFT20, KFT20B DKF20
D	PT100A	Sauter	EGT430/F011	✓	EGT466/F011 EGT447/F011	✓	EGT456/F011
		Serck	✓	✓	✓	✓	✓
		Siemens/Landis & Staefa	QAA100 , QAA2010	QAC2010	FK-TP/200 , QAM2110	QAE2110	QAP2010
		Phoenix Contact	✓	✓	✓	✓	✓
E	PT1000A	Honeywell	T7412A1018	T7416A1014	T7411A1001	T7413A1009	
		Sauter	EGT430/F101	EGT401/F101	EGT446/F101 EGT446/F101		EGT456/F101
		Serck	✓	✓	✓	✓	✓
		Siebe	TS-5811	✓	✓	✓	✓
		Cylon	✓	✓	✓	✓	✓
		Phoenix Contact	✓	✓	✓	✓	✓
F	Ni1000A`	Sauter	EGT330/F101	EGT301/F101	EGT346/F101 EGT347/F101 EGT348/F101	EGT346/F101 EGT347/F101 EGT348/F101	EGT354/F101 EGT356/F101
G	Ni1000A/TCR (LAN1)	Siemens	QAA24/25/26/27 QAA64	QAC22	QAM2120	QAE2120	QAP21, QAP22 QAZ21
H	SAT1	Satchwell	DRT, DU, DUS , DUSF	DOT0002 , DOS0002	DDT0001	DWT0001, DST0001	DDU
		Drayton DC1400	✓	✓	✓	✓	✓
K	STA1	Landis & Staefa	QAA2040 FR-T1	FW-T1	QAM2140 FK-T1	QAE2140	✓
L	TAC1	TAC	✓	✓	✓	✓	✓
M	2.2K3A1	Ambiflex	RTN3060	ETN3060	DTN3060	ITN3060 (Chilled water)	✓
		Johnson	TE-6344P	TE-6343P	TE-6IP , TE-6IV TE-634GV-1	TE-6IHP	✓
N	3K3A1	Alerton	MS-S Series, TS-1050	✓	✓	✓	✓
P	30K6A1	Drayton DC1100	A701	A702	✓	A703	✓
Q	50K6A1						
R	100K6A1	York >40°C	✓	✓	✓	✓	✓
S	SAT2	Satchwell	DR	✓	DD	DW1202 , DWS1301	✓
T	SAT3	Satchwell	✓	✓	✓	DW1204, DWS1202	✓
V	SAT4	Satchwell	✓	DO2202	✓	✓	✓
W	SIE1	Barber Colman	✓	✓	✓	✓	✓
		Siebe	✓	✓	✓	✓	✓
Y	STA2	Landis & Staefa	FR-T30	FO-T30	FK-T30	FT-T305	✓
Z	10K	Carel	✓	✓	✓	✓	✓

Thermistor Temperature Range

A - 10K3A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
−50	667828
−40	335671
−30	176683
−20	96974
−15	72895
−10	55298
−5	42314
0	32650
1	31030
2	29500
3	28054
4	26688
5	25396
6	24173
7	23016
8	21921
9	20885
10	19904
11	18974
12	18092
13	17257
14	16465
15	15714
16	15001
17	14325
18	13623
19	13053
20	12494
21	11943
22	11420
23	10923
24	10450
25	10000
26	9572
27	9165
28	8777
29	8408
30	8056
35	6530
40	5325
45	4367
50	3601
55	2985
60	2487
65	2082
70	1751
75	1480
80	1256
85	1070
90	916.1
95	787.0
100	678.6
105	587.3
110	510.1
115	444.5
120	388.6
125	340.8
130	300.0
140	234.1
150	184.8
160	–
170	–
180	–
190	–
200	–

B - 10K4A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
−50	441667
−40	239831
−30	135233
−20	78930
−15	61030
−10	47549
−5	37316
0	29490
1	28157
2	26891
3	25689
4	24547
5	23462
6	22430
7	21450
8	20517
9	19631
10	18787
11	17983
12	17219
13	16490
14	15797
15	15136
16	14507
17	13906
18	13334
19	12788
20	12268
21	11771
22	11297
23	10845
24	10413
25	10000
26	9606
27	9229
28	8869
29	8525
30	8197
35	6754
40	5594
45	4656
50	3893
55	3271
60	2760
65	2339
70	1990
75	1700
80	1458
85	1255
90	1084
95	939.6
100	817.2
105	713.0
110	624.1
115	547.9
120	482.5
125	426.0
130	377.2
140	298.1
150	238.0
160	–
170	–
180	–
190	–
200	–

C - 20K6A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
0	70204
1	66525
2	63059
3	59793
4	56713
5	53809
6	51070
7	48484
8	46044
9	43739
10	41563
11	39506
12	37562
13	35724
14	33986
15	32342
16	30786
17	29313
18	27918
19	26598
20	25346
21	24160
22	23036
23	21970
24	20959
25	20000
26	19090
27	18226
28	17405
29	16626
30	15886
31	15182
32	14513
33	13877
34	13273
35	12697
36	12150
37	11629
38	11133
39	10661
40	10211
41	9783
42	9374
43	8985
44	8614
45	8260
46	7922
47	7600
48	7293
49	6999
50	6719
51	6452
52	6196
53	5952
54	5719
55	5496
56	5282
57	5078
58	4883
59	4697
60	4518
61	–
62	–
63	–
64	–

D - PT100A
Sensor type: Platinum, temp coef. positive

°C	Ω
−50	80.3
−40	84.3
−30	88.2
−20	92.2
−15	
−10	96.1
−5	
0	100.0
5	
10	103.9
15	
20	107.8
25	109.8
30	111.7
35	
40	115.5
45	
50	119.4
55	
60	123.2
65	
70	127.1
75	
80	130.9
85	
90	134.7
95	
100	138.5
105	
110	142.3
115	
120	146.1
125	
130	149.8
140	153.6
150	157.3
160	161.0
170	164.8
180	168.5
190	172.2
200	175.8
210	179.5
220	183.2
230	186.8
240	190.5
250	194.1
260	197.7
270	201.3
280	204.9
290	208.5
300	212.0
310	215.6
320	219.1
330	222.7
340	226.2
350	229.7
360	233.2
370	236.7
380	240.1
390	243.6
400	247.0
401	–
402	–
403	–

E - PT1000A
Sensor type: Platinum, temp coef. positive

°C	Ω
−50	803
−40	843
−30	882
−20	921
−15	
−10	961
−5	
0	1000
5	
10	1039
15	
20	1078
25	
30	1117
35	
40	1155
45	
50	1194
55	
60	1232
65	
70	1271
75	
80	1309
85	
90	1347
95	
100	1385
105	
110	1423
115	
120	1461
125	
130	1498
140	1536
150	1573
160	1611
170	1648
180	1685
190	1722
200	1758
210	1795
220	1832
230	1868
240	1905
250	1941
260	1977
270	2013
280	2049
290	2085
300	2121
310	2156
320	2191
330	2227
340	2262
350	2297
360	2OR
370	2367
380	2401
390	2436
400	2470
401	–
402	–
403	–

F - NI1000A
Sensor type: Nickel, temp coef. positive

°C	Ω
−50	743
−40	791
−30	842
−20	893
−15	
−10	946
−5	
0	1000
5	
10	1056
15	
20	1112
25	
30	1171
35	
40	1230
45	
50	1291
55	
60	1353
65	
70	1417
75	
80	1483
85	
90	1549
95	
100	1618
105	
110	1688
115	
120	1760
125	
130	1833
140	1909
150	1987
160	2066
170	2148
180	2232
190	–
200	–
201	–
202	–
203	–
204	–
205	–

Thermistor Temperature Range

G - LAN 1 (Ni1000A/TCR)
Sensor type: Nickel, temp coef. positive

°C	Ω
-50	790.8
-40	826.8
-30	871.7
-20	913.4
-15	934.7
-10	956.2
-5	978.0
0	1000.0
1	1004.4
2	1008.9
3	1013.3
4	1017.8
5	1022.3
6	1026.7
7	1031.2
8	1035.8
9	1040.3
10	1044.8
11	1049.3
12	1053.9
13	1058.4
14	1063.0
15	1067.6
16	1072.2
17	1076.8
18	1081.4
19	1086.0
20	1090.7
21	1095.3
22	1100.0
23	1104.6
24	1109.3
25	1114.0
26	1120.0
27	1123.4
28	1128.1
29	1132.9
30	1137.6
35	1161.5
40	1185.7
45	1210.2
50	1235.0
55	1260.1
60	1285.4
65	1311.1
70	1337.1
75	1363.5
80	1390.1
85	1417.1
90	1444.4
95	1472.0
100	1500.0
105	1528.3
110	1557.0
115	1586.0
120	1625.4
125	–
130	–
135	–
140	–
150	–
170	–
180	–
190	–
200	–

H - SAT1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	9719
-40	9584
-30	9349
-20	8968
-15	8708
-10	8396
-5	8031
0	7614
1	7525
2	7434
3	7341
4	7246
5	7150
6	7053
7	6954
8	6853
9	6752
10	6649
11	6545
12	6440
13	6334
14	6228
15	6121
16	6013
17	5905
18	5786
19	5684
20	5580
21	5471
22	5362
23	5254
24	5147
25	5039
26	4933
27	4827
28	4721
29	4617
30	4513
35	4012
40	3545
45	3117
50	2730
55	2386
60	2082
65	1816
70	1585
75	1385
80	1213
85	1064
90	937
95	828
100	734
105	654
110	585
115	525
120	474
125	429
130	391
140	329
150	281
160	–
170	–
180	–
190	–
200	–

K - STA1
Sensor type: Thermistor, temp coef. positive

°C	Ω
0	2226
1	2236
2	2246
3	2256
4	2266
5	2276
6	2286
7	2298
8	2306
9	2316
10	2326
11	2337
12	2347
13	2357
14	2367
15	2377
16	2388
17	2398
18	2408
19	2418
20	2429
21	2439
22	2449
23	2460
24	2470
25	2480
26	2491
27	2501
28	2512
29	2522
30	2532
31	2543
32	2553
33	2564
34	2574
35	2585
36	2596
37	2606
38	2617
39	2627
40	2638
41	–

L - TAC1
Sensor type: Thermistor, temp coef. negative

°C	Ω
0	5085
5	4078
10	3294
15	2676
20	2188
25	1800
30	1488
35	1237
40	1034
50	740
60	540
70	400
80	300
90	230
100	180
110	–

M - 2.2K3A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	150395
-40	75593
-30	39789
-20	21839
-15	16416
-10	12453
-5	9529
0	7353
1	6988
2	6643
3	6318
4	6010
5	5719
6	5444
7	5183
8	4937
9	4703
10	4482
11	4273
12	4075
13	3886
14	3708
15	3539
16	3378
17	3226
18	3081
19	2940
20	2814
21	2690
22	2572
23	2460
24	2353
25	2252
26	2156
27	2064
28	1977
29	1893
30	1814
35	1471
40	1199
45	983.4
50	810.9
55	672.2
60	560.1
65	468.9
70	394.5
75	333.3
80	282.9
85	241.1
90	206.3
95	177.2
100	152.8
105	132.3
110	114.9
115	100.1
120	87.51
125	76.75
130	67.52
140	52.72
150	41.61
160	–
170	–
180	–
190	–
200	–

N - 3K3A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	200348
-40	100701
-30	53005
-20	29092
-15	21868
-10	16589
-5	12694
0	9795
1	9309
2	8850
3	8416
4	8006
5	7619
6	7252
7	6905
8	6577
9	6266
10	5971
11	5692
12	5428
13	5177
14	4940
15	4714
16	4500
17	4297
18	4105
19	3916
20	3748
21	3583
22	3426
23	3277
24	3135
25	3000
26	2871
27	2749
28	2633
29	2522
30	2417
35	1959
40	1598
45	1310
50	1080
55	895.5
60	746.2
65	624.7
70	525.5
75	444.0
80	376.9
85	321.2
90	274.8
95	236.1
100	203.6
105	176.2
110	153.0
115	133.3
120	116.6
125	102.2
130	89.95
140	70.23
150	55.44
160	–
170	–
180	–
190	–
200	–

P - 30K6A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	2497K
-40	1219K
-30	622911
-20	331876
-15	245785
-10	183697
-5	138502
0	105305
1	99787
2	94588
3	89689
4	85069
5	80713
6	76604
7	72726
8	69064
9	65608
10	62347
11	59257
12	56346
13	53585
14	50978
15	48511
16	46178
17	43969
18	41877
19	39895
20	38019
21	36240
22	34554
23	32955
24	31438
25	30000
26	28635
27	27339
28	26108
29	24939
30	23828
35	19046
40	15317
45	12390
50	10079
55	8243
60	6777
65	5600
70	4650
75	3879
80	3251
85	2737
90	2313
95	1963
100	1672
105	1430
110	1228
115	1058
120	914.6
125	793.2
130	690.2
140	527.4
150	407.7
160	-
170	-
180	-
190	-
200	-

Thermistor Temperature Range

Q - 50K6A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	4168K
-40	2033K
-30	1038K
-20	553243
-15	409689
-10	306183
-5	230842
0	175508
1	166310
2	157644
3	149480
4	141779
5	134521
6	127669
7	121207
8	115105
9	109344
10	103903
11	98761
12	93901
13	89307
14	84962
15	80851
16	76961
17	73280
18	69794
19	66492
20	63364
21	60400
22	57589
23	54925
24	52398
25	50000
26	47724
27	45564
28	43513
29	41565
30	39714
35	31744
40	25529
45	20650
50	16799
55	13740
60	11297
65	9334
70	7751
75	6466
80	5419
85	4560
90	3855
95	3271
100	2787
105	2384
110	2046
115	1762
120	1523
125	1321
130	1149
140	878.2
150	678.8
160	–
170	–
180	–
190	–
200	–

R - 100K6A1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	8337K
-40	4067K
-30	2077K
-20	1106K
-15	819378
-10	612366
-5	461683
0	351017
1	332619
2	315288
3	298959
4	283558
5	269041
6	255337
7	242414
8	230210
9	218688
10	207807
11	197521
12	187803
13	178613
14	169924
15	161702
16	153923
17	146560
18	139588
19	132984
20	126729
21	120799
22	115179
23	109850
24	104796
25	100000
26	95449
27	91128
28	87026
29	83129
30	79428
35	63489
40	51058
45	41301
50	33598
55	27479
60	22593
65	18669
70	15502
75	12932
80	10837
85	9121
90	7710
95	6543
100	5574
105	4767
110	4092
115	3525
120	3047
125	2642
130	2299
140	1756
150	1357
160	–
170	–
180	–
190	–
200	–

S - SAT2
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	–
-40	–
-30	–
-20	–
-15	–
-10	–
-5	–
0	2094
1	2079
2	2061
3	2046
4	2027
5	2010
6	1992
7	1973
8	1951
9	1934
10	1911
11	1897
12	1872
13	1851
14	1810
15	1809
16	1787
17	1764
18	1740
19	1716
20	1690
21	1667
22	1644
23	1621
24	1598
25	1574
26	1549
27	1524
28	1500
29	1476
30	1452
35	1336
40	1219
45	1113
50	1011
55	–
60	–
65	–
70	–
75	–
80	–
85	–
90	–
95	–
100	–
105	–
110	–
115	–
120	–
125	–
130	–
140	–
150	–
160	–
170	–
180	–
190	–
200	–

T - SAT3
Sensor type: Thermistor, temp coef. negative

°C	Ω
20	2708
21	2681
22	2659
23	2618
24	2616
25	2592
26	2567
27	2544
28	2520
29	2496
30	2474
31	2447
32	2423
33	2398
34	2372
35	2346
36	2322
37	2296
38	2269
39	2243
40	2216
45	2086
50	1950
55	1818
60	1694
65	1578
70	1461
75	1353
80	1258
85	1171
90	1089
95	1020
100	950

V - SAT4
Sensor type: Thermistor, temp coef. negative

°C	Ω
-10	1733
-5	1617
0	1504
5	1397
10	1298
15	1208
20	1128

W - SEI1
Sensor type: Thermistor, temp coef. negative

°C	Ω
-50	10732
-40	10517
-30	10172
-20	9654
-15	9320
-10	8933
-5	8496
0	8044
1	7910
2	7807
3	7702
4	7596
5	7489
6	7381
7	7271
8	7161
9	7050
10	6938
11	6825
12	6712
13	6598
14	6485
15	6370
16	6256
17	6141
18	6028
19	5913
20	5798
21	5686
22	5573
23	5461
24	5349
25	5238
26	5128
27	5019
28	4910
29	4803
30	4696
35	4185
40	3707
45	3271
50	2875
55	2521
60	2206
65	1929
70	1685
75	1472
80	1287
85	1127
90	986
95	866
100	760
105	670
110	590
115	522
120	462
125	410
130	365
140	290
150	233
160	–
170	–
180	–
190	–
200	–

Y - STA2
Sensor type: Thermistor, temp coef. negative

°C	Ω
0	7490
5	6340
10	5360
15	4540
20	3840
25	3250
30	2750
35	2320

Z - 10K NTC
Sensor type: Thermistor, temp coef. negative

°C	Ω
-10	42218
-5	33784
0	27197
5	22023
10	17933
15	14684
20	12087
25	10000
30	8315
35	6947
40	5831
45	4916
50	4163
55	3540
60	3023
65	2591
70	2230
75	1926
80	1669
85	1451
90	1266
95	1109
100	973

General Information

Your Sontay Account

SETTING UP AN ACCOUNT: • Complete and return an account application form to apply for credit facilities • Pay for your order up front by bank transfer or credit-debit card on a proforma account	**PLACING ORDERS:** Phone +44 (0) 1732 861200 Email sales@sontay.com Website www.sontay.com Mail Sontay Ltd. Four Elms Road · Edenbridge TN8 6AB · UK

SETTING UP AN ACCOUNT:

Companies wishing to purchase on credit account should complete and return the 'Application for credit account' form included in this catalogue or on our website at www.sontay.com. Please note that references will not be accepted from companies that are immediate competitors of Sontay.

Companies and individuals placing orders without an account will be invoiced on a proforma basis. Goods will not be despatched until the payment has cleared into our bank account, or for a faster response we are able to accept payment by Mastercard, Visa, and most types of debit/purchase cards.

CREDIT AND PAYMENT TERMS:

All accounts will be subject to a trading credit limit. Accounts trading beyond these terms will be notified and asked to correct their account.
Our standard credit terms are nett monthly account unless agreed otherwise in writing.

Accounts not settled within their terms will be notified and placed on stop. Accounts trading beyond agreed credit terms may invalidate their product warranty. (See warranty section).

Sontay reserve the right to charge interest on overdue balances.
Sontay reserve the right to withdraw credit facilities should payment performance be outside of agreed terms.

Please note that we are no longer able to accept payment by cheque.
Non proforma credit and debit card payments will be subject to a 5% handling fee to cover bank charges.

MINIMUM ORDER VALUES:

In order that we may maintain our competitive pricing it is necessary for us to insist on minimum order values per shipment
as follows:

UK and Republic of Ireland:	£30
International:	£50
France & Germany:	€45

Orders supported by a bank Letter of Credit will only be accepted if over £5,000 in value. In each case, an administration charge of 5% minimum will be applied to cover set-up of payment arrangements and any bank charges will be recovered at cost.

DISCOUNT STRUCTURE:

Customers may be allocated sales discounts, any discount given will be determined and reviewed on the basis of actual turnover. Standard discounts only apply to the specific products in this catalogue, special products and custom variants are excluded and are net priced. Your company discount entitlement can be confirmed at any time by calling Sales Support.

CUSTOM PRODUCTS:

Sontay is always willing to discuss OEM manufacturing and special build contracts. Please contact Sales Support or your account manager for more information.

PLACING ORDERS:

Orders can be placed by phone, mail, e-mail or by our website.

The following information is required:

• Order number
• Invoice address
• Delivery address
• Delivery date required
• Part shipment acceptance (Y/N)
• Customer contact
• Items detailed with Sontay part numbers

DELIVERY PERIODS:

Many items are available for immediate delivery. In all cases where delivery is critical consult the Sales Support who will try to fulfil your needs.

WARRANTY:

All Sontay branded products purchased after the 1st January 2017 and paid for in full compliance with Sontay's Terms and Conditions of Sale are covered by a 5 year warranty from the date the goods were despatched (excluding general fair wear & tear and gas sensing elements natural life span). The product warranty is void if the bar code label attached to the product has been removed or tampered with in anyway.

UKCA AND CE MARKING:

Compliance to the essential requirements of relevant EC Directives and British Standards is detailed on the datasheet for each product, and products are UKCA and CE marked where appropriate. All data sheets are provided on our website and copies of which can be obtained from the Sales Support Team.

WEEE AND ROHS DIRECTIVE COMPLIANCE:

Waste Electrical and Electronic Equipment (WEEE) Directive The WEEE Directive requires producers to pay for electronic and electrical equipment recycling and it covers a broad range of electronic and electrical products. The WEEE Directive aims to divert waste electronics from going into landfills and to encourage eco-design, reuse and recycling through producer responsibility. The WEEE Directive applies to standalone products. These are products that can function entirely on their own and are not part of another system or piece of equipment. Sontay do not supply any products that fit into this category.

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RESTRICTION OF HAZARDOUS SUBSTANCES (ROHS) DIRECTIVE

A sister directive to WEEE, the RoHS Directive bans the presence of specified hazardous substances in certain electronic and electrical equipment placed on the EU market after 1st July 2006. The RoHS Directive ensures that any such new electronic and electrical equipment does not contain Lead, Mercury, Cadmium, Hexavalent Chromium, Polybrominated Biphenyls (PBB) and Polybrominated Diphenyl Ethers (PBDE) that are often used as flame retardants in some plastics, unless derogation is provided for via an exemption. It should be noted that not all products that Sontay supply are subject to the RoHS Directive. For those that are subject to the Directive we are fully compliant.

PROGRESSING AN ORDER

To progress an order, please call our Sales Support Team and provide the following information:

• Your company name
• Your purchase order number
• The Sontay sales order number as stated on the order confirmation, if at all possible.

If the order has been dispatched but not received, then a 'Proof of Delivery' can be requested. It usually takes between 15 minutes and two hours to provide verbal delivery status or delivery time, location and signature, as applicable. A hard copy can be requested from the couriers, but can take some days to produce.

DELIVERY AND PACKAGING CHARGES

The following prices are for shipping and packing of parcels up to 30Kg within the UK. Heavier parcels are priced individually on request.

Service (UK only)	Price
Next Day (up to 20Kg) before 12.00am*	£11.00
Before 9.00am (up to 20Kg)	£26.00
France & Germany	€22.50

* Please note – before 12.00am delivery is not available in all areas.

For prices on international and heavier items please contact the Sales Support Team. Should you choose to nominate you own freight forwarder a £25 handling charge will be applied to your account to cover our handling and admin.

CANCELLATION OF AN ORDER

Sontay employ the latest lean manufacturing techniques and often manufacture and source products to suit customer's instructions. In the event of a cancelled order, the customer will be liable for any costs incurred by Sontay during the fulfilment of your order up to the point of cancellation. Please note we will only accept written cancellation of an order. You will receive a confirmation of cancellation from us advising that we have been able to cancel your order. We regret that we cannot accept cancellation of confirmed orders for any special products and custom variants.

CUSTOMER COLLECTION

The office is open for collections from 09.00 and 17.00 hours.
Please call Sales Support to arrange a suitable collection time.

DELIVERY TERMS

DAP Edenbridge or EXW: The buyer pays all transportation costs and also bears the risks for bringing the goods to their final destination. This term requires that the buyer is responsible for all duties and taxes applicable when goods are shipped internationally.

Loss, shortfall or damage (UK only): Dispatches will only be delivered if the destination address is attended and the receiver will sign for receipt of the goods.

Our carrier will make all reasonable attempt to deliver the package, it is the customer's responsibility to have a representative available to receive the package. Please allow a 30 minute leeway on delivery times.

If there is nobody available to receive the goods, the carrier will leave a calling card and return the delivery to their local depot. Simply call the number on the card to rearrange the delivery. Neither Sontay nor the carrier will advise further of any failure to deliver. Any loss, shortfall or damage discovered by the receiver/customer must be reported to Sontay within 7 days of despatch. Sontay will not accept any liability for claims made after this period and the customer will be liable to pay for the whole delivery.

Loss, shortfall or damage (Export): All export orders are accepted terms, DAP. Sontay accept no responsibility for either lost or damaged goods, we strongly advise customers to ensure that you have insurance in place to cover any such losses.

PRODUCT RETURNS

Please refer to the relevant information below for our procedures and guidelines on our product returns process. All goods that are to be returned to us must have a RMA number and documentation stating the reason for return, please contact the Sales Support Team to obtain your RMA number should you need to return goods. Any goods received without a valid RMA number or documented reason for return will not be processed and will be returned to the originator at their cost.

WARRANTY FAILURES

All goods received and accepted with the correct documentation will undergo inspection to determine their condition, goods that are determined to have failed within the defined warranty period will be credited or replaced as requested. Goods that are deemed by inspection and test to have been damaged by the user will be referred back to the customer for a decision on either return or disposal, after notification we will automatically return the goods to the originator after a period of 30 days without reply. Should you require advance replacements to items being returned we will require you to place a new purchase order, then after inspection should any credit be due it will be placed against the original order.

PRODUCT EXCHANGE

We offer to exchange products that have been ordered in error providing they are standard catalogue items, and have been returned within 60 days of purchase. These products will be inspected on return and if found to be in good condition for resale will be restocked for a 25% charge. Should you require exchange of items in advance we will require you to place a new purchase order, then after inspection should any credit be due it will be placed against the original order less the 25% restock charge. Please note that all customised "special products" and non-catalogue items are excluded from the product exchange programme.

SONTAY, EASIER TO DO BUSINESS

Sontay provide a range of services for customers to enable greater and easier access to key information and personnel.

CUSTOMER SEVSICES

UK:	Tel: 01732 861200
Email:	sales@sontay.com

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TECHNICAL SUPPORT

UK:	Tel: 01732 861218
International:	Tel: +44 1732 861218
Email:	support@sontay.com

ACCOUNTS

UK:	Tel: 01732 861202
International:	Tel: +44 1732 861202
Email:	accounts@sontay.com
Website:	www.sontay.com

You will find the latest news, information on any product updates as well access to all technical datasheets for our range of catalogue products. Visit often as we are constantly evolving the site!

ISO9001 & ISO14001:

Sontay Limited is committed to serving the environment and supplying products that meet or exceed our customers' expectations of quality and service, and to this end we have an Environmental & Quality Management System that complies with the requirements of BS-EN ISO14001 and ISO9001, the scope of which covers:

'The design, manufacture, distribution, technical and after-sales support of electro and electro-mechanical temperature and relative humidity sensors and their associated peripheral equipment for building management, measurement and control applications. The provision of training service related to the products provided, and their relative applications.' Copies of the certificates of registration are available on request.

DEFINITIONS:

(a) "Acceptance" means confirmation in writing by the Company upon receipt of the Customer's order.
(b) "Company" means Sontay Limited.
(c) "Contract" means the contract for the purchase and sale of Goods.
(d) "Customer" means the person, firm or company [described overleaf] and who purchases the Goods or any services from the Company.
(e) "Goods" means the goods or services which the Company is to supply in accordance with these Terms and Conditions.
(f) "Terms and Conditions" means the terms and conditions of sale set out below, the Company's "Your Sontay Account" document and any specific terms and/ or conditions agreed in writing between the Customer and the Company. In the event of conflict, the terms in this document shall take precedence.
(g) "Writing" includes communication by post, e-mail and by personal delivery of documents.

1. APPLICATION

(a) Unless otherwise specifically agreed in writing, these Terms and Conditions shall be incorporated into every offer, quotation, acceptance and contract for the sale or supply of Goods by the Company and, together with the order to which they relate, constitute the entire contract between the Company and the Customer. Any conditions proposed by the Customer which are inconsistent with these Terms and Conditions are hereby excluded (including any terms or conditions which the Customer purports to apply under purchase order, confirmation of order, specification or other document).
(b) These Terms and Conditions apply to all the Company's sales of Goods and any variation to these Terms and Conditions and any representation about the Goods or services shall have no effect unless expressly agreed in writing by a director of the Company. The Customer acknowledges that it has not relied on any statement, promise, assurance, warranty or representation made or given

by, or on behalf of, the Company which is not set out in the Contract. Nothing in this clause 1 shall exclude or limit the Company's liability for fraudulent misrepresentation.
(c) The Customer shall ensure that the terms of its order and any applicable specification are complete and accurate.

2. ACCEPTANCE

(a) All quotations are given subject to confirmation in writing by the Company upon receipt of the Customer's order, and no contract shall be concluded until such confirmation is given or the Customer's order is otherwise accepted. Unless otherwise stated in writing by the Company, each order when accepted constitutes a separate contract.
(b) The quality and description of the Goods shall be as set out in the Company's quotation or acknowledgement of order.
(c) All samples, drawings, descriptive matter, specifications and advertising issued by the Company, and any descriptions or illustrations contained in the Company's catalogues or brochures, are issued or published for the sole purpose of giving an approximate idea of the Goods described in them. They shall not form part of the Contract and this is not a sale by sample.

3. PRICES

(a) Prices quoted are exclusive of Value Added Tax from time to time ("VAT") (unless otherwise stated) and are those in force at the date of quotation. Unless otherwise stated in the quotation (if any) given by the Company, prices quoted may be varied at any time before delivery of the Goods or before performance of any services, provided that the prices may be varied after a Contract has become binding only by reason of an increase in the cost to the Company of raw materials or labour, or by reason of a fluctuation in exchange rates.
(b) If prices are varied after a Contract has become binding, the Company shall give the Customer written notice of such variation, and on receipt of such notice the Customer may cancel his order. In a case where Goods are to be delivered or services are to be supplied in instalments, the Customer may cancel payments only for the undelivered Goods or the unperformed part of the services. If the order is not cancelled, the Customer shall be bound to pay the increased or varied price in respect of the Goods delivered or services performed after such notice is received. To be effective, cancellations must be in writing and must be received by the Company either within 14 (fourteen) days of the date on which such notice was sent, or at least 28 (twenty-eight) days before delivery is due, whichever is the sooner.
(c) Unless otherwise expressly agreed, prices quoted are ex works and exclude all cost of packaging and delivery from the Company's premises, but these may be charged as extras.
(d) Any variation or amendment requested by the Customer will only be valid and binding on the Company when it is subject to a change order relating to the order duly placed with, and accepted by, the Company in writing and signed by a duly authorised representative of the Company, and subject to appropriate adjustment in price, delivery dates and other matters.
(e) Unless otherwise expressly agreed, in the case of export sales, prices quoted also exclude all overseas taxes and tariffs, and all costs of delivery which will be the responsibility of the Customer.

4. DELIVERY

(a) Delivery dates or periods are only best estimates, and the Company is not liable for the consequences of any delay. Accordingly, time shall not be of the essence in making deliveries.
(b) Unless otherwise agreed in writing by the Company, delivery of the Goods shall take place at the Company's place of business.
(c) Any delivery or performance period begins on the date of the Company's acceptance of the Customer's order, or (if later) when the Company receives from the Customer any further information which it may require to proceed

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with the Contract. The Customer agrees to supply such information to the Company promptly, and to accept the Goods within the delivery or performance schedule or timetable specified in the Contract, and to give any necessary instructions for delivery or performance accordingly.
(d) Where the Company has agreed to deliver the Goods to a place other than the Company's place of business, the Customer shall, in all cases other than export sales, provide the labour necessary to the Company to unload and stack the Goods free of charge to the Company. The Customer shall ensure that the delivery vehicle is unloaded within a reasonable time, and shall indemnify the Company against any loss or damage arising during unloading.
(e) If for any reason the Customer fails to accept delivery of any of the Goods when they are notified to the Customers as being ready for delivery, or the Company is unable to deliver the Goods on time because the Customer has not provided appropriate instructions, documents, licences or authorisations:
(i) risk in the Goods shall pass to the Customer (including for loss or damage caused by the Company's negligence);
(ii) the Goods shall be deemed to have been delivered to the Customer; and
(iii) the Company may store the Goods until actual delivery to the Customer, whereupon the Customer shall be liable for all related costs and expenses (including, without limitation, storage and insurance).
(f) If the Company delivers to the Customer a quantity of Goods of up to 5% more or less than the quantity ordered and accepted by the Company, the Customer shall not be entitled to object to or reject the Goods or any of them by reason of the surplus or shortfall, and shall pay for such goods at the pro rata Contract rate.
(g) Any typographical, clerical error or other omission in documents issued by the Company shall be subject to correction by the Company without liability on the part of the Company.
(h) The Customer must examine the Goods immediately upon delivery, and within 7 (seven) days thereafter notify the Company in writing of any defects, and return any allegedly defective part or parts of the Goods to the Company or as the Company shall direct at the Customer's expense within 18 (eighteen) days of delivery. The Customer must pay to the Company the costs of any tests carried out to such allegedly defective part or parts of the Goods (such cost to be certified by the Company) together with the costs of return thereof to the Company, in the event that no liability attaches to the Company in respect of any defects of any Goods. Where damage occurs, not apparent on reasonable inspection, the Customer must notify the Company within 7 (seven) days of discovery of any such damage. In default, the Customer will be deemed to have examined and accepted the Goods.
(i) The Company shall not be liable for any loss or damage caused by, or resulting from, any variation (for whatever reason) in the specifications or technical data of any outside manufacturer or, for any loss or damage arising out of curtailment or cessation of supply following such variation.
(j) The Company will repair or, at its option, replace free of charge any part of the Goods lost or damaged in transit provided that (if the Company appoints the carrier) the Company and the carrier are given written notice of such loss or damage within the time required by the carrier's Conditions of Carriage. Alternatively, where delivery is made by the Company's own transport, the Company should be given written notice within 3 (three) days of the arrival of the Goods or, in the case of non-delivery, within 14 (fourteen) days of dispatch. This clause shall not apply to export sales.
(k) The quantity of any consignment of Goods as recorded by the Company on dispatch from the Company's place of business shall be conclusive evidence of the quantity received by the Customer on delivery, unless the Customer can provide conclusive evidence proving the contrary.

5. RISK / TITLE

(a) The Goods are at the risk of the Customer from the time of delivery.
(b) Ownership of the Goods shall not pass to the Customer until the Company has received in full (in cash or cleared funds) all sums due to it in respect of:
(i) the Goods supplied to the Customer; and
(ii) all other sums which are, or which become, due to the Company from the

Customer on any account.
(c) Until ownership of the Goods has passed to the Customer, the Customer shall:
(i) hold the Goods on a fiduciary basis as the Company's bailee;
(ii) store the Goods (at no cost to the Company) separately from all other goods of the Customer or any third party in such a way that they remain readily identifiable as the Company's property;
(iii) not remove, destroy, deface or obscure any identifying mark or packaging on or relating to the Goods;
(iv) maintain the Goods in satisfactory condition and keep them insured on the Company's behalf for their full price against all risks, to the reasonable satisfaction of the Company. On request the Customer shall produce the policy of insurance to the Company; and
(v) give to the Company information relating to the Goods as the Company may require from time to time.
(d) The Customer may resell the Goods before ownership has passed to it, solely on the following provisions:
(i) any sale shall be effected in the ordinary course of the Customer's business at full market value; and
(ii) any such sale shall be a sale of the Company's property on the Customer's own behalf, and the Customer shall deal as principal when making such a sale.
(e) The Customer's right to possession of the Goods shall terminate immediately if:
(i) the Customer (being an individual) has a petition, receiving order in bankruptcy or bankruptcy order presented or made against him, or commits an act of bankruptcy, or makes or offers to make an arrangement or composition with his creditors, or otherwise takes the benefit of any statutory provision for the time being in force for the relief of insolvent debtors, or (being a body corporate) convenes a meeting of creditors (whether formal or informal), or enters into liquidation (whether voluntary or compulsory) except a solvent voluntary liquidation for the purpose only of reconstruction or amalgamation, or has a receiver and/ or manager, administrator or administrative receiver is appointed of its undertaking or assets or any part thereof, or documents are filed with the court for the appointment of an administrator of the Customer or notice of intention to appoint an administrator is given by the Customer or its directors or by a qualifying floating charge holder (as defined in paragraph 14 of Schedule B1 to the Insolvency Act 1986), or a resolution is passed or a petition presented to any court for the winding-up of the Customer or for the granting of an administration order in respect of the Customer (other than for the purpose of amalgamation or reconstruction), or any proceedings are commenced relating to the insolvency or possible insolvency of the Customer; or
(ii) the Customer suffers or allows any distress, execution, whether legal or equitable, to be levied on his/its property or obtained against him/it, or fails to obsEVSe or perform any of his/its obligations under the Contract or any other contract between the Company and the Customer, or is unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986 or the Customer ceases to trade; or
(iii) the Customer encumbers or in any way charges any of the Goods.
(f) The Company shall be entitled to recover payment for the Goods notwithstanding that ownership of any of the Goods has not passed from the Company.
(g) The Customer grants the Company, its agents and employees an irrevocable licence at any time to enter any premises where the Goods are or may be stored in order to inspect them, or, where the Customer's right to possession has terminated, to recover them.
(h) Where the Company is unable to determine whether any Goods are the goods in respect of which the Customer's right to possession has terminated, the Customer shall be deemed to have sold all goods of the kind sold by the Company to the Customer in the order in which they were invoiced to the Customer.
(i) On termination of the Contract, howsoever caused, the Company's (but not the Customer's) rights contained in this clause 5 shall remain in effect.

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Terms and Conditions of Sale

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6. LAW

The validity construction and performance of any contract to which these Terms and Conditions apply shall be governed by the law of England and any disputes or claims arising out of or in connection with this Contract or its subject matter, shall be submitted to the English Courts.

7. PAYMENT

(a) Subject to the establishment of an approved credit account with the Company, payment by the Customer is due within 30 (thirty) days of the date of the invoice.

(b) If the Customer fails to pay the Company by the due date for payment, the Company may either suspend all further deliveries of Goods or performance of services until payment is made in full, or cancel the order and any subsequently ordered Goods insofar as any such Goods remain to be delivered or services remain to be performed thereunder.

(c) The Company reserves the right to charge interest on any amounts outstanding when payment has not been made on the due date for payment at the rate (both before and after judgment) of 2 (two) per cent above HSBC base rate for the time being, calculated on the outstanding balance from the due date for payment up to and including receipt by the Company of payment.

(d) Any sums paid by deposit, retainer or prepayment are not refundable in the event of a Customer cancelling an order. The Company reserves the right at any time, and at its sole discretion, to demand security for payment before continuing with or delivering any order.

(e) Payment of the price for the Goods is due in pounds sterling.

(f) No payment shall be deemed to have been received until the Company has received cleared funds.

(g) All payments payable to the Company under the Contract shall become due immediately on its termination despite any other provision.

(h) The Customer shall make all payments due under the Contract in full without any deduction whether by way of set-off, counterclaim, discount, deduction, withholding, abatement or otherwise, unless the Customer has a valid court order requiring an amount equal to such deduction to be paid by the Company to the Customer.

8. GUARANTEE OF QUALITY

(a) The Company shall have the right, whether before or after the date of the order, to alter the specification of the Goods, or any part thereof, provided that such alterations shall not adversely affect the performance of the Goods.

(b) Where the Company is not the manufacturer of the Goods, the Company shall endeavour to transfer to the Customer the benefit of any warranty or guarantee given to the Company.

(c) The Company warrants that (subject to the other provisions of these Terms and Conditions) on delivery, and for a period of 36 (thirty six) months from the date of delivery, the Goods shall be of satisfactory quality within the meaning of the Sale of Goods Act 1979.

(d) The Company shall not be liable for a breach of the warranty in clause 8(c) unless the Company receives notice in writing from the Customer within the warranty period referred to in clause 8(c) of a breach of that warranty, is given a reasonable opportunity, after receiving the notice, of examining such Goods, and provided also that the Customer (if asked to do so by the Company) returns such Goods to the Company's place of business at the Customer's cost for the examination to take place there.

(e) The Company shall not be liable for a breach of the warranty in clause 8(c) if:

(i) the Customer makes any further use of such Goods after giving notice to the Company in accordance with clause 8(d); or

(ii) the defect arises because the Customer failed to follow the Company's oral or written instructions as to the storage, installation, commissioning, use or maintenance of the Goods or (if there are none) good trade practice; or

(iii) the Customer alters or repairs such Goods without the written consent of the

Company; or

(iv) the defect arises as a result of fair wear and tear, wilful damage, negligence, or abnormal working conditions.

(f) Subject to clause 8(d) and clause 8(e), if any of the Goods do not conform with the warranty in clause 8(c), the Company shall, at its option, repair or replace such Goods (or the defective part) or refund the price of such Goods at the pro rata Contract rate provided that, if the Company so requests, the Customer shall, at the Company's expense, return the Goods or the part of such Goods which is defective to the Company.

(g) If the Company complies with clause 8(f) it shall have no further liability for a breach of the warranty in clause 8(c) in respect of such Goods.

9. USE OF THE GOODS

Where the Goods are plant for use or operation at work (or are components for such plant), it is the Customer's responsibility to ensure that proper standards of safety are maintained in using the Goods and (without limitation) to pass on all instructions regarding such use to personnel and to arrange for their training in such use where appropriate. This obligation shall extend to taking all reasonable steps to ensure compliance with the Health and Safety at Work etc. Act 1974 in the event of sale on or other supply by the Customer.

10. INTELLECTUAL PROPERTY

(a) The Company will indemnify the Customer against any claim for infringement of Letters Patent, Registered Design, Trade Mark or Copyright ("Intellectual Property Rights") arising by the use or sale of any of the Goods, against all costs and damages which the Customer may incur in any action for such infringement, or for which the Customer may become liable in any such action. Provided always that this indemnity shall not apply to any infringement which is due to the Company having followed any instructions furnished or given by the Customer, or to the use of such Goods in a manner, or for a purpose, or in a foreign country, not specified by, or disclosed to the Company, or to any infringement which is due to the use of the Goods in association or combination with any other goods not supplied by the Company. And provided also that this indemnity is conditional upon the Customer giving to the Company notice in writing within 7 (seven) days of any claim being made, or action threatened, or brought against the Customer, and on the Customer permitting the Company at the Company's own expense, to conduct any litigation that may ensue and all negotiations of the claim. The Customer warrants that any instruction furnished or given by it to the Company in respect of the Goods, shall not be such as will cause the Company to infringe any intellectual Property Rights.

(b) The Customer shall indemnify the Company for any loss, damage, expense or liability in any suit or proceedings based upon any claim for the infringement of Intellectual Property Rights brought against the Company resulting from the Company's compliance with the Customer's designs or specifications, and for any such infringement involving any marking or branding applied by the Company at the request of the Customer.

11. LIABILITY

(a) Subject to these Terms and Conditions, the following provisions set out the entire financial liability of the Company (including any liability for the acts or omissions of its employees, agents and sub-contractors) to the Customer in respect of:

(i) any breach of these Terms and Conditions;

(ii) any use made or resale by the Customer of any of the Goods, or of any product incorporating any of the Goods; and

(iii) any representation, statement or tortious act or omission, including negligence, arising under or in connection with the Contract.

(b) All warranties, conditions and other terms implied by statute or common law (save for the conditions implied by section 12 of the Sale of Goods Act 1979) are, to the fullest extent permitted by law, excluded from the Contract.

(c) Nothing in these Terms and Conditions excludes or limits the liability of the Company:

General Information

(i) for death or personal injury caused by the Company's negligence; or

(ii) for any matter which it would be illegal for the Company to exclude or attempt to exclude its liability; or

(iii) for fraud or fraudulent misrepresentation.

(d) Subject to clauses 9(b) and 9(c):

(i) the Company's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the performance or contemplated performance of the Contract, shall be limited to the Contract price; and

(ii) the Company shall not be liable to the Customer for loss of profit, loss of business, or depletion of goodwill, in each case, whether direct, indirect or consequential, or any claims for consequential compensation whatsoever (howsoever caused) which arise out of or in connection with the Contract.

(e) This clause 11 shall survive termination of the Contract.

12. FORCE MAJEURE

(a) The Company shall not be liable to the Customer to the extent that fulfilment of its obligations to the Customer under the Contract has been prevented, hindered or delayed by force majeure, as herein defined.

(b) For the purpose of this clause 12, "force majeure" shall mean any circumstance beyond the control of the Company and shall include (without limitation):

(i) riot, civil, commotion, war, rebellion, national or international emergency, strikes, lockouts or other labour disputes;

(ii) restriction or damage due to natural cause, floods, fires, storms, explosions or breakdown of machinery;

(iii) any order of a local national or international authority;

(iv) shortage of labour equipment, materials or supplies; or

(v) transportation embargoes, or failure or delays in transport or utility services.

13. REGULATIONS

The Customer warrants that it has complied with every applicable lawful requirement or instruction and (without limitation) that it has obtained every necessary licence, permit or authority that may be required in connection with the supply of Goods and services to be carried out under the Contract.

14. DEFAULT INSOLVENCY

Without prejudice to any other right or remedy which the Company may lawfully enforce or exercise, if the Customer shall commit a breach of any of its obligations to the Company under this Contract, or any other contract, or if the any of the events referred to in clause 5 (e) occur in respect of the Customer, then the Company may, without notice:

(a) suspend or determine the Contract or any unfulfilled part thereof or any other contract between the Company and the Customer: and/or

(b) stop any Goods in transit; and/or

(c) recover any Goods from the Customer's premises for which payment has not been made in full. Any cost incurred by the Company during the process of recovering Goods from the Customer's premises for which payment has not been made in full, would be regarded as the debt of the Customer to the Company.

15. GENERAL

(a) The Customer shall not assign, transfer, mortgage, charge, subcontract or deal in any other manner with all or any of its rights or its interest in the Contract without the written consent of the Company.

(b) Each right or remedy of the Company under the Contract is without prejudice to any other right or remedy of the Company whether under the Contract or not.

(c) If any provision of the Contract is found by any court, tribunal or administrative body of competent jurisdiction to be wholly or partly illegal, invalid, void, voidable, unenforceable or unreasonable it shall, to the extent of such illegality, invalidity, voidness, voidability, unenforceability or unreasonableness be deemed severable and deleted, and the remaining provisions of the Contract and the remainder of such provision shall continue in full force and effect.

(d) Failure or delay by the Company in enforcing, or partially enforcing, any provision of the Contract shall not be construed as a waiver of any of its rights under the Contract.

(e) Any waiver by the Company of any breach of, or any default under, any provision of the Contract by the Customer shall not be deemed a waiver of any subsequent breach or default and shall in no way affect the other terms of the Contract.

(f) The parties to the Contract do not intend that any term of the Contract shall be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person that is not a party to it.

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Application Quick Reference

Common building applications and relevant Sontay product families.

Product Name Listing

A comprehensive alphabetical listing for quick and precise product navigation.

Product Name Listing

A comprehensive alphabetical listing for quick and precise product navigation.

Description   Page No.

Education and Support in HVAC and Indoor Climate Control

Sontay® Academy

bcia training partner

BCM00 — Introduction to Building Controls and HVAC
Difficulty level: GREEN

This course gives an overview of the systems and technologies used in the HVAC industry and includes the use of building controls and building management systems. It is designed for those already involved in building controls that require a knowledge and understanding of the terminology, technologies and systems used.

BCM01 — Fundamentals of HVAC & Building Controls
Difficulty level: GREEN

This course gives an overview of the systems and technologies used in the HVAC industry and includes the use of building controls and building management systems. It is designed for those already involved in building controls that require a knowledge and understanding of the terminology, technologies and systems used.

BCM04 — Control Function of Heating Plants
Difficulty level: AMBER

This course provides a detailed overview of all types of heating plant and systems together with the associated control applications. This is an course for those who have a good level of knowledge and a recommended minimum of two years' experience within the industry.

BCM02 — Measuring & Control Technology
Difficulty level: RED

This assessed course gives an overview of the systems and technologies used in the heating, ventilating and air conditioning industry. Building control and building management systems are also covered. This course is designed for engineers and technicians who have some knowledge and field experience with a minimum period of one year within the industry. It is also necessary that candidates complete Fundamentals of HVAC & Building Technology (BCM01) first.

BCM05 — Control of Ventilation and Air Conditioning
Difficulty level: AMBER

This course details the requirements of air conditioning plants and how they can be controlled effectively for energy efficiency. It is designed for those responsible for the design, installation and commissioning of building control technologies & systems for ventilation and air conditioning. This course builds on the knowledge gained in the BCM01-BCM04 courses.

BCM03 — Hydraulics in Building Services
Difficulty level: AMBER

BCM03 covers the main water circuits & systems and includes the necessary mechanical knowledge needed to understand applications, valve sizing and control. The course is designed for those who have some knowledge and a recommended minimum of one year field experience within the industry.

BCM06 — Control of Cooling Systems
Difficulty level: RED

BCM06 is a detailed, theory-based course relating to refrigeration and psychometrics, focusing on how the refrigeration process operates. This is a course for those who have a good level of knowledge and a recommended minimum of two years' experience within the industry.

When attendees successfully complete BCM01-BCM03, they will be awarded with a Technical Certificate and with completion of BCM04-BCM06, they will be awarded with an Advanced Technical Certificate.

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