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AIR & WATER FLOW

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Wind Speed & Direction Sensors

The AV-WS measures wind speed providing a pulsed output and is intended for applications where external weather conditions influence the building control strategy, such as for the automatic closing of windows. A mounting arm and U bolts for pole mounting are included.

Specification

Electrical conns: Flying lead (3m long)
Ambient range: 20°C to +70°C

AV-WS Series

Type	Part No.
Wind speed sensor	AV-W-S
Wind speed & direction sensor	AV-W-AD

Single-Point Air Velocity Sensor

The AV-622 is a single-point, multi-range air velocity transmitter with user selectable 0-10V DC or 4-20mA outputs and four user selectable measurement ranges. 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 0-10V DC or 4-20mA outputs
- Built-in self-test feature
- Built-in manual override facility for 0%, 50% or 100% of output range
- Durability and resistance to chemical reagents

Specification

0 to 4 m/s, 0 to 8 m/s, 0 to 16 m/s, 0 to 32 m/s selectable ranges.
Accuracy (\pm 3% of range): 0 to 4 m/s, \pm ; 0.12 m/s
0 to 8 m/s, \pm ; 0.24 m/s
0 to 16 m/s, \pm ; 0.48 m/s
0 to 32 m/s, \pm ; 0.96 m/s

AV-622 Series

Type	Part No.
Air velocity sensor	AV-622
Accessory	
Duct probe adjustment flange	DPA

Air Flow Switch

This 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.

Features

- Adjustable switching point
- Lid-mounting screws provide tamper proofing

FS-521 Series

Description	Part No.
80 x 175 mm Paddle Switch	FS-521

Fan Speed Controllers

Remote control via 0-10V DC or 4-20mA or Modbus signal. Suitable for direct connection to BMS or transmitters.

FC-ERV Series - IP54

Type	Part No.
1A - Single phase	FC-ERV-1
3A - Single phase	FC-ERV-3
5A - Single phase	FC-ERV-5
10A - Single phase	FC-ERV-10

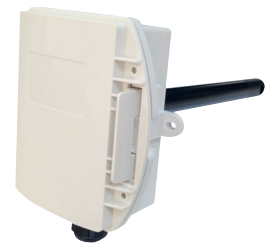
Manual Speed Controllers for Small Motors

Manual control for small, single-phase motors up to 4 amps. Suitable for wall and/or flush mounting.

FC-MTY Series - IP54

Type	Part No.
1A - Single phase	FC-MTY-1
2A - Single phase	FC-MTY-2
4A - Single phase	FC-MTY-4

Sontay®





Multi Point Air velocity Probes

The AV-EP series of air velocity probes are available in lengths from 100 to 600mm and the AV-MPS series in lengths of 700 to 2000mm. They are used to ensure that recommended flow rates for public buildings and industrial plants are achieved. They can be connected to a PA-60x, PA-65x, PA-699 Air Differential Pressure Sensor of an appropriate range.

Features

- Mounting plates included
- Double gasket seals the probe to the duct
- Push on connectors to suit PA-TUBE-8MM

Specification

Probe Material: AV-EP PVC Flame retardant (V0)
 AV-MPS 316 Stainless steel
 Connectors: Nickel plated brass to suit 6mm ID PVC tubing

AV-MPS Series

Type	Probe Length (mm)	Part No.
Pair of multi-point stainless steel probes	700	AV-MPS-700
	800	AV-MPS-800
	1000	AV-MPS-1000
	1250	AV-MPS-1250
	1500	AV-MPS-1500
	1750	AV-MPS-1750
2000	AV-MPS-2000	
Accessories		
PVC tube 8mm o/d, 30m reel		PA-TUBE-8MM

AV-EP Series

Type	Probe Length (mm)	Part No.
Pair of multi-point ABSI probes	100	AV-EP-100
	200	AV-EP-200
	300	AV-EP-300
	400	AV-EP-400
	500	AV-EP-500
	600	AV-EP-600



Wind Speed & Direction Sensor

The AXIO wind speed and direction sensors give an analogue output of both the wind speed and direction. The units are manufactured from anodised aluminium alloy, UPVC and stainless steel.

AX-WSD-V

Type	Wind Speed	Wind Direction	Part No.
0-10V DC Output - LED indication control box	0-50m/s	10 to 360 degrees	AX-WSD-V

Air Velocity Probes - Multipoint

Stainless steel multipoint air velocity probes for use in ductwork. The two probes can be connected to the relevant AX-ADPT air velocity transmitter to output velocity pressure to the BMS which can then accurately work out air velocity in m/s.

AX-AV-MPP

Type	Min Duct (mm)	Max Duct (mm)	Part No.
2 x Multipoint probes 400mm	248	300	AX-AV-MPP-400
2 x Multipoint probes 500mm	336	400	AX-AV-MPP-500
2 x Multipoint probes 600mm	424	500	AX-AV-MPP-600
2 x Multipoint probes 700mm	512	600	AX-AV-MPP-700
2 x Multipoint probes 800mm	599	700	AX-AV-MPP-800
2 x Multipoint probes 1000mm	775	900	AX-AV-MPP-1000
2 x Multipoint probes 1250mm	995	1150	AX-AV-MPP-1250
2 x Multipoint probes 1500mm	1215	1400	AX-AV-MPP-1500
2 x Multipoint probes 1750mm	1434	1650	AX-AV-MPP-1750
2 x Multipoint probes 2000mm	1653	1900	AX-AV-MPP-2000
2 x Multipoint probes 2150mm	1875	2150	AX-AV-MPP-2150

Water Leak Detection

The WD-x range is designed to detect water leaks either at localised points using the WD-PS point sensor or larger areas with the WD-CS cable sensor, a rain sensor is also available. All these sensors are used with the WD-AMX range of modules that are suitable for DIN-rail mounting inside AHUs, power distribution units or general areas where leak detection is required. They are fitted as standard with LED indication of the water leak status, and sounder that can be disabled by simply removing a jumper. The WD-AMX relay output can be either configured to be manual or auto reset.

Module Features

- AC detector excitation for reliability
- 24V AC/DC or 230V AC versions
- Audible alarm

Sensor Features

- WD-CS is easy to lay and detects along its entire length
- More than one WD-PS can be connected to a WD-AMX
- Self-contained heater to avoid nuisance alarms on WD-RS

Specification

Power Supply:	WD-AMX-1	24V AC/DC ±10%
	WD-AMX-2	230V AC @ 50Hz
	WD-RS heater	24V AC/DC
Protection:	WD-AMX	IP30
	WD-RS	IP65

Modules

Description	Part No.
24V AC/DC Controller with buzzer	WD-AMX-1
230V AC Controller with buzzer	WD-AMX-2

Sensors

Water Cable Sensor, 2m cable, 3m leader	WD-CS-2M
Water Cable Sensor, 5m cable, 3m leader	WD-CS-5M
Water Cable Sensor, 10m cable, 3m leader	WD-CS-10M
Water Cable Sensor, 15m cable, 3m leader	WD-CS-15M
Water Cable Sensor, 20m cable, 3m leader	WD-CS-20M
Water Cable Sensor, 25m cable, 3m leader	WD-CS-25M
Water Point Sensor, 2m	WD-PS
Rain Sensor with internal heater, 2m leader	WD-RS
Rain Sensor with internal heater, 5m leader	WD-RS-5M

Sensors

Pack of 20 fixing clips for WD-CS	WD-FC
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Condensation Prevention Sensor

Sontay's condensation prevention sensor has been designed to provide a switched output signal to prevent the onset of condensation on chilled surfaces such as chilled beams. The detector measures the temperature compensated RH and surface temperature of the chilled surface and calculates the dew point temperature. This is compared to an adjustable setpoint to provide either a current output or VFC switched output.

Features

- Reliable and accurate switching
- VFC or current output
- Quick and simple to install

Sensors

Description	Part No.
Condensation Prevention Sensor 2m Lead	WD-CPS
Condensation Prevention Sensor 5m Lead	WD-CPS-5M

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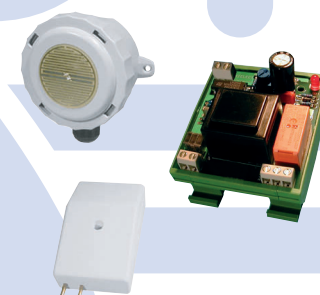
Rain, Water & Leak Detectors

Detects conductive non corrosive liquid/water in plant rooms, boiler houses, under floors, roofs etc. DO NOT use with combustible liquids i.e. fuels. AC sensor excitation is used for reliable operation which eliminates the sensor degradation problems found with DC systems.

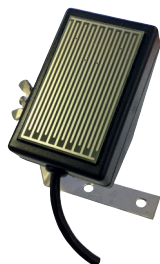
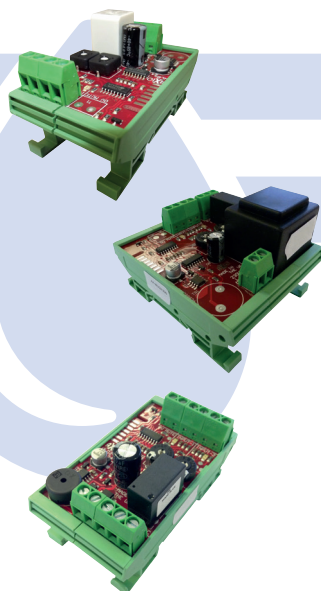
EW... Series

Connection	Media Temp °C	Part No.
Switch Unit	230V AC	EW-230
	24V AC	EW-24
Sensors		
Probe sensor can be fitted in various locations		EW-01
Cable sensor 3mm Dia. Order per metre (Max 200m)		EW-03
Rain sensor 2 sensor & 2 heater wires 24V AC 1 Watt		EW-06

Electro Controls



AXIO



Rain, Water & Leak Detectors

The AX-WLD2 range of two zone water leak detection products is designed for DIN rail mounting wherever localised water leak detection is required. The cable used will not be subject to oxidation or erosion over time, due to an isolated AC signal for cable excitation.

AX-WD2 Series

Description	Part No.
Two Zone 24V alarm detection module	AX-WLD2-24
Two Zone 230V AC alarm detection module	AX-WLD2-230
Two Zone 24V alarm detection module + alarm	AX-WLD2-24-A
Two Zone 230V AC alarm detection module + alarm	AX-WLD2-230-A
Enclosure for WLD2	AX-WLD2-Enc
Drip tray alarm in an enclosure	AX-WLD-DTA

Water Leak Detection Cables

A range of cable sensors used to detect water leaks, usually at floor level. These sensors must be used in conjunction with the AX-WLD2 range of detection modules.

AX-W... Series

Description	Part No.
Cable sensor for WLD2, 2m cable 1m leader	AX-WCS-2
Cable sensor for WLD2, 5m cable 3m leader	AX-WCS-5
Cable sensor for WLD2, 10m cable 3m leader	AX-WCS-10
Cable sensor for WLD2, 15m cable 3m leader	AX-WCS-15
Cable sensor for WLD2, 20m cable 3m leader	AX-WCS-20
Customer spec for cable and header	AX-WCS-xx
Point sensor for WLD2 & 2m cable	AX-WPS

Rain, Water & Leak Detectors

The AX-WLDF range of four zone water leak detection module with open or short circuit sensor cable detection.

AX-WLDF Series

Description	Part No.
Four zone 24V alarm detection module	AX-WLDF-24
Four zone 230V AC alarm detection module	AX-WLDF-230

Water Leak Detection Cables

A range of cable sensors used to detect water leaks, usually at floor level. These sensors must be used in conjunction with the AX-WLDF range of detection modules.

AX-W... Series

Description	Part No.
Cable sensor for WLDF, 2m cable 1m leader	AX-WLDF-C2
Cable sensor for WLDF, 5m cable 3m leader	AX-WLDF-C5
Cable sensor for WLDF, 10m cable 3m leader	AX-WLDF-C10
Cable sensor for WLDF, 15m cable 3m leader	AX-WLDF-C15
Cable sensor for WLDF, 20m cable 3m leader	AX-WLDF-C20
Customer spec for cable and header	AX-WLDF-xx
Point sensor with 2m cable	AX-WLDF-P

Rain Sensor with Integral Heater

The WRS1 provides detection of rainfall. An integrated heater prevents false detection alarms resulting from dew forming, and to provide rapid recovery from rainfall.

AX-WRS1

Description	Part No.
Rain sensor with 1m cable	AX-WRS1

Liquid Flow Switch

The FS-541 series of paddle switches are intended to monitor liquid flow within pipes and provides a VFC output on detection of either a specific flow rate or flow failure. The FS-541 screws directly into a 1" BSPT boss.

Features

- Adjustable switching point

FS-541 Series

Description	Part No.
1" BSPT flow switch	FS-541

Hydrostatic Level Transmitter

LS-712 range of submersible water level transmitters provides continuous hydrostatic level measurement up to 10,2m of water column. They are suitable for many applications such as water tanks, wells, sumps and ponds. Transmitters have a vented cable which provides an atmospheric reference for the sensor, which is necessary for ensuring repeatable, precision depth measurements under the most adverse conditions.

Features

- Compact design
- Simple installation
- Stainless steel construction

LS-712 Series

Description	Part No.
0-300 mbar, 5 meter cable, 4-20mA output	LS-712-A
0-300 mbar, 5 meter cable, 0-10V DC output	LS-712-A-V
0-1000 mbar, 15 meter cable, 4-20mA output	LS-712-B
0-1000 mbar, 15 meter cable, 0-10V DC output	LS-712-B-V

Automatic Float Switch

The LS-AFS is designed for simple reliable water level control. The float switch can be used to control a pump for either tank filling or tank emptying (a high or low level cut-out). It is easily achieved by positioning the float stops on the cord. The electrical connections are easily made inside the housing, via the terminal strip. Two M20 cable glands are provided for use with suitable conduit.

Features

- Reliable
- Easy to install & adjust
- Simple wiring

LS-AFS

Description	Part No.
Automatic Float switch	LS-AFS

Capacitance Level Sensors

These sensors are designed for level measurement in tanks or sumps providing a 4-20mA output relating to the level of fluid in the tank. The LS-CAP1 is suitable for conducting liquids such as water whilst the LS-CAP2 is designed for use with clean, low viscosity non-conducting liquids such as oil. Both types consist of two concentric elements, an inner probe and an outer tube. Fluid rises in the cavity between the two concentric elements and the changes in capacitance are transposed into an analogue 4-20mA output signal.

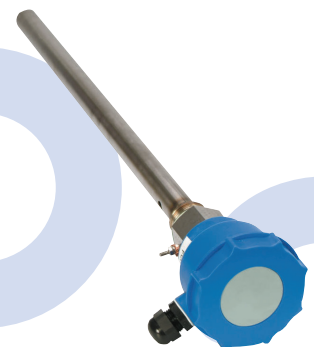
Features

- Suitable for a wide range of media
- Easy in-situ range adjustment
- 4-20mA output
- No moving parts
- Unaffected by pressure or vacuum

LS-CAP Series

Description	Probe Sensor	Part No.
Sensors for conducting liquids	0.5m	LS-CAP-1-0.5
	1m	LS-CAP-1-1.0
	1.5m	LS-CAP-1-1.5
	2m	LS-CAP-1-2.0
	2.5m	LS-CAP-1-2.5
Sensors for non-conducting liquids	3m	LS-CAP-1-3.0
	0.5m	LS-CAP-2-0.5
	1m	LS-CAP-2-1.0
	1.5m	LS-CAP-2-1.5
	2m	LS-CAP-2-2.0
	2.5m	LS-CAP-2-2.5
	3m	LS-CAP-2-3.0

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Ultrasonic Level Transmitter

The LS-UT provides accurate level measurement or liquids in tanks or sumps in applications where non-contact level monitoring is the preferred option. The 4-20mA loop powered output represents the distance between the surface of the liquid being detected and the transmitter. It has a user programmable measuring range of up to 8 metres, it works by sending out ultrasonic sound waves from its sensor, the sound waves reflect off the surface of the liquid in the vessel and return back to the sensor. The time taken to perform this process is calculated and then converted to provide a measurement in metres.

Features

- Maintenance free
- Simple set up procedure
- IP68 housing (2m for 24 hours)
- Low consumption
- Locking nut supplied

LS-UT Series

Description	Part No.
Ultrasonic level transmitter	LS-UT

Float Switch

The LS-541 is intended to monitor the liquid level in a tank or vessel and provides a switched output for local alarm, pump or valve control. The differential between switching is equivalent to approximately 15mm (0.59").

LS-541 Series

Description	Part No.
1" BSPT Float Switch (horizontal mount)	LS-541

Liquid Level Float

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 consist of 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.

LS-FL Series

Description		Part No.
Alarm switch	High level	LS-FL-1H
	Low level	LS-FL-1L
	High & low level	LS-FL-2LH
Control switch	Emptying pump	LS-FL-2H
	Filling pump	LS-FL-2L

Compact Liquid Level Switch

A range of level switches designed for high and low liquid level detection in tanks and vessels. 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.

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 5m PVC cable with a polyethylene weight and is fully submersible and adjustable.

Features

- Low cost
- Easy to install
- Reliable switching

LS-S Series

Description	Part No.
Polypropylene float switch, Internal fixing to M16 back nut	LS-SN-1
Polypropylene float switch, 1/2" NPT external fixing	LS-SN-2
Stainless steel float switch, Internal fixing to M8 back nut	LS-SS-1
Stainless steel float switch, 1/2" PF external fixing	LS-SS-2
Top mounting reversible float switch	LS-TM

Suspended Sealed Float Switch

The sealed Float switch is suitable for single phase pumps direct control to adjust levels of clear or contaminated water, acid or alkaline fluid. (Not suitable for ketonic and aromatic hydrocarbons.)

The float contains a micro switch inside water seal enclosure, and is connected to a pump by a flexible cable. The float position is dependent on the water level which will in turn switch on or off a device (e.g. pump or relay, refer to max. rating .refer to max. rating for the micro switch in the float switch).

Float Switches	
Cable Length (m)	Part No.
3	LL113
5	LL115
8	LL118



Liquid Level Transmitter Ultrasonic

These level switches are suitable for mounting from the top of a tank to monitor the level of liquid. The float follows the surface of the liquid level. The switches within the float operate according to the tilting action.

AX-UL-S... Series				
Measuring Range	Operating Temp °C	Display	Output	Part No.
0.35 to 8m	-20 to +90	No	4-20mA loop powered	AX-UL-SEP-370-2
0.25 to 6m			AX-UL-SEP-380-2	
0.35 to 8m			4-20mA suitable for diesel	AX-UL-STV-370-2
0.25 to 6m			AX-UL-STV-380-2	
0.35 to 8m		Yes	4-wire 4-20mA & 2x relay	AX-UL-STP-370-4
0.25 to 6m				AX-UL-STP-380-4

AXIO



Liquid Level Transmitter Ultrasonic

This entry level transmitter is designed specifically for use in the many industrial applications where economical liquid level measurement with an analog 4-20mA output proportional to level is required.

Features

- Measures liquid height or distance to liquid
- Simple push button calibration
- Built-in 4 digit display

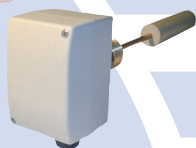
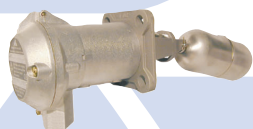
Specification

Accuracy: +/- 1%
Pressure: -0.25 to 3 bar (20°C)

MSP422			
Measuring Range	Operating Temp °C	Output 2 Wire	Part No.
0.3 to 8m	-20 to +70	4-20mA loop	MSP422

mobrey





Horizontal Liquid Level Switches

To monitor liquid level in tanks and switch pumps or an alarm in the event of high or low level. Two switches are required when using both high and low level or limit and alarm functions. EL-041/093 switches contain magnets, therefore ensure that no metal objects are present in the liquid.

Specification

Detection: ELL-01/02 Oil, diesel, water, non aggressive fluids
 EL-041/093 Oil, diesel, water, some aggressive fluids

ELL... Series

Mounting	Media Temp °C	Media Contact Materials	Rating	Part No.
Horizontal	90	Phosphor bronze / brass / stainless steel	IP43	ELL-01
			IP65	ELL-02
	330	Stainless steel	IP65	EL-041 EL-093

High-Low Switching

These level switches are suitable for mounting from the top of a tank to monitor the level of liquid. The float follows surface of the liquid level. The switches within the float operate according to the tilting action.

Specification

Connection: 5m PVC cable
 Switching rate: 230V AC 6(3)A

EL... Series

Measuring Range	Operating Temp °C	Span Max.	Output 2 Wire	Part No.
Vertical	40	Low level alarm	Close on low level & open on rise	EL-AL
		High level alarm	Close on high level & open on low	EL-AH
	250/1200 adj. dead band	High & low level alarm	Close on high-off-close on low	EL-AHL
	250/1200 adj.	Pump filling	Close on low level until high level	EL-PF
		Pump emptying	Close on high level until high level	EL-PE

Liquid Level Transmitter Ultrasonic

These level switches are suitable for mounting from the top of a tank to monitor the level of liquid. The float follows the surface of the liquid level. The switches within the float operate according to the tilting action.

Specification

Accuracy: 0.25%
 Pressure: -0.25 to +2 bar

ELU-8 Series

Measuring Range	Operating Temp °C	Span Max.	Output 2 Wire	Part No.
0.5 to 8m	-10 to +60	100mm	4-20mA loop	ELU-8

Liquid Flow Switches

ELF... detects liquid flow through chillers, boilers, pipes and other units to monitor pump operation or switch alarms in the event of flow failure i.e. hot water, chilled water, diesel oil and up to 30% glycol systems. ELF-4../5.. can be used with some aggressive liquids.

ELF Series

Connection	Media Temp °C	Media Contact Materials	Rating	Part No.
1" BSPT	+4 to 110	Phosphor Bronze / Brass / Stainless Steel	IP54	ELF-1C ELF-3
		Stainless steel	IP54	ELF-4 ELF-5
	-30 to +110	Phosphor bronze / brass / stainless steel	IP65	ELF-2 ELF-3W ELF-4W ELF-5W
		Stainless steel	IP65	
Tee ¾" x ¾" x 1"	+4 to 110	Phosphor bronze / brass / stainless steel / iron	IP54	ELF-7