HEAT & COMBUSTION
CONTROL SYSTEMS CATALOGUE

2024 Edition

HVAC & BMS Controls Specialist Distributor

H&C

CELEBRATING
HEAT &
COMBUSTION
35
YEARS
1989-2024

INTRODUCTION

As we enter a new year, we are proud to be celebrating the 35th anniversary of *Heat and Combustion*.

2024 welcomes new partnerships alongside the already established as we continue to be one of the UK's largest suppliers in the HVAC market.

Stock levels are at a record high and our technical sales engineers are on hand to offer advice, guidance, and quantity rates.

As always, our portfolio is not limited to that in our catalogue, so if you require anything sourcing, or support with a product not listed, then please get in touch.

H&C

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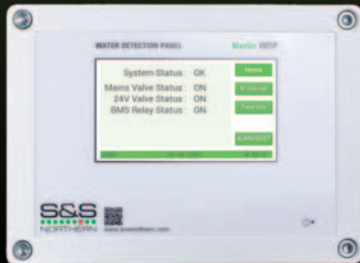
H&C PARTNERSHIPS

CONTENTS

NEW FOR 2024

S&S NORTHERN™

A new full range of CO₂/air quality and refrigerant sensors with various outputs and options, as well as the new range of Water leak detection

AXIO

New PIR/Microwave sensors, Diesel leak detection alarm modules, Water pressure transmitters as well as many other products

The FlowCon Bus Smart actuator - either Modbus or BACnet, with fail-in-place failsafe, manual override and position indicator

FlowCon international

PLEASE NOTE – CONTACT OFFICE FOR ANY ENQUIRIES/QUESTIONS

CONTACT OFFICE
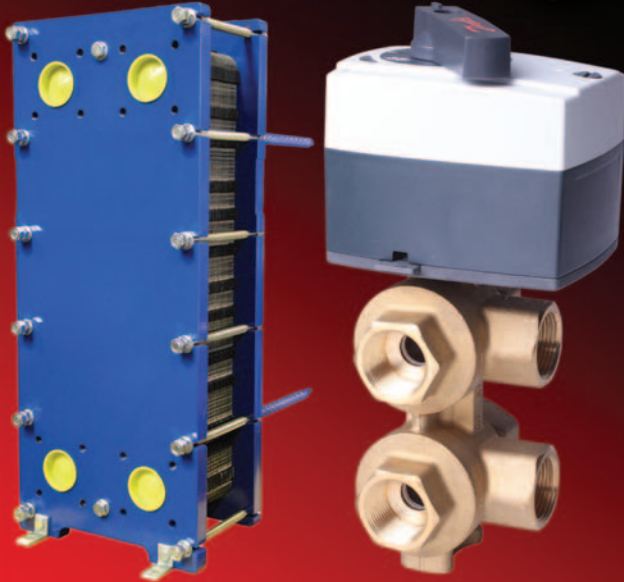
Now offering the supply of Heat Exchangers and 6 way control valves

PAGE 79

New IP66 rated Air DP Sensors c/w display type ZP refrigeration sensors for over 109 different types of refrigerant. Button/duct sensors available

PAGES 54,58,80

New "slimline Halo" type CO_2 sensors along with GEN3 wireless and BACnet/ Modbus Temperature/ Humidity sensors

CONTACT OFFICE

Wireless/Smart Underfloor heating controls and thermostats

PAGES 55,56,57

HMW/TWM range of HVAC premium quality transmitters and weather stations for ALL applications

VAISALA

DANFOSS ABQM PRESSURE INDEPENDENT CONTROL VALVES

The AB-QM has a linear control characteristic. The AB-QM is pressure independent which means that the control characteristic is independent from the available pressure and is not influenced by a low authority.

The flow limitation on the AB-QM is achieved by limiting the stroke and the Danfoss actuators calibrate to the stroke of the valves. This means that the AB-QM keeps its linear characteristic independent of the setting or differential pressure.

Because of the predictable characteristic the actuators on the AB-QM can be used to change the response from linear to logarithmic (equal percentage).

That makes the AB-QM suitable for all applications, including AHUs, where the equal percentage characteristic is needed to get a stable control loop.

The actuators can be switched from linear to logarithmic by changing a dipswitch setting on the actuator.

Part Number	Type	Description	Max Flow (l/hr)	Trade Price
003Z1261	AB-QM DN10 LF	DN10 LOW FLOW SCREWED ORDER FITTINGS SEPARATELY	150	£87.00
003Z1262	AB-QM DN15 LF	DN15 LOW FLOW SCREWED. ORDER FITTINGS SEPARATELY	275	£95.00
003Z1212	AB-QM DN15	DN15 SCREWED ORDER FITTINGS SEPARATELY	450	£97.00
003Z1222	AB-QM-DN15 HF	DN15 SCREWED HIGH FLOW ORDER FITTINGS SEPERATELY	1135	£105.00
003Z1213	AB-QM DN20	DN20 SCREWED ORDER FITTINGS SEPARATELY	900	£113.00
003Z1214	AB-QM DN25	DN25 SCREWED ORDER FITTINGS SEPARATELY	1,700	£138.00
003Z1215	AB-QM DN32	DN32 SCREWED ORDER FITTINGS SEPARATELY	3,200	£211.00
003Z0770	AB-QM DN40	DN40 SCREWED ORDER FITTINGS SEPARATELY	7,500	£459.00
003Z0771	AB-QM DN50	DN50 SCREWED. ORDER FITTINGS SEPARATELY	12,500	£515.00
003Z0773	AB-QM DN65	DN65 FLANGED PN16	20,000	£1,203.00
003Z0793	AB-QM DN65 HF	DN65 HIGH FLOW FLANGED PN16	20,000	£1,270.00
003Z0774	AB-QM DN80	DN80 FLANGED PN16	28,000	£1,377.00
003Z0794	AB-QM DN80 HF	DN80 HIGH FLOW FLANGED PN16	28,000	£1,660.00
003Z0775	AB-QM DN100	DN100 FLANGED PN16	38,000	£1,887.00
003Z0795	AB-QM DN100 HF	DN100 HIGH FLOW FLANGED PN16	38,000	£2,020.00
003Z0705	AB-QM DN125	DN125 FLANGED PN16	90,000	£4,304.00
003Z0715	AB-QM DN125 HF	DN125 HIGH FLOW FLANGED PN16	120,000	£5,467.00
003Z0706	AB-QM DN150	DN150 FLANGED PN16	145,000	£5,385.00
003Z0716	AB-QM DN150 HF	DN150 HIGH FLOW FLANGED PN16	229,000	£6,808.00
003Z0707	AB-QM DN200	DN200 FLANGED PN16	190,000	£8,532.00
003Z0717	AB-QM DN200 HF	DN200 HIGH FLOW FLANGED PN16	300,000	£10,557.00
003Z0708	AB-QM DN250	DN250 FLANGED PN16	280,000	£10,924.00
003Z0718	AB-QM DN250 HF	DN250 HIGH FLOW FLANGED PN16	442,000	£13,173.00

SEE PAGE 8 FOR ACTUATORS TO SUIT

Fittings (2 per valve)			
003Z0231	UNION CONNECTION	⅜" BSP FOR VALVE SIZE DN10. (ONE PCS.)	£2.75
003Z0232	UNION CONNECTION	½" BSP FOR VALVE SIZE DN15. (ONE PCS.)	£2.75
003Z0233	UNION CONNECTION	¾" BSP FOR VALVE SIZE DN20 (ONE PCS.)	£4.15
003Z0234	UNION CONNECTION	1" BSP FOR VALVE SIZE DN25. (ONE PCS.)	£6.85
003Z0235	UNION CONNECTION	1¼" BSP FOR VALVE SIZE DN32. (ONE PCS.)	£10.25
003Z0279	UNION CONNECTION	1½" BSP FOR VALVE SIZE DN40. (ONE PCS.)	£21.15
003Z0278	UNION CONNECTION	2" BSP FOR VALVE SIZE DN50. (ONE PCS.)	£23.95

DANFOSS AB-QM 4.0 PRESSURE INDEPENDENT CONTROL VALVES

The Danfoss AB-QM is a Pressure Independent Control Valve (PICV) that combines high accuracy and durability with market leading user-friendliness. The design of the AB-QM is fully geared towards making your project run on time and on budget while delivering the most efficient HVAC system.

Pressure independent valves are control valves with an automatic balancing function. An in-built pressure controller keeps a constant differential pressure over the control valve, ensuring full authority and automatic flow limitation. By combining two functions in one, control and automatic hydronic balance, Danfoss PICVs provide a cost-efficient solution for the challenges faced by forward-looking designers of HVAC systems.

Danfoss AB-QM was the first of its kind control valve for HVAC heating and cooling applications. AB-QM 4.0 is its next level successor.

The basic principles haven't changed; It is a control valve with automatic flow limitation and built-in differential pressure controller. The control performance is very accurate and the valve has a – still – unique valve authority of 100%.

But the value the AB-QM 4.0 valves provide has improved a lot. AB-QM 4.0 is the best-in-class PICV currently on the market. The AB-QM 4.0 becomes available in DN 15 up to DN 20HF. There are versions with and without test plugs. And versions with internal or external thread connections. The flow capacity increases to a broad range of 20 l/h up to 6,000 l/h and can accurately be measured with the PFM 1000 measuring instrument via Bluetooth on iOS and Android devices.

AB-QM 4.0 is engineered to be the indisputable best PICV on the market. For example, it has a scaling & clogging resistant design, PN25 Nominal Pressure, accurate flow measuring and bi-directional filling and flushing. These provide many advantages for designers, installers, and end-users.

PICV's increase the energy efficiency of HVAC heating and cooling systems. AB-QM 4.0 is designed for terminal units such as fan-coil units, climate ceilings and chilled beams. Equipped with one of our actuators they accurately control the room temperature and improve the indoor climate. In case it's equipped with our digital actuator, NovoCon S, it enables HVAC 4.0 systems for smart buildings with Internet of Things (IoT) solutions.

Part Number	Type	Description	Max Flow (l/hr)	Trade Price
003Z8200	AB-QM 4.0 DN15 LF	DN15 LOW FLOW SCREWED. ORDER FITTINGS SEPARATELY	200	POA
003Z8201	AB-QM 4.0 DN15	DN15 SCREWED. ORDER FITTINGS SEPARATELY	650	POA
003Z8202	AB-QM 4.0 DN15 HF	DN15 SCREWED HIGH FLOW. ORDER FITTINGS SEPERATELY	1,200	POA
003Z8203	AB-QM 4.0 DN20	DN20 SCREWED. ORDER FITTINGS SEPARATELY	1,100	POA
003Z8204	AB-QM 4.0 DN20 HF	DN20 HIGH FLOW SCREWED. ORDER FITTINGS SEPARATELY	1,900	POA
003Z8205	AB-QM 4.0 DN25	DN25 SCREWED. ORDER FITTINGS SEPARATELY	2,200	POA
003Z8206	AB-QM 4.0 DN25 HF	DN25 SCREWED HIGH FLOW. ORDER FITTINGS SEPARATELY	3,800	POA
003Z8207	AB-QM 4.0 DN32	DN32 SCREWED. ORDER FITTINGS SEPARATELY	3,600	POA
003Z8208	AB-QM 4.0 DN32 HF	DN32 SCREWED HIGH FLOW. ORDER FITTINGS SEPARATELY	5,000	POA

Fittings (2 per valve)				
003Z0232	UNION CONNECTION	½" BSP FOR VALVE SIZE DN15. (ONE PCS.)		£2.75
003Z0233	UNION CONNECTION	¾" BSP FOR VALVE SIZE DN20 (ONE PCS.)		£4.15
003Z0234	UNION CONNECTION	1" BSP FOR VALVE SIZE DN25 (ONE PCS.)		£6.85
003Z0235	UNION CONNECTION	1¼" BSP FOR VALVE SIZE DN32 (ONE PCS.)		£10.25
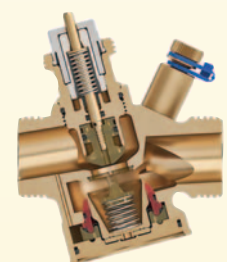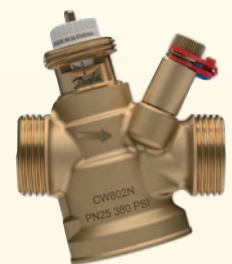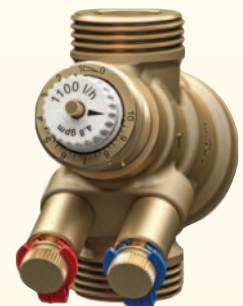
DANFOSS ABQM ACTUATORS

The AMV/AME series actuators are used together with automatically balanced combination valve type AB-QM for DN10 to DN32 whilst the AME 435QM actuator for modulating control is used with pressure independent balancing and control valve type AB-QM from DN40 to DN100. AME 55QM actuator to be used with DN125 & DN150. AME 685-1 actuator is used together with large pressure independent balancing and control valves Type AB-QM DN200 and DN250.

Part Number	Type	Voltage (V)	0-10v Feedback	To Suit Valve (mm)	Trade Price
082H8036	AMV 130	24	NO	10-32	£59.00
082H8057	AME 110 NL	24 0-10V	NO	10-32	£84.50
082H8060	AME 110NLX	24 0-10V	YES	10-32	£98.00
082H8049	AMI 140	230V	NO	10-32	£115.00
082H0171	AME 435QM	24 0-10V	YES	40-100	£261.00
082H0163	AMV 435	230V	NO	40-100	£205.00
082H0162	AMV 435	24V	NO	40-100	£205.00
082H3078	AME 55QM	24 0-10V	YES	125-150	£523.00
082H5013	AME 685-1	24 0-10V	YES	200-250	£1,723.00

Part Number	Type	Voltage (V)	Spring Return	0-10v Feedback	To Suit Valve (mm)	Trade Price
082G3006	AME13 SD	24V 0-10V	CLOSED	YES	DN10-DN32 (USE WITH 003Z025700 ADAPTOR)	£665.50
082H3044	AME13 SU	24V 0-10V	OPEN	YES	DN10-DN32 (USE WITH 003Z395900 & 003Z025700 ADAPTORS)	£357.00
082H3038	AME 25 SD	24V 0-10V	CLOSED	YES	DN40-DN100 (USE WITH 003Z069400 ADAPTOR)	£458.00
082H3041	AME 25 SU	24V 0-10V	OPEN	YES	DN40-DN100 (USE WITH 003Z069400 ADAPTOR)	£458.00
082G3448	AME 658 SD	24V 0-10V	CLOSED	YES	DN125-DN150	£1,989.00
082G3450	AME 658 SU	24V 0-10V	OPEN	YES	DN125-DN150	£1,989.00
082H7090	AM-PBU	24V ELECTRONIC POWER BACKUP UNIT		N/A	N/A	£700.00

Part Number	Type	Voltage (V)	0-10v Feedback	To Suit Valve (mm)	Trade Price
003Z3959	ADAPTOR	ABQM TO AMV/E 13SU ONLY (USE WITH 003Z025700 FOR SU)	N/A	DN10-DN32	£50.00
003Z0694	ADAPTOR	ABQM TO AMV/E 25SU OR SD	N/A	DN40-DN100	£75.50

DANFOSS NOVOCON ACTUATORS WITH REMOTE I/O

NovoCon is a high accuracy multi-functional field bus actuator, specifically designed for use in combination with ABQM DN10-DN250. The NovoCon comes with remote I/O functionality; with remote I/O you can now control a fan coil unit without the need of a room controller. Incorporate the remote I/O functionality to monitor energy usage, condensation, presence detection or window contacts. All controlled via the NovoCon BACnet actuator.

FEATURES

- Bacnet MS/TP and Modbus RTU in the same product
- Remote commissioning/Pre-set/Flush Features
- Remote I/O allows connection to other devices, eg room thermostat, window contact, CO2 sensor, humidity sensors, fan control, 0-10V actuator etc
- 1.5m cable offered as standard, 5m & 10m available on request
- Flow indication
- High Position Accuracy
- LED bar displaying status
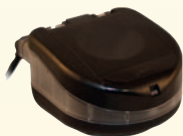
Part Number	Description	Trade Price
003Z8504	NOVOCON S. DIGITAL ACTUATOR FOR AB-QM DN10-32	POA
003Z8540	NOVOCON M. DIGITAL ACTUATOR FOR AB-QM DN40-100	POA
003Z8560	NOVOCON L. DIGITAL ACTUATOR FOR AB-QM DN125-150	POA
003Z8563	NOVOCON XL. DIGITAL ACTUATOR FOR AB-QM DN200-250	POA

ACCESSORIES

Part Number	Type	Connections	Trade Price
003Z8600	CABLE NOVOCON DIGITAL, 1.5m	BUS/POWER	POA
003Z8603	CABLE NOVOCON DIGITAL, DAISY CHAIN, 1.5m	ACTUATOR/ACTUATOR	POA
003Z8606	CABLE NOVOCON DIGITAL, ANALOGUE, 1.5m	0-10V/POWER/VOLTAGE/BOOSTER	POA
003Z8610	1.5m CABLE FOR USE WITH NOVOCON® S WITH SURFACE TEMPERATURE SENSORS		POA

FLOWCON GREEN AND SM PRESSURE INDEPENDENT CONTROL VALVES

The FlowCon Pressure Independent Control Valves combine 3 functions in one valve housing:

- Modulating control;
- Dynamic flow limitation;
- Differential pressure control.

FlowCon PICVs are widely used in heating and cooling applications due to their accuracy and energy saving potential.

The valves offer 100% control authority for all flow conditions, through a programmable choice of either linear or equal percent control characteristic. Flow balancing of the system is automatic and independent of pressure change within the system. The FlowCon PICV range includes two families, "Green" and "SM", which are both are tested to BSRIA BTS 1/2019 standards.

FlowCon Green

The female threaded Green range covers multiple control ranges and offers flexibility and serviceability through the removable PICV valve insert up to 1½".

Green valves are fitted with 2 PT plugs (standard) with other options available on request, including PT plug & Combined PT plug and drain.

Part Number	Size (mm)	Description	Flowrate (l/s)	Trade Price
G.EQ.01.B.I	15	GREEQ.0 LOW FLOW 16-600 KPAD	0.00482 – 0.126	£78.00
G.0.01.B.I	15	GREEN.0 16-600 KPAD	0.0103 – 0.160	£78.00
G.1.01.B.I	15	GREEN.1 30-800 KPAD	0.0178 – 0.308	£78.00
G.0.02.B.I	20	GREEN.0 16-600 KPAD	0.0103 – 0.160	£97.00
G.1.02.B.I	20	GREEN.1 30-800 KPAD	0.0178 – 0.308	£97.00
G.1HF.02.B.I	20	GREEN.1 HIGH FLOW 35-800 KPAD	0.172 – 0.736	£99.00
G.0.07.B.I	25	GREEN.0 16-600 KPAD	0.0103 – 0.160	£115.00
G.1.07.B.I	25	GREEN.1 30-800 KPAD	0.0178 – 0.308	£115.00
G.1HF.07.B.I	25	GREEN.1 HIGH FLOW 35-800 KPAD	0.172 – 0.736	£117.50
G.2.14.B.I	25	GREEN.2 16-800 KPAD	0.240 – 1.29	£175.00
G.2.15.B.I	32	GREEN.2 16-800 KPAD	0.240 – 1.29	£188.00
G.3.40.B.I	40	GREEN.3 16-600 KPAD	0.528 – 3.79	£430.50
G.3.50.B.I	50	GREEN.3 16-600 KPAD	0.528 – 3.79	£450.50

Part Number	Recommended Actuators*	Valve Compatibility	Trade Price
FN.0.2 24V	ELECTRIC MODULATING, 0(2)-10V WITH FEEDBACK SIGNAL	GREEQ, GREEN.0-2	£90.00
FN.0.4 24V	ELECTRIC 3 POINT FLOATING/ON-OFF	GREEN.0-2	£82.95
FH	24V ELECTRIC MODULATING, 2-POSITION/3-POINT FLOATING	GREEN.3	£234.00
FNP.0.2	24V ACTUATOR		£72.00

24V AC/DC AS STANDARD VALVE AND MOTOR PRICED SEPERATELY

FLOWCON FN0.2 BUS SMART ACUATOR

The Actuator is compatible with the following inserts in the Green PICVs: Gre EQ.0, Gre EQ.1, Green.0, Green.1, Green.2 and Green.3. The Actuator is eithe ModBUS. or BACnet, 50/60HZ with fail-in-place failsafe, manual override and position indicator.

Part Number	Description	Trade Price
FN0.2-BUS	SMART ACTUATOR	£242.00

FOR QUANTITY RATE CONTACT H&C FOR PRICES

NEW PRODUCT

FLOWCON SM - FLANGED VERSIONS

FlowCon International

The flanged SM range covers sizes up to 250mm, with the option of failsafe, BACnet or BACnet failsafe actuators. (Listed below)

As standard Valve price includes the 24V / 0-10V motor fitted.

Part Number	Size (mm)	Description	Flowrate (l/s)	Trade Price
SM.3.0.B.3	50/65/80	SM, KPAD 30-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	1.48 – 4.16	£1,399.00
SM.3.1.B.3	50/65/80	SM, KPAD 30-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	2.57 – 7.15	£1,399.00
SM.3.2.B.3	50/65/80	SM, KPAD 35-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	3.55 – 9.89	£1,449.00
SM.4.1.B.3	80/100	SM, KPAD 30-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	3.49 – 9.38	£2,099.00
SM.4.2.B.3	80/100	SM, KPAD 35-80 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	4.73 – 14.2	£2,099.00
SM.4.3.B.3	80/100	SM, KPAD 50-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	3.68 – 20.2	£2,499.00
SM.5.1.B.3	125/150	SM, KPAD30-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	6.48 – 23.3	£2,999.00
SM.5.2.B.3	125/150	SM, KPAD35-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	7.1 – 29.5	£2,999.00
SM.6.2.B.3	200/250	SM, KPAD 35-800 VALVE C/W 24V OR 0-10V 2 PORT / 3 POINT ACTUATORS	9.21 – 76.8	£8,499.00

Alternative Actuators			
Part Number	Description	Valve Compatability	Trade Price
SM.0.0.0.4	24V ELECTRICAL, 0(2)-10V, 0(4)-20MA, 2-POSITION OR 3-POINT FLOATING W/FEEDBACK SIGNAL FAILSAFE	SM.3-SM.6	£1,015.00
SM.0.0.0.5	24V ELECTRICAL, 0(2)-10V, 0(4)-20MA, 2-POSITION OR 3-POINT FLOATING W/FEEDBACK SIGNAL AND BACNET	SM.3-SM.6	£1,189.00
SM.0.0.0.6	24V ELECTRICAL, 0(2)-10V, 0(4)-20MA, 2-POSITION OR 3-POINT FLOATING W/FEEDBACK SIGNAL, FAILSAFE AND BACNET	SM.3-SM.6	£1,322.00

PRE-ASSEMBLED VALVE SETS

FloControl

Projects increasingly require pre-assembled solutions to minimise site work. FloControl assembles valve sets that fit directly onto terminal units in the hydronic system of commercial buildings.

FloControl offers off-the-shelf configurations that include the FlowCon PICV as well as valve sets build to project specifications, incorporating any PICV of choice. The Valve Sets are assembled and tested by FloControl in the UK and are available on short lead times.

FCU standard configuration with FlowCon PICV.

FEATURES

• Supplied in pairs, CHW/LTHW, tested, set and ready to fit
• Fits FCU drip tray with 40mm centres
• Vertical and horizontal configurations
• Union connections on all joints
• Wide range of connections and extensions
• Versatile 5-Position by-Pass with extension options
• BSRIA BG29 compliant
• PICV selection based on terminal unit flow rate
• Removable PICV insert for easy filling, flushing & maintenance
• Technical drawings and technical submission.
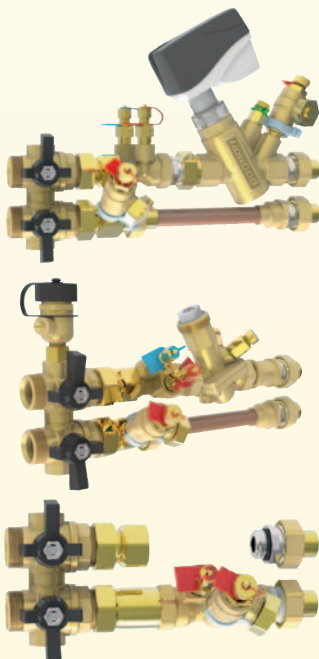
Part Number	Size (mm)	Description	Flowrate (l/s)	Trade Price
PR.0.1R.15I.S.x	15		0.00482 – 0.160	POA
PR.0.2R.15I.S.0	15	Right Hand PICV FCU Valve Set. Mini Flushing By-Pass. Drain to the Flow Branch. [x PICV] fitted with PT Plug and Combined PT Plug & Drain and [x Metering Station] to the Return Branch. [Solder FCU Connections] included but supplied loose.	0.0103 – 0.160	POA
PR.0.3R.15I.S.0	15		0.0103 – 0.160	POA
PR.0.4R.15I.S.x	20		0.0178 – 0.308	POA
PR.0.5R.15I.S.1HF	20		0.172 – 0.736	POA
PL.0.1R.15I.S.x	15		0.00482 – 0.160	POA
PL.0.2R.15I.S.0	15	Right Hand PICV FCU Valve Set. Mini Flushing By-Pass. Drain to the Flow Branch. [x PICV] fitted with PT Plug and Combined PT Plug & Drain and [x Metering Station] to the Return Branch. [Solder FCU Connections] included but supplied loose.	0.0103 – 0.160	POA
PL.0.3R.15I.S.0	15		0.0103 – 0.160	POA
PL.0.4R.15I.S.x	15		0.0178 – 0.308	POA
PL.0.5R.15I.S.x	20		0.0178 – 0.308	POA
PL.0.5R.15I.S.1HF	20		0.172 – 0.736	POA

MINIFLUSH PRE-FABRICATED FLUSHING BYPASS ASSEMBLY C/W DANFOSS ABQM

Miniflush 40 is a pre-fabricated, flushing bypass arrangement for balance, control, isolation, and operation of terminal devices. It is designed for use with fan coil units, chilled beams, and other terminal devices, where flow is controlled via a pressure independent control valve, and isolation, drain, flushing bypass, and flow measurement is required.

FEATURES

- A compact, pre-fabricated design
- Factory pressure tested assembly
- Flexible product which can be tailored to suit exact requirements for specific applications, eg additional drain, strainer, 4 port valve etc
- Each assembly is labelled with FCU location and Miniflush 40 instructions
- High flow DN15 option for direct connection to CHW terminals with flows up to 0.315 l/s
- Low flow option for LTHW flow rates down to 0.008 l/s
- Left and right handed versions to prevent clashes within the fan coil
- A wide range of connection options, including BSP, compression, and solder connections to the coil
- Danfoss AB-QM type pressure independent control valve for balance at full or partial loads
- A comprehensive compatible range of actuators to enable it to be connected to a building management system or other controller
- Flow mounted drain for flushing and quick drain-downs
- Flow measurement function in all sizes

**PRICE ON APPLICATION TO SUIT SPECIFIC CUSTOMER REQUIREMENTS.
PLEASE CONTACT H&C FOR ENQUIRES.**
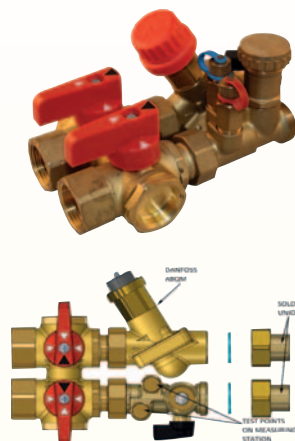
DANFOSS HERO PLANT C/W ABQM

Hero plant is a pre-fabricated, flushing bypass arrangement for balance, control, isolation and operation of plant devices. Flow is controlled by the ABQM pressure independent control valve to avoid overflow and optimize the efficiency of the terminal unit. It is designed for use with air handling units, heat exchangers, heater batteries and all other plant devices.

FEATURES

- A compact, pre-fabricated design
- Factory pressure tested assembly to PED standard
- PN16 screwed connections DN15-50 and flanged connections DN65-150
- A wide flow rate range or all applications

Part Number	Description	Nominal Flow (l/h)	Trade Price
146B5928	HERO PLANT DN15	450	POA
146B5929	HERO PLANT DN20	900	POA
146B5930	HERO PLANT DN25	1700	POA
146B2683	HERO PLANT DN32	3200	POA
146B2684	HERO PLANT DN40	7500	POA
146B2685	HERO PLANT DN50	12500	POA
146B2686	HERO PLANT DN65	20000	POA
146B5931	HERO PLANT DN80	28000	POA
146B5932	HERO PLANT DN100	38000	POA
146B5933	HERO PLANT DN125	90000	POA
146B5934	HERO PLANT DN150	145000	POA

DANFOSS VRB/VF 2 PORT CONTROL VALVES

VRB/VF valves provide a quality, cost effective solution for most water and chilled applications.

FEATURES

- Plant valves for 15-300mm, used with 3-point, modulating and spring return plant actuators
- VRB internally threaded valves – direct connection to BSP pipework without the need for couplings
- VF flanged valves – made with PN16 cast iron body, stainless steel spindle and brass plug
- Suitable for medium temperature up to 130°C
- Can be used with glycol concentrations of up 50%
- Stem heaters available for temperatures down to -10°C

Part Number	Type	Size (mm)	Kvs (m³/hr)	Trade Price
065Z0231	VRB2 15/0.63	15	0.63	£96.00
065Z0232	VRB2 15/1.0	15	1.0	£96.00
065Z0233	VRB2 15/1.6	15	1.6	£96.00
065Z0234	VRB2 15/2.5	15	2.5	£96.00
065Z0235	VRB2 15/4.0	15	4.0	£96.00
065Z0236	VRB2 20/6.3	20	6.3	£114.00
065Z0237	VRB2 25/10	25	10	£121.00
065Z0238	VRB2 32/16	32	16	£149.00
065Z0239	VRB2 40/25	40	25	£181.00
065Z0240	VRB2 50/40	50	40	£225.00
065Z0281	VF2 65/63	65	63	£839.00
065Z0282	VF2 80/100	80	100	£974.00
065B3205	VF2 100/145	100	145	£984.00
065B3230	VF2 125/220	125	220	£1,229.00
065B3255	VF2 150/320	150	320	£1,765.00
065B3505	VFM2 200/630	200	630	£7,374.00
065B3506	VFM2 250/900	250	900	£8,298.00

DANFOSS VRB/VF 3 PORT CONTROL VALVES

VRB/VF valves provide a quality, cost effective solution for most water and chilled applications.

FEATURES

- Plant Valves for 15-300mm, used with 3-point, modulating and spring return plant actuators
- VRB valves – direct connection to BSP pipework without the need for couplings
- VF valves – made with cast iron body, stainless steel spindle and brass plug
- Suitable for medium temperature up to 130°C
- Can be used with glycol concentrations of up 50%
- Stem heaters available for temperatures down to -10°C
- Suitable for mixing and diverting applications

Part Number	Type	Size (mm)	Kvs (m³/hr)	Trade Price
065Z0211	VRB3 15/0.63	15	0.63	£96.00
065Z0212	VRB3 15/1.0	15	1.0	£96.00
065Z0213	VRB3 15/1.6	15	1.6	£96.00
065Z0214	VRB3 15/2.5	15	2.5	£96.00
065Z0215	VRB3 15/4.0	15	4.0	£96.00
065Z0216	VRB3 20/6.3	20	6.3	£114.00
065Z0217	VRB3 25/10	25	10	£121.00
065Z0218	VRB3 32/16	32	16	£149.00
065Z0219	VRB3 40/25	40	25	£181.00
065Z0220	VRB3 50/40	50	40	£225.00
065Z0261	VF3 65/63	65	63	£806.00
065Z0262	VF3 80/100	80	100	£974.00
065B1685	VF3 100/145	100	145	£945.00
065B3125	VF3 125/220	125	220	£1,250.00
065B3150	VF3 150/320	150	320	£1,780.00
065B4200	VF3 200/630	200	630	£6,306.00
065B4250	VF3 250/1000	250	1000	£6,839.00
065B4300	VF3 300/1350	300	1350	£10,822.00

PLEASE CONTACT US FOR PROJECT QUANTITY ENQUIRIES. CONTACT THE TEAM ON (029) 20 463345 OR E-MAIL SALES@HEATCOMBUSTION.CO.UK

DANFOSS CONTROL VALVE ACTUATORS

AMV/AME actuators for use with VRB/VF control valves.

FEATURES

- For use in 3-point control and modulating applications
- Self-stroking function on modulating version
- Diagnostic LED
- Position Indication
- Manual Override

24V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0162	AMV 435	24	VRB/VF 15-80	£205.00
082H3020	AMV 55	24	VF 100	£444.00
082G1450	AMV 85	24	VF 125-150	£1,036.00
082G3440	AMV 655	24	VFM2 200-250	£1,379.00

230V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0163	AMV 435	230	VRB/VF 15-80	£205.00
082H3021	AMV 55	230	VF 100	£444.00
082G1451	AMV 85	230	VF 125-150	£1,036.00

0-10V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0161	AME 435	24 0-10V	VRB/VF 15-80	£214.00
082H3022	AME 55	24 0-10V	VF 100	£557.00
082G1452	AME 85	24 0-10V	VF 125-150	£1,219.00
082G3442	AME 655	24 0-10V	VFM2 200-250	£1,611.00
082G3500	AME 685	24 0-10V	VF3 200-300	£2,693.00

ACCESSORIES				
Part Number	Type	Description	To Suit Valve (mm)	Trade Price
065Z0313	ADAPTOR FOR AMV/E 435	TO ENABLE NEW TYPE ACTUATORS TO FIT OLD STYLE VRG/VBG/VF/VL SERIES VALVES	15-80	£50.75
065Z7020	STEM HEATER	FROST PROTECTION	AMV(E) 55/56/655/658/659	£179.00
065B2171	STEM HEATER	FROST PROTECTION	AME 25, 35	£189.00
065Z7022	STEM HEATER	FROST PROTECTION	AMV55/56	£377.00
065Z0315	STEM HEATER	FROST PROTECTION	AMV(E) 335/435	£156.00

DANFOSS SPRING RETURN CONTROL VALVE ACTUATORS

AMV/AME spring return actuators for use with VRB/VF control valves.

FEATURES

- For use in 3-point control and modulating applications
- Self-stroking function on modulating version
- Spring up function: In case of power failure or power switch off spring up function retracts actuator stem to end position. Further manual stem positioning is not disabled

24V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0122	AMV 438SU	24	VRB/VF 15-50	£452.00
082G3446	AMV 658SU	24	VF 100-150	£1,637.00
082H70900	BATTERY BACKUP	24	VF 65-80 (USE WITH 082H0162)	POA

230V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0123	AMV 438SU	230	VRB/VF 15-50	£452.00
082G3447	AMV 658SU	230	VF 100-150	£1,637.00

0-10V				
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H0121	AME 438SU	24 0-10V	VRB/VF 15-50	£565.00
082G3451	AME 658SU	24 0-10V	VF 100-150	£1,877.00

FOR SPRING RETURN OPTIONS FROM 65MM - UPWARDS - USE THE STANDARD AMV/AME OPTIONS FROM THE TOP OF THE PAGE, ALONG WITH BATTERY BACK UP SUPPLY OPTION AM-PBU REF: 082H709000 (CONTACT H&C FOR FURTHER DETAILS)

DANFOSS VZL 2 & 4 PORT FAN COIL VALVES

VZL valves provide a high quality, cost effective solution for the control of hot and/or chilled water for fan coil units, small re-heaters and re-coolers in temperature control systems.

FEATURES

- Fan coil valves for 15-20mm, used with 3-point and modulating fan coil valve actuators
- Conex compression connection as standard, flat faced connection version available on request
- Suitable for medium temperature up to 120°C
- Can be used with glycol concentrations of up 50%
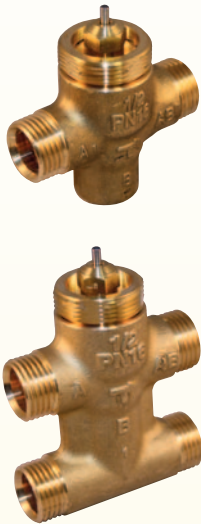
2 PORT				
Part Number	Type	Size (mm)	Kvs (m³/hr)	Trade Price
065Z2040	VZL2 15/0.25	15	0.25	£36.50
065Z2041	VZL2 15/0.40	15	0.40	£36.50
065Z2042	VZL2 15/0.63	15	0.63	£36.50
065Z2043	VZL2 15/1.0	15	1.0	£36.50
065Z2044	VZL2 15/1.6	15	1.6	£36.50
065Z2045	VZL2 20/2.5	20	2.5	£42.00
065Z2046	VZL2 20/3.5	20	3.5	£42.00

4 PORT				
Part Number	Type	Size (mm)	Kvs (m³/hr)	Trade Price
065Z2060	VZL4 15/0.25	15	0.25	£40.25
065Z2061	VZL4 15/0.40	15	0.40	£40.25
065Z2062	VZL4 15/0.63	15	0.63	£40.25
065Z2063	VZL4 15/1.0	15	1.0	£40.25
065Z2064	VZL4 15/1.6	15	1.6	£40.25
065Z2065	VZL4 20/2.5	20	2.5	£50.00
065Z2066	VZL4 20/3.5	20	3.5	£50.00

Part Number	Type	Trade Price
BBZ15	DN15 FITTING-NUT AND OLIVE	£1.65
BBZ22	DN20 FITTING-NUT AND OLIVE	£2.20

PLEASE NOTE: VZL2 REQUIRE 2 FITTINGS, VZL4 REQUIRE 4 FITTINGS

DANFOSS FAN COIL VALVE ACTUATOR

AMV/AME 130 actuators for use with VZL fan coil valves.

FEATURES

- For use in 3-point control and modulating applications
- Self-stroking function on modulating version
- Force switch-off at stem down position prevents overload of actuator and valve
- Thermic option available on request
- Supplied with 1.5m cable as standard, 5m cable available on request
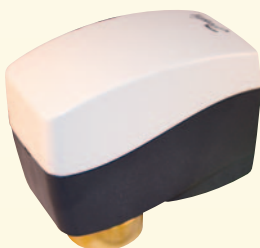
Part Number	Type	Voltage (V)	To Suit Valve (mm)	Trade Price
082H8036	AMV 130	24	VZL 15-20	£59.00
082H8037	AMV 130	230	VZL 15-20	£62.00
082H8044	AME 130	24 0-10v	VZL 15-20	£89.00

Type	AMV 130	AME 130 (0-10V output)
POWER SUPPLY	24VAC.230VAC; +10 TO -15°C	24 VAC; +10 TO -15°C
POWER CONSUMPTION	1V -24VAC; 8 VA-230VAC	1.3 VA
FREQUENCY	50HZ/60HZ	50HZ/60HZ
CLOSE OF FORCE	200 N	200 N
STROKE	5.5MM	5.5MM
SPEED	24 S/MM	24 S/MM
MAX. MEDIUM TEMPERATURE INSIDE THE PIPE	130°C	130°C
AMBIENT TEMPERATURE	0 - 55°C	0 - 55°C
STORAGE AND TRANSPORT TEMPERATURE	-40°C - +70°C	-40°C - +70°C
PROTECTION CODE	IP42	IP42
WEIGHT	0.3KG	0.3KG

REGIN THERMAL ACTUATORS & ADAPTORS

≋REGIN
THE CHALLENGER

Thermal actuators with position indicaton for control of valves in heating or cooling systems. The actuator can be used to control radiator circuits, solar heating systems, heating or cooling coils, floor heating, etc…

TECHNICAL DATA

- Ambient temperature 0-60°C
- Protection class   IP54
- Cable length   2m

24V					
Part Number	Voltage (V)	Normally Open/Closed	Force (N)	Stroke (mm)	Trade Price
RTAM100-24	24	NC	100	4	£33.00
RTAOM100-24	24	NO	100	4	£32.00
RTAM125-24	24	NC	125	6.5	£37.00
RTAOM125-24	24	NO	125	6.5	£37.00

230V					
Part Number	Voltage (V)	Normally Open/Closed	Force (N)	Stroke (mm)	Trade Price
RTAM100-230	230	NC	100	4	£32.75
RTAOM100-230	230	NO	100	4	£32.00
RTAM125-230	230	NC	125	6.5	£37.50
RTAOM125-230	230	NO	125	6.5	£37.50

0-10V					
Part Number	Voltage (V)	Normally Open/Closed	Force (N)	Stroke (mm)	Trade Price
RTAM100-24A	24 0-10v	NC	100	4	£92.75
RTAOM100-24A	24 0-10v	NO	100	4	£110.00
RTAM125-24A	24 0-10v	NC	125	6.5	£95.50

PLEASE NOTE: VA RANGE ADAPTERS FOR ADJUSTING THE RTA (0)M ACTUATORS TO VALVE OF OTHER BRANDS PLEASE CONTCT H&C

DANFOSS HRE/HFE ROTARY SHOE VALVES

Danfoss

HRE/HFE rotary valves are primarily designed for regulation of flow temperature in heating systems where a certain leakage can be accepted and where a defined control characteristic is not required.

FEATURES

- Rotary shoe valves for 20-150mm, used with 3-point and modulating actuators
- HRE internally threaded valves, cast iron body
- HFE flanged valves, PN6 cast iron body
- Suitable for medium temperature up to 110°C
- Lowest leakage in class
- For mixing and diverting applications

Part Number	Type	Size (mm)	Kvs (m³/h)	Trade Price
065Z0418	HRE3 20/6.3	20	6.3	£71.00
065Z0419	HRE3 25/10	25	10	£77.00
065Z0420	HRE3 32/16	32	16	£83.00
065Z0421	HRE3 40/25	40	25	£128.00
065Z0422	HRE3 50/40	50	40	£161.00
065Z0433	HFE3 65/90	65	90	£309.00
065Z0434	HFE3 80/150	80	150	£410.00
065Z0435	HFE3 100/225	100	225	£589.00
065Z0436	HFE3 125/280	125	280	£731.00
065Z0437	HFE3 150/400	150	400	£981.00

DANFOSS ROTARY SHOE VALVE ACTUATORS

AMB actuators for use with HRE/HFE rotary shoe valves.

FEATURES

- For use in 3-point control and modulating applications
- LED indication of turning direction
- Selectable speed on DIP switch
- Manual valve turning mode enabled by a permanent clutch

24V					
Part Number	Type	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
082H0213	AMB162	24	NO	HRE 20-50	£131.00
082H0218	AMB162	24	YES	HRE 20-50	£136.00
082H0234	AMB182	24	NO	HFE 65-150	£155.00
082H0236	AMB182	24	YES	HFE 65-150	£180.00

230V					
Part Number	Type	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
082H0223	AMB162	230	NO	HRE 20-50	£131.00
082H0228	AMB162	230	YES	HRE 20-50	£136.00
082H0238	AMB182	230	NO	HFE 65-150	£155.00
082H0240	AMB182	230	YES	HFE 65-150	£160.00

0-10V					
Part Number	Type	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
082H0230	AMB162	24 0-10v	NO	HRE 20-50	£179.00
082H0241	AMB182	24 0-10v	NO	HFE 65-150	£234.00

TERMOMIX ROTARY SHOE VALVES, LINKAGE & GRUNER OR JOVENTA ACTUATORS

Rotary shoe valves and actuators for use in heating systems.

FEATURES

- Rotary shoe valves for 20-50mm, used with 3-point and modulating actuators
- Internally threaded, cast iron body
- Suitable for medium temperature up to 110°C
- Suitable for mixing and diverting applications
- Use with Gruner or Joventa actuators and ET3 linkage

VALVES			
Part Number	Size (mm)	Kvs (m³/h)	Trade price
2320	20	13	£70.50
2325	25	17	£75.00
2332	32	24	£82.50
2340	40	31	£92.50
2350	50	41	£137.50

LINKAGE		
Part Number	To Suit Valve (mm)	Trade Price
ET3	20-50	£23.00

ACTUATORS (GRUNER)				
Part Number	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
227-024-10	24	NO	15-50	£86.50
227-024-10-S1	24	YES	15-50	£104.00
227-230-10	230	NO	15-50	£86.50
227-230-10-S1	230	YES	15-50	£104.00
227C-024-10	24 0-10V	NO	15-50	£124.00

ACTUATORS (JOVENTA)				
Part Number	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
DAS1.S	24	YES	15-50	£164.00
DAS2.S	230	YES	15-50	£199.50
DMS1.1	24 0-10V	NO	15-50	£204.00
DMS1.1S	24 0-10V	YES	15-50	£251.00

DANFOSS AMZ 2 & 3 PORT MOTORISED BALL VALVES

The AMZ range of motorised ball valves are typically used in domestic and commercial central heating applications.

FEATURES

- Supplied as complete valve/actuator assembly
- Indication of actual valve position
- Suitable for medium temperature up to 110°C
- Auxiliary switch fitted as standard with LED indication
- Silent and reliable operation

2 PORT				
Part Number	Type	Size (mm)	Voltage (V)	Trade Price
082G5400	AMZ 112	15	24	£122.00
082G5401	AMZ 112	20	24	£123.00
082G5402	AMZ 112	25	24	£126.00
082G5403	AMZ 112	32	24	£156.00
082G5404	AMZ 112	40	24	£200.00
082G5405	AMZ 112	50	24	£236.00
082G5406	AMZ 112	15	230	£122.00
082G5407	AMZ 112	20	230	£123.00
082G5408	AMZ 112	25	230	£126.00
082G5409	AMZ 112	32	230	£156.00
082G5410	AMZ 112	40	230	£200.00
082G5411	AMZ 112	50	230	£236.00

3 PORT				
Part Number	Type	Size (mm)	Voltage (V)	Trade Price
082G5412	AMZ 113	15	24	£161.00
082G5413	AMZ 113	20	24	£163.00
082G5414	AMZ 113	25	24	£166.00
082G5415	AMZ 113	32	24	£250.00
082G5418	AMZ 113	15	230	£161.00
082G5419	AMZ 113	20	230	£163.00
082G5420	AMZ 113	25	230	£166.00
082G5421	AMZ 113	32	230	£250.00

REGIN BALL VALVES & ACTUATORS

Regin range of 2&3 Port female connection ball valves for use in HVAC systems to regulate the flow of water.

FEATURES

- 2 port full-bore shut off valves DN15-50 (characterised versions on request)
- 3 port characterised valves DN15-50
- For use with 24V, 230V and 0-10V modulating actuators
- Motor fits straight on to valve - no linkage required
- Media temperature -5°C to + 140°C

2 PORT			
Part Number	Size (mm)	Kv (m³/h)	Trade Price
BV215	15	6.3	£37.00
BV220	20	10	£41.50
BV225	25	16	£50.50
BV232	32	25	£74.50
BV240	40	40	£92.00
BV250	50	60	£122.00

3 PORT			
Part Number	Size (mm)	Kv (m³/h)	Trade Price
BV315	15	4.0	£70.00
BV320	20	6.3	£77.00
BV325	25	10	£97.00
BV332	32	16	£136.00
BV340	40	25	£190.00
BV350	50	40	£271.00

Part Number	FORCE (NM)	Voltage (V)	To Suit Valve	Trade Price
RVAB4-24	4	24	DN15-DN25	£78.00
RVAB4-230	4	230	DN15-DN25	£78.00
RVAB5-24	5	24	DN32-DN50	£98.00
RVAB5-230	5	230	DN32-DN50	£98.00
RVAB4-24A	4	24, 0-10	DN15-DN25	£105.00
RVAB5-24A	5	24, 0-10	DN32-DN50	£140.00

NB: NO AUX SWITCHES AVAILABLE ON THE ABOVE VERSIONS. IF AUX SWITCH VERSIONS REQUIRED CONTACT THE TEAM ON (029) 20 463345 OR E-MAIL SALES@HEATCOMBUSTION.CO.UK

OTHER BALL VALVE MAKES AVAILABLE CONTACT THE TEAM ON (029) 20 463345 OR E-MAIL SALES@HEATCOMBUSTION.CO.UK

NEW PRODUCT

REGIN ZFCM ON/OFF SPRING RETURN ZONE VALVES

The ZFCM valves are designed for temperature control in heating and cooling systems.

The valves are available as both 2 & 3 way models.

The ZFCM valves can only be used together with Regin's RVAFC actuators.

Valves and actuators are ordered separately.

2 PORT VALVES			
Part Number	Size (mm)	Kv (m³/h)	Trade Price
ZFCM-215X	15	3.2	£35.25
ZFCM-220X	20	4.6	£41.00
ZFCM-225X	25	5.7	£48.50
ZFCM-232X	32	10	£82.00

3 PORT VALVES			
Part Number	Size (mm)	Kv (m³/h)	Trade Price
ZFCM-315X	15	3.2	£40.50
ZFCM-320X	20	4.6	£46.50
ZFCM-325X	25	5.7	£50.50
ZFCM-330X	32	10	£88.00

ACTUATORS		
Part Number	Description	Trade Price
RVAFC-2302	VALVE ACTUATOR FOR ZFCM, 2-WAY 230V	£43.00
RVAFC-2303	VALVE ACTUATOR FOR ZFCM, 3-WAY 230V	£44.00

DB-V MOTORISED ZONE VALVES

The range of DB-V zone valves are especially designed and produced for HVAC systems. 2 & 3 way versions in 24v, 230v and sized ½" to 1".

The DB-VZ valves can be used with the SM actuators. Valves and Actuators sold separately.

2 PORT VALVES & ACTUATORS				
Part Number	Description	Size (mm) - Voltage (V)	Kvs (m³/h)	Trade Price
DB-VZ2-15	2 PORT VALVE	15	1.5	£25.75
DB-VZ2-20	2 PORT VALVE	20	2.5	£34.25
DB-VZ2-25	2 PORT VALVE	25	4.8	£39.75
SM230/CA	ACTUATOR C/W AUX	230	N/A	£35.00
SM24/CA	ACTUATOR C/W AUX	24	N/A	£35.00

3 PORT VALVES & ACTUATORS				
Part Number	Description	Size (mm) - Voltage (V)	Kvs (m³/h)	Trade Price
DB-VZ3-15	3 PORT VALVE	15	1.5	£25.75
DB-VZ3-20	3 PORT VALVE	20	2.5	£38.50
DB-VZ3-25	3 PORT VALVE	25	4.8	£51.50
SM230/CA	ACTUATOR C/W AUX	230	N/A	£35.00
SM24/CA	ACTUATOR C/W AUX	24	N/A	£35.00

PLEASE SELECT THE SUITABLE ACTUATOR FOR THE REQUIRED VALVE

DOMESTIC MOTORISED ZONE VALVES

The ZV range of domestic 2/3 port spring return motorised valves for domestic applications.
C/W Aux switch as standard.

H&C

2 PORT		
Part Number	**Size**	**Trade Price**
ZV½"	½"	£50.00
ZV¾"	¾"	£51.00
ZV22	22mm	£55.00
ZV1"	1"	£60.00
ZV28	28mm	£63.00

3 PORT		
Part Number	**Size**	**Trade Price**
ZVD½"	½"	£58.00
ZVD¾"	¾"	£57.00
ZVD22	22mm	£60.00
ZVD1"	1"	£65.00
ZVD28	28mm	£65.00

PLEASE SPECIFY REQUIRED VOLTAGE, 240 OR 24V WHEN ORDERING

**PLEASE NOTE: FOR COMMERCIAL APPLICATIONS WE RECOMMEND USING THE
REGIN RANGE OF ZONE VALVES ON PAGE 18**

ROBUST PROTECTIVE COVER FOR CONTROL VALVES AND DAMPER ACTUATORS

H&C

If you have difficult operating conditions then it is the ideal solution for protecting your control valves in harsh environments.

The BLUE BAG Series cover offers an innovative and effective weather protection solution for control valves and actuators.

Made of heavy duty fabric, it gives significant protection against severe weather such as rain, sleet or snow. The "Ice Blue" colour minimizes solar glare which keeps the protected equipment cooler than other forms of protection It can be installed and removed in seconds and it is available in two sizes to fit various control valve assemblies.

FEATURES

- Easiest of Installations
- Long lasting nylon rope included
- Ice Blue colour to minimise solar glare
- Water repellent fabric
- Keeps equipment cooler in hot conditions
- Keeps equipment clean and protected
- UV Protective coating.

Part Number	Description	Trade Price
BLUE BAG LARGE	LARGE OUTDOOR PROTECTIVE COVER SUITABLE FOR MOST MAKES OF MOTORISED VALVES	£26.00
BLUE BAG SMALL	SMALL OUTDOOR PROTECTIVE COVER SUITABLE FOR MOST MAKES OF MOTORISED VALVES	£20.00

GRUNER DAMPER ACTUATORS
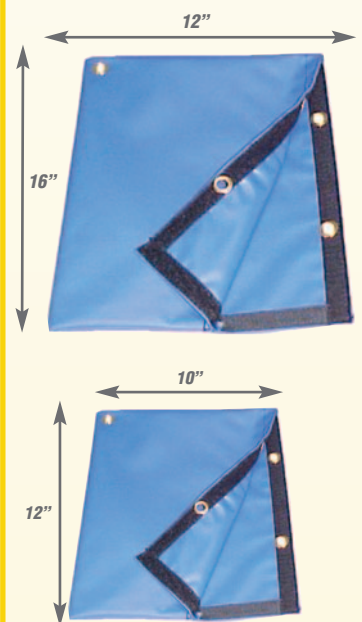
GRUNER
Schalten und Bewegen

Range of Gruner damper actuators for use in HVAC systems.

FEATURES

- Standard range from 5Nm up to 40Nm, Spring Return range up to 20Nm
- 230v, 24v & 0-10v versions available
- Auxiliary switch versions available
- 5 year warranty

5Nm (DAMPER SIZE UP TO 1M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
227-024-05	5	24	2/3 POINT	NO	£71.50
227-230-05	5	230	2/3 POINT	NO	£71.50
227-024-05-S1	5	24	2/3 POINT	YES	£83.00
227-230-05-S1	5	230	2/3 POINT	YES	£83.00
227C-024-05	5	24	0-10V	NO	£95.50

10Nm (DAMPER SIZE UP TO 2M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
227-024-10	10	24	2/3 POINT	NO	£86.50
227-230-10	10	230	2/3 POINT	NO	£86.50
227-024-10-S1	10	24	2/3 POINT	YES	£104.00
227-230-10-S1	10	230	2/3 POINT	YES	£104.00
227C-024-10	10	24	0-10V	NO	£124.00

15Nm (DAMPER SIZE UP TO 3M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
227-024-15	15	24	2/3 POINT	NO	£95.50
227-230-15	15	230	2/3 POINT	NO	£95.50
227-024-15-S1	15	24	2/3 POINT	YES	£118.00
227-230-15-S1	15	230	2/3 POINT	YES	£118.00
227C-024-15	15	24	0-10V	NO	£132.00

20Nm (DAMPER SIZE UP TO 4M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
363-024-20	20	24	2/3 POINT	NO	£104.00
363-230-20	20	230	2/3 POINT	NO	£105.00
363-024-20-S2	20	24	2/3 POINT	YES	£129.00
363-230-20-S2	20	230	2/3 POINT	YES	£129.00
363C-024-20	20	24	0-10V	NO	£149.00
363C-024-20-S2	20	24	0-10V	YES	£173.50

30NM (DAMPER SIZE UP TO 6M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
363-024-30	30	24	2/3 POINT	NO	£166.00
363-230-30	30	230	2/3 POINT	NO	£167.00
363-024-30-S2	30	24	2/3 POINT	YES	£188.00
363-230-30-S2	30	230	2/3 POINT	YES	£188.00
363C-024-30	30	24	0-10V	NO	£208.00
363C-024-30-S2	30	24	0-10V	YES	£231.00

40NM (DAMPER SIZE UP TO 8M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
363-024-40	40	24	2/3 POINT	NO	£178.50
363-230-40	40	230	2/3 POINT	NO	£178.50
363-024-40-S2	40	24	2/3 POINT	YES	£201.50
363-230-40-S2	40	230	2/3 POINT	YES	£201.50
363C-024-40	40	24	0-10V	NO	£211.00
363C-024-40-S2	40	24	0-10V	YES	£252.00

5Nm SPRING RETURN (DAMPER SIZE UP TO 1M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
341-024-05	5	24	2 POINT	NO	£116.50
341-230-05	5	230	2 POINT	NO	£130.00
341-024-05-S2	5	24	2 POINT	YES	£142.00
341-230-05-S2	5	230	2 POINT	YES	£145.00
341C-024-05	5	24	0-10V	NO	£153.50
341C-024-05-S2	5	24	0-10V	YES	£174.50

10Nm SPRING RETURN (DAMPER SIZE UP TO 2M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
361-024-10	10	24	2 POINT	NO	£147.00
361-230-10	10	230	2 POINT	NO	£173.50
361-024-10-S2	10	24	2 POINT	YES	£168.00
361-230-10-S2	10	230	2 POINT	YES	£189.00
361C-024-10	10	24	0-10V	NO	£173.00
361C-024-10-S2	10	24	0-10V	YES	£189.00

20Nm SPRING RETURN (DAMPER SIZE UP TO 4M²)					
Part Number	Nm	Voltage (V)	Control	Aux Switches	Trade Price
361-024-20	20	24	2 POINT	NO	£173.00
361-230-20	20	230	2 POINT	NO	£197.50
361-024-20-S2	20	24	2 POINT	YES	£191.00
361-230-20-S2	20	230	2 POINT	YES	£212.00
361C-024-20	20	24	0-10V	NO	£197.50
361C-024-20-S2	20	24	0-10V	YES	£209.00

JOVENTA DAMPER ACTUATORS

JOVENTA

A range of damper actuators designed for HVAC & valve applications.

FEATURES

• Standard range from 4Nm - 32Nm

• 24v, 230v and 0-10v versions avalable

• Aux switches as standard on 24/230v on-off version

Part Number	NM	Voltage (V)	Control	Aux Switch	Trade Price
ON-OFF VERSIONS WITH AUX SWITCH					
DAN1.SN	4	24	2/3 POINT	YES	£164.00
DAN2.SN	4	230	2/3 POINT	YES	£168.00
DAS1.S	8	24	2/3 POINT	YES	£164.00
DAS2.S	8	230	2/3 POINT	YES	£199.50
DA1.S	16	24	2/3 POINT	YES	£140.00
DA2.S	16	230	2/3 POINT	YES	£177.50
DAL1.S	24	24	2/3 POINT	YES	£165.00
DAL2.S	24	230	2/3 POINT	YES	£198.50
DAG1.S	32	24	2/3 POINT	YES	£155.50
DAG2.S	32	230	2/3 POINT	YES	£233.00

Part Number	NM	Voltage (V)	Control	Aux Switch	Trade Price
MODULATING 0-10V VERSIONS					
DMN1.2N	4	24	0-10V	NO	£162.00
DMS1.1	8	24	0-10V	NO	£204.00
DMS1.1S	8	24	0-10V	YES	£251.00
DM1.1	16	24	0-10V	NO	£197.50
DM1.1S	16	24	0-10V	YES	£201.50
DML1.1	24	24	0-10V	NO	£192.50
DML1.1S	24	24	0-10V	YES	£252.00
DMG1.1	32	24	0-10V	NO	£212.00
DMG1.1S	32	24	0-10V	YES	£500.00

Part Number	Description	Trade Price
ACCESORY		
M16-M20	METAL ADAPTOR	£4.50

PLEASE NOTE: AS WE ARE NO LONGER PARTNERS WITH NENUTEC. THE ABOVE JOVENTA RANGE ARE DIRECT REPLACEMENT VERSIONS WITH THE SAME FOOTPRINT. PLEASE CONTACT H&C FOR ANY OLD NENUTEC REQUIREMENTS YOU MAY HAVE, AND WE WILL QUOTE REPLACEMENTS WHERE WE CAN. OTHER JOVENTA VERSIONS ARE AVAILABLE ON REQUEST - CONTACT H&C FOR DETAILS

WRAS APPROVED BALL VALVES & ACTUATORS

H&C

A range of 2 way WRAS actuated ball valves sized ½" to 2" C/W either a 230V or 24V actuator which are fitted with AUX switch as standard.

Valves are brass bodied with a PTFE seat and VITON 'O' Ring.

The valves are screwed BSP, fully assembled and factory tested.

Part Number	Size (mm)	Trade Price
WBV15/HQ005	15	£399.00
WBV20/HQ005	20	£419.00
WBV25/HQ005	25	£429.00
WBV32/HQ005	32	£469.00
WBV40/HQ005	40	£509.00
WBV50/HQ005	50	£569.00

XUROX BUTTERFLY VALVES & JOVENTA ACTUATORS

XUROX

A range of wafer type butterfly valves & actuators used in heating and cooling systems.

FEATURES
- Aluminium body – DN50-150
- Stainless steel disc and shaft
- EPDM seat
- To suit PN10, PN16 flanges

VALVES			
Part Number	Size (mm)	Kvs (m³/h)	Trade Price
405WEHT40	40	50	£158.00
405WEHT50	50	83	£158.00
405WEHT65	65	212	£170.00
405WEHT80	80	400	£176.00
405WEHT100	100	750	£204.00
405WEHT125	125	1100	£237.00
405WEHT150	150	2000	£273.00

ACTUATORS					
Part Number	Force (Nm)	Voltage (V)	Aux Switch	To Suit Valve (mm)	Trade Price
DA1.S	16	24	YES	40-100	£140.00
DA2.S	16	230	YES	40-100	£177.50
DAG1.S	32	24	YES	125-150	£155.50
DAG2.S	32	230	YES	125-150	£233.00

BUTTERFLY VALVES & ACTUATORS – DN200-DN350

H&C

A range of wafer type butterfly valves & actuators used in heating and cooling systems.

FEATURES
- Butterfly valves – cast iron body, PN16, wafer pattern, EPDM seat & stainless steel disc
- Actuators – manual override, 4 off limit switches (2 off auxiliary) & position indicator
- Fully assembled & tested

Part Number	Size (mm)	Voltage (V)	Trade Price
BF200/HQ020-24	200	24	£1,365.00
BF200/HQ020-230	200	230	£1,365.00
BF250/HQ030-24	250	24	£1,690.00
BF250/HQ030-230	250	230	£1,690.00
BF300/HQ050	300	230	£2,500.00
BF350/HQ060	350	230	£2,900.00

WRAS APPROVED BUTTERFLY VALVES & ACTUATORS

H&C

A range of 2-Way WRAS actuated Butterfly Valves, Sizes 50mm (2") - 200mm (8") c/w either 230V or 24VAC actuator (0-10v option available).

Fitted with AUX switches as standard. Valves are Cast Iron body, wafer pattern with EPDM SEAT and Stainless Steel Disc. Fully assembled and factory tested.

Part Number	Size (mm)	Trade Price
WBF50/HQ005	50	£510.00
WBF65/HQ005	65	£520.00
WBF80/HQ005	80	£540.00
WBF100/HQ005	100	£780.00
WBF125/HQ015	125	£1,450.00
WBF150/HQ015	150	£1,560.00
WBF200/HQ030	200	£2,050.00

SPARES		
Part Number	Description	Trade Price
HQ005	ACTUATOR FOR 50-100MM BUTTERFLY VALVE	£285.00
HQ015	ACTUATOR FOR 125-150MM BUTTERFLY VALVE	£820.00
HQ030	ACTUATOR FOR 200-250MM BUTTERFLY VALVE	£1,043.00

WRAS APPROVED PRODUCT

SPARTAN PERIPHERAL DEVICES 0-10V ACTUATOR

The ME5320/ME5330 is the most common replaceable actuator from the Spartan range of VE411 & VE431 range of 3 way control valves.

Other products within the range are available on request.

Part Number	Type	Trade Price
ME5320	5NM MOTOR 24V 0-10V PROPORTIONAL FOR VALVES UP TO 2" KV29.2	£330.00
ME5330	10NM MOTOR 24V 0-10V PROPORTIONAL FOR VALVES FROM 2"37.5 TO 3"KV95	£380.00

CONTROLLI IP65 UNIVERSAL ACTUATOR

The Controlli type MVE515-IP65 universal 24v 0-10v proportional motor,can be used/fitted to all Schneider type valves, as well as other makes of valves, to make suitable for IP65 outdoor protection, where bags/covers are not an ideal option.

The MV5215-IP65 can fit directly on to the below Schneider Type valves Ranges:
V241/V211T/V211/V212/VG211/VG222/V231/V232/V292

Part Number	Type	Rating & Stroke	Trade Price
MVE515-IP65	24V 0-10V PROPORTIONAL	1500N-60MM STROKE	£330.00
MVE215-IP65	230V VERSION	1500N-60MM STROKE	£350.00

UNIVERSAL LINKAGE KITS		
Part Number	To suit type of valve	Trade Price
AG53	SATCHWELL VZ/VSF/MZ/MJF/MZF	£51.00
AG60-10	HONEYWELL V176A.B/V5011A	£51.00
AG79	HONEYWELL V5011R	£90.00
AG66	JOHNSON VB7816	£51.00
AG60-07	DANFOSS VF2/VF3	£51.00
AG70-10	BELIMO H6.N (DN15-100), H7.N (DN15-100) SIEMENS VVF21(DN25-80),VVF31(DN15-80), VVF40(DN15-80),VVF51(DN15-40), VVF52(DN15-40), VVF53(DN15-150),VVF61(DN15-25),VVF61_2(DN15-150), VVG41(DN15-50),VVG11(DN25-40),VXF21(DN25-80), VXF31(DN15-80), VXF40(DN15-80),VXF51(DN15-40), VXF52(DN15-40),VXF53(DN15-150), VXF61(DN15-25), VXF61_2(DN15-150),VXG41(DN15-50),VXG11(DN25-40)	£51.00
AG70-14	SIEMENS VVF21(DN100).VVF31(DN150),VVF40(DN150), VVF41(DN50-150), VVF45(DN50-150), VVF61(DN40-150), VXF21(DN100),VXF31(DN100-150), VXF40(DN100-150),VXF41(DN50-150), VXF45(DN50-150),VXF61(DN40-150).	£51.00

PLEASE SEE FOLLOWING PAGES (24 AND 25) FOR CROSS REFERENCE FOR RELEVANT VALVE MANUFACTURER AND REQUIRED LINKAGE.

CONTACT OFFICE FOR FURTHER INFORMATION

COMPATIBLE VALVES/LINKAGE KITS						
MANUFACTURER	MODEL	WAY	TYPE	MVE	MVH	MVH56EA/C
SCHNEIDER ELECTRIC	2V241	2-WAY	THREADED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V211T	2-WAY	THREADED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V212T	2-WAY	THREADED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V211	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V212	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	VG211	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	VG222	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V231	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V232	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V292	2-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V341	3-WAY	THREADED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V311T	3-WAY	THREADED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V311	3-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	VG321	3-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
	V321	3-WAY	FLANGED	COMPATIBLE	COMPATIBLE	COMPATIBLE
SATCHWELL	VZ	2-WAY	THREADED	AG53	AG54	AG54
	VSF DN15-50	2-WAY	FLANGED	AG53	AG54	AG54
	VZF DN65 150	2-WAY	FLANGED	AG53	AG54	AG54
	MZ	3-WAY	THREADED	AG53	AG54	AG54
	MJF DN15-50	3-WAY	FLANGED	AG53	AG54	AG54
	MZF DN 65-150	3-WAY	FLANGED	AG53	AG54	AG54
HONEYWELL	V176A,B	2-WAY	FLANGED	AG60-10	NO	NO
	V5011A	2-WAY	FLANGED	AG60-10	NO	NO
	V5011R	2-WAY	THREADED	AG79	NO	NO
	V5011S	2-WAY	THREADED	AG79	NO	NO
	V5011E	2-WAY	THREADED	AG79	NO	NO
	V5013E	2-WAY	\THREADED	AG79	NO	NO
	V5013R	2-WAY	THREADED	AG79	NO	NO
SIEMENS	VVF21 DN 25..80	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF21DN ≥100	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF31 DN 15..80	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF31DN 150	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF40 DN 15..80	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF40 DN 150	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF41 DN 50	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF41 DN 65..150	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF45 DN 50	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF45 DN65..150	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF51DN15..40	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF52 DN 15..40	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10

COMPATIBLE VALVES/LINKAGE KITS						
MANUFACTURER	MODEL	WAY	TYPE	MVE	MVH	MVH56EA/C
SIEMENS	VVF53 DN 15..50	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF53 DN 65..150	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF61 DN 15..25	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF61 DN 40..50	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF61 DN 65..150	2-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VVF61_2 DN 15..50	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVF61_2 DN65..150	2-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VVG41 DN 15.50	2-WAY	THREADED	AG70-10	AG70-10	AG70-10
	VVG11 DN 25..40	2-WAY	THREADED	AG70-10	AG70-10	AG70-10
	VXF21DN 25..80	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF21DN 100	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF31 DN 15..80	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF31 DN 100..150	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF40 DN 15..80	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF40 DN 100..150	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF41 DN 50	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF41 DN 65..150	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF45 DN 50	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF45 DN 65..150	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF51 DN 15..40	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF52 DN 15..40	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF53 DN 15..50	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF53 DN 65..150	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF61 DN 15..25	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF61 DN 40..50	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF61 DN 65..150	3-WAY	FLANGED	AG70-14	AG70-14	AG70-14
	VXF61_2 DN 15..50	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXF61_2 DN 65..150	3-WAY	FLANGED	AG70-10	AG70-10	AG70-10
	VXG41 DN 15..50	3-WAY	THREADED	AG70-10	AG70-10	AG70-10
	VXG11 DN 25..40	3-WAY	THREADED	AG70-10	AG70-10	AG70-10
BELIMO	H6..N DN 15..100	2 WAY	FLANGED	AG70-10	NO	NO
	H7..N DN 15..100	3 WAY	FLANGED	AG70-10	NO	NO
	H2...X-S	2 WAY	THREADED	AG82	NO	NO
	H3...X-S	3 WAY	THREADED	AG82	NO	NO
JOHNSON CONTROLS	VB7816	3-WAY	THREADED	AG66	NO	NO
DANFOSS	VF2	2-WAY	FLANGED	AG60-07	NO	NO
	VF3	3-WAY	FLANGED	AG60-07	NO	NO
MUT	MK DN50 - 150	3-WAY	FLANGED	AG69	NO	NO

WRAS APPROVED SOLENOID VALVES-GOLDSEAL

S&S NORTHERN

The WRAS approved range of 2 way normally closed servo assisted solenoid valves.

FEATURES

• WRAS approved solenoid valves for water
• EPDM seal, brass body
• For temperatures up to 120ºC
• Pressure range 0.5 – 16 bar
• Normally closed as standard

230V VERSION			
Part Number	Size (inch)	Voltage	Trade Price
WSV-G-15/230	½"	230	£79.00
WSV-G-20/230	¾"	230	£100.00
WSV-G-25/230	1"	230	£147.00
WSV-G-32/230	1¼"	230	£289.00
WSV-G-40/230	1½"	230	£336.00
WSV-G-50/230	2"	230	£415.00

24VDC VERSION			
Part Number	Size (inch)	Voltage	Trade Price
WSV-G-15/24D	½"	24	£79.00
WSV-G-20/24D	¾"	24	£100.00
WSV-G-25/24D	1"	24	£147.00
WSV-G-32/24D	1¼"	24	£289.00
WSV-G-40/24D	1½"	24	£336.00
WSV-G-50/24D	2"	24	£415.00

24VAC VERSION			
Part Number	Size (inch)	Voltage	Trade Price
WSV-G-15/24A	½"	24	£79.00
WSV-G-20/24A	¾"	24	£100.00
WSV-G-25/24A	1"	24	£147.00
WSV-G-32/24A	1¼"	24	£289.00
WSV-G-40/24A	1½"	24	£336.00
WSV-G-50/24A	2"	24	£415.00

SPARE COILS		
Part Number	Voltage	Trade Price
WSV-G 24	24VAC	£25.00
WSV-G 230	230VAC	£25.00
WSV-G 24VDC	24VDC	£25.00

PLEASE NOTE: FOR NORMALLY OPEN VERSIONS – CONTACT THE TEAM ON (029) 20 463345 OR E-MAIL SALES@HEATCOMBUSTION.CO.UK

WRAS APPROVED SOLENOID VALVES

Danfoss

A WRAS approved range of 2 way normally closed servo-assisted solenoid valves.

FEATURES

- EV220S slimline compact range
- ½" - 2" 230V or 24VAC as standard
- EPDM seals
- Temperature range -30°C to 60°C.

230V			
Part Number	**Size (")**	**Voltage (V)**	**Trade Price**
042U491432	½	230	£85.00
042U491732	¾	230	£115.00
042U492232	1	230	£160.00
042U493232	1¼	230	£310.00
042U494032	1½	230	£420.00
042U495032	2	230	£485.00
042U491419	½	24	£115.00
042U491719	¾	24	£160.00
042U492219	1	24	£310.00
AVAILABLE IN KIT FORMAT -	1¼	24	POA
VALVE/COIL/DIN PLUG	1½	24	POA
CONTACT OFFICE	2	24	POA

PLEASE NOTE: VALVE/ACTUATORS COME SEPARATE CONTACT OFFICE FOR INFORMATION

NEW PRODUCT

WRAS APPROVED PRODUCT

GENERAL PURPOSE SOLENOID VALVES 230VAC ZERO RATED ½" - 2" SERVO ASSISTED DN65-350

H&C

A range of general purpose solenoid valves normally closed Zero rated direct acting ½" to 2" and servo assisted flanged versions DN65 to DN350 for water/air applications - also Viton types suitable for oil up to 50 centistokes (contact H&C for price): - 230V as standard other voltages available on request.

Part Number	Size (")	Pressure Range (BAR)	Trade Price
PU22004AE	½"	0-8.5	£73.50
PU22006AE	¾"	0-8.5	£91.00
PU22008AE	1"	0-7	£113.50
AD35E	1¼"	0-10	£291.00
AD40E	1½"	0-10	£291.00
AD50E	2"	0-7	£581.50
BFE65D	DN65	0.7-10	£738.00
BFE80D	DN80	0.7-10	£1,007.50
BFE100D	DN100	0.7-10	£1,189.00
BFE125D	DN125	0.7-10	£1,985.00
BFE150D	DN150	0.7-10	£2,210.00
BFE200D	DN200	0.7-10	£5,265.00
BFE250D	DN250	0.7-10	£10,120.00
BFE300D	DN300	0.7-10	£13,265.00
BFE350D	DN350	0.7-10	£16,850.00

PLEASE NOTE: STAINLESS STEEL/PVC AND FAILSAFE BALL VALVES AVAILABLE ON REQUEST

DANFOSS SONOMETER 40 ENERGY METERS

The Danfoss SonoMeter 40 is a range of ultrasonic, compact energy meters intended for measuring energy consumption in heating and cooling applications for billing purposes. The meters are designed for remote meter read-out (AMR).

SonoMeter 40 energy meters consist of an ultrasonic flow sensor, a pair of Pt500 temperature sensors and a calculator with integrated circuits for temperature measurement, flow calculation and energy calculation.

FEATURES

- Available in nominal flow rates qp 0.6, 1.5, 2.5, 3.5, 6.0, 10.0, 15.0, 25.0, 40.0 and 60 m3/h
- Triple communication with M-Bus, wMBus onboard + 1 additional communication module slot
- Housings with thread (G3/4 to G2) or flange (DN 20 to DN 100) connections
- MID approval for ultrasonic energy meter with dynamic range of 1:100 (qi:qp) in class 2
- Optional MID approved dynamic range of 1:250 in class 2
- Temperature range 0 - 180 °C
- Nominal pressure PN25 bar as standard
- Calculator with IP 65 protection class as standard (IP67 or IP68 on special request)
- Flow sensor with IP 65 protection class as standard for heating applications (IP68 for combined heating and cooling applications)
- Return or supply pipe installation, for vertical or horizontal mounting
- Battery lifetime for at least 15+1 years
- Low pressure loss, insensitive to dirt
- No calming sections needed before or after the flow sensor (DN 15-DN 50)
- For DN 65 to DN 100 calming sections are needed (5 x DN on inlet and 3 × DN on outlet of flow sensor)
- Remote reading via M-Bus, radio OMS 868 MHz, RS 485 Modbus, BACnet, LoRA-WAN, pulse output or optical interface
- Available from stock in either Mbus or MODBUS versions. Other output types ie Bacnet/Pulse etc , available to order on request

Part Number	Size (DN)	Nom Flow (m³/h)	Trade Price
SONO40/15/1.5	15	1.5	POA
SONO40/20/2.5	20	2.5	POA
SONO40/25/3.5	25	3.5	POA
SONO40/25/6.0	25	6	POA
SONO40/40/10	40	10	POA
SONO40/50/15	50	15	POA
SONO40/65/25	65	25	POA
SONO40/80/40	80	40	POA
SONO40/100/60	100	60	POA

Option	Trade Price
3M TEMP SENSORS	POA
5M TEMP SENSORS	POA
10M TEMP SENSORS	POA

PLEASE CONTACT THE OFFICE AS VARIOUS OPTIONS AVAILABLE

KAMSTRUP MULTICAL 403 & 603 ULTRASONIC ENERGY METERS

kamstrup

Multical 403 & 603 is a static heat meter, cooling meter or combined heating/cooling meter based on the ultrasonic principle.

FEATURES

• MID Approved Class II
• DN15-40 screwed, DN50-250 Flanged
• M-Bus or Pulse as standard – please specify
• Battery, 230v or 24v – please specify
• Complete with 1.5m temperature sensors, pockets & connections
• Heating version as standard, cooling available on request
• Longer temperature sensors available on request – 3m, 5m, 10m
• Other communication options available on request – Modbus, Bacnet etc

Part Number	Size (mm)	Nom Flow qp(m³/h)	Trade Price
MC403/15/0.6	15	0.6	£451.00
MC403/15/1.5	15	1.5	£451.00
MC403/20/2.5	20	2.5	£455.00
MC403/25/3.5	25	3.5	£620.00
MC403/25/6	25	6	£657.00
MC403/40/10	40	10	£905.00
MC403/50/15	50	15	£1,262.00

Part Number	Size (mm)	Nom Flow qp (m³/h)	Trade Price
MC603/65/25	65	25	£1,595.00
MC603/80/40	80	40	£1,764.00
MC603/100/60	100	60	£2,300.00
MC603/125/100	125	100	£2,850.00
MC603/150/150	150	150	£4,410.00
MC603/200/400	200	400	£5,269.00
MC603/250/600	250	600	£8,500.00

Optional Spares		
Part Number	Description	Trade Price
HC/003/11	PULSE CARD	£32.00
HC/003/20	MBUS CARD	£55.00
HC/003/66	BACNET CARD	£125.00
HC/003/67	MODBUS CARD	£125.00

Part Number	Description	Trade Price
HC/993/09	BATTERY POWER SUPPLY	£28.00
HC/993/08	24V POWER SUPPLY	£28.00
HC/993/07	230V POWER SUPPLY	£28.00

Part Number	Description	Trade Price
6700000B	3M TEMP LEADS (PAIR)	£53.00
6700000C	5M TEMP LEADS (PAIR)	£84.00
6700000D	10M TEMP LEADS (PAIR)	£96.00

ULTRAFLOW CLAMP ON ULTRASONIC ENERGY METER

The U1000MKII-HM is an ultrasonic clamp-on thermal, heat/energy meter that uses ultrasound to measure flow rate and PT100 temperature sensors to measure flow and return temperatures. The U1000MKII-HM displays energy rate and totalised energy with pulse output and communication options, so it can be used as a standalone meter or as an integral part of an M&T or BMS. Simple to install – connect power and enter the pipe inside diameter, adjust the sensors and clamp-on the pipe – no pipe cutting, media intrusion and no specialist skills or tools required!

FEATURES

- Simple to install, clamp on to the pipe and connect power.
- No specialist skills or tools required.
- Power supply 12-24VAC/DC. Complete with built in heatmeter integrator.
- Simple, low cost, hot or chilled water energy measurement from outside the pipe.
- For Modbus,Pulse & Modbus or for Flowmeter version only - Contact the office

U3000 version available for larger pipe sizes (up to 5000mm OD)- available as standard flowmeter or with an integrator for heat metering applications -230V mains as standard,other voltage options available.Built in datalogger & RS232/USB output versions available on request

Part Number	Description	Trade Price
U1000EM-PULSE	22-115mm CLAMP ON ENERGY METER (PULSE OUTPUT)	£1,750.00
U1000EM-MBUS	22-115mm CLAMP ON ENERGY METER (MBUS OUTPUT)	£1,850.00
U1000EM-MODBUS	22-115mm CLAMP ON ENERGY METER (MODBUS OUTPUT)	£1,850.00

MICRONICS CAN ALSO OFFER A FULL RANGE OF PORTAFLOW PORTABLE ULTRASONIC CLAMP ON FLOW METERS/HEATMETERS - CONTACT OFFICE FOR FURTHER DETAILS

COLD WATER METERS C/W PULSE OUTPUT – WRAS APPROVED

A range of class B multijet, dry dial, 16 bar rated water meters.

FEATURES

- WRAS & MID Approved
- Suitable for cold water up to 30°C
- Meters suitable for horizontal & vertical installation

Part Number	Size (mm)	Connection Type	Nom Flow (m³/h)	Max Flow (m³/h)	Trade Price
S15MJC	15	SCREWED	2.5	3	£64.50
S20MJC	20	SCREWED	4	5	£73.65
S25MJC	25	SCREWED	6.3	7	£98.50
S32MJC	32	SCREWED	10	12	£117.00
S40MJC	40	SCREWED	16	20	£215.50
S50MJC	50	SCREWED	25	30	£251.50
F50WC	50	FLANGED	40	50	£288.50
F65WC	65	FLANGED	63	78.7	£366.75
F80WC	80	FLANGED	63	78.7	£395.00
F100WC	100	FLANGED	100	125	£470.50
F125WC	125	FLANGED	125	200	£622.00
F150WC	150	FLANGED	150	312	£746.50
F200WC	200	FLANGED	200	500	£968.00

Part Number	Description	Trade Price
SCREWED SPARE PULSE - COLD	SPARE PULSE FOR COLD SCREWED WATER METERS	£25.50
FLANGED SPARE PULSE - COLD	SPARE PULSE FOR COLD FLANGED WATER METERS	£25.50

Pulse Values	
15mm - 32mm	1P = 10L
40mm - 125mm	1P = 100L
150mm - 200mm	1P = 1000L

WRAS APPROVED PRODUCT

HOT WATER METERS C/W PULSE OUTPUT

aquamotion

A range of class B multijet, dry dial, 16 bar rated water meters.

FEATURES

- Screwed meters- WRAS & MID approved (up to 50mm)
- Flanged meters –ISO4064 Class B
- Suitable for water up to 90°C
- Meters suitable for horizontal & vertical installation

Part Number	Size (mm)	Connection Type	Nom Flow (m³/h)	Max Flow (m³/h)	Trade Price
S15MJH	15	SCREWED	2.5	3	£73.50
S20MJH	20	SCREWED	4	5	£86.50
S25MJH	25	SCREWED	6.3	7	£121.50
S32MJH	32	SCREWED	10	12	£149.50
S40MJH	40	SCREWED	16	20	£237.00
S50MJH	50	SCREWED	25	30	£280.00
F50WH	50	FLANGED	40	50	£492.50
F65WH	65	FLANGED	63	78.7	£496.50
F80WH	80	FLANGED	63	78.7	£557.00
F100WH	100	FLANGED	100	125	£600.50
F125WH	125	FLANGED	160	200	£636.50
F150WH	150	FLANGED	250	312	£786.00
F200WH	200	FLANGED	400	500	£896.00

Part Number	Description	Trade Price
SCREWED SPARE PULSE - HOT	SPARE PULSE FOR HOT SCREWED WATER METERS	£25.50
FLANGED SPARE PULSE - HOT	SPARE PULSE FOR HOT FLANGED WATER METERS	£25.50

Pulse Values	
15mm - 32mm	1P = 10L
40mm - 125mm	1P = 100L
150mm - 200mm	1P = 1000L

ELSTER KENT V100 WATER METERS

elster

The Elster V100 is a robust water meter designed for the measurement of cold potable water that offers accuracy, long maintenance-free life and tamper resistance. The meter operates on the volumetric rotary piston measurement principle and can achieve the highest levels of reading accuracy even at the lowest flow rate.

FEATURES

- Volumetric Positive Displacement type
- WRAS & MID approved
- Suitable for installation in any position with no loss of accuracy
- Suitable for cold water up to 30°C
- Pulse output (to be ordered separately)

Part Number	Size (mm)	2% Accuracy Between		Trade Price
V100-015	15	25 l/hr	25 l/hr	£94.00
V100-020	20	40 l/hr	4m³/hr	£109.00
V100-025	25	63 l/hr	6.3 m³/hr	£261.00
V100-032	32	100 l/hr	1 0 m³/hr	£370.00
V100-040	40	160 l/hr	16 m³/hr	£401.00

Part Number	Type	Output		Trade Price
		15-20mm	25-40mm	
T110-S135	Reed Pulse	1 PULSE PER 0.5 LITRES	1 PULSE PER 5 LITRES	£48.50

ELSTER KENT V200 WATER METERS

The Elster V200 water meter incorporates many advanced design features to improve metering accuracy across a wide range of flow rates, from dripping taps to water for showers, baths and washing machines. It is designed to give a long, trouble-free working life, with excellent features such as the proven grooved piston design.

FEATURES
- Volumetric Positive Displacement type
- WRAS & MID approved
- Suitable or horizontal & vertical installation
- Detection of very low flows
- Suitable for cold water up to 30°C
- Pulse output to be ordered separately.

Part Number	Size (mm)	2% Accuracy Between		Trade Price
V200-015	15	25 l/hr	25 l/hr	£69.50
V200-020	20	40 l/hr	4 m³/hr	£106.50
V200-025	25	63 l/hr	6.3 m³/hr	£256.00
V200-032	32	100 l/hr	10 m³/hr	£368.50
V200-040	40	160 l/hr	16 m³/hr	£440.00

Part Number	Type	Output		Trade Price
		Primary Channel 1	Secondary Channel 1	
PR6-1-1	INDUCTIVE PULSE	1 PULSE PER 1 LITRE	1 PULSE PER 1 LITRE	£65.50
PR6-1-10	INDUCTIVE PULSE	1 PULSE PER 1 LITRE	1 PULSE PER 10 LITRE	£65.50
PR6-1-100	INDUCTIVE PULSE	1 PULSE PER 1 LITRE	1 PULSE PER 100 LITRE	£65.50

ELSTER KENT H4000 WATER METERS

The Elster H4000 is a Woltmann (turbine) water meter designed for measuring bulk flows of cold potable water in commercial or industrial applications and for revenue billing. It meets with all relevant standards, substantially exceeding specifications for forward flow installations in horizontal, vertical and inclined pipelines.

FEATURES
- Woltmann (Turbine) type
- WRAS & MID approved
- Suitable or horizontal & vertical installation
- Flanged PN16
- Suitable for cold water up to 30°C
- Pulse output (to be ordered separately)
- DN65-DN250 longer length versions available on request - please contact H&C

Part Number	Size (mm)	2% Accuracy Between		Trade Price
H4000-040-LP	40	0.81 m³/hr	63 M³/HR	£990.50
H4000-050-LP	50	0.81 m³/hr	63 M³/HR	£870.50
H4000-065-SP	65	1.6 m³/hr	63 M³/HR	£1,031.00
H4000-080-SP	80	2.05 m³/hr	160 M³/HR	£1,045.00
H4000-100-SP	100	2.05 m³/hr	160 M³/HR	£1,400.00
H4000-125-SP	125	2.05 m³/hr	160 M³/HR	£1,666.00
H4000-150-SP	150	3.2 m³/hr	400 M³/HR	£2,540.00
H4000-200-SP	200	6.3 m³/hr	630 M³/HR	£3,115.00
H4000-250-SP	250	10 m³/hr	1000 M³/HR	£4,990.00
H4000-300-SP	300	20.48 m³/hr	1600 M³/HR	£7,332.00

Part Number	Type	Output DN40-DN125		Trade Price
		Primary Channel 1	Secondary Channel 1	
PR7-10-10	INDUCTIVE PULSE	1 PULSE PER 10 LITRE	1 PULSE PER 10 LITRE	£192.00
PR7-1-10	INDUCTIVE PULSE	1 PULSE PER 1 LITRE	1 PULSE PER 10 LITRE	£197.00
PR7-1-100	INDUCTIVE PULSE	1 PULSE PER 1 LITRE	1 PULSE PER 100 LITRE	£182.00

FOR DN150-DN300 PULSE OUTPUT INFORMATION AND MBUS OPTIONS PLEASE CONTACTOFFICE

SCREWED MTHW HOT WATER METERS C/W PULSE OUTPUT

H&C

Water supply systems for cold water up to 30°C, or water up to 50°C and hot water up to 130°C for the family houses and, public buildings.

The water meter structure allows for installing it in both horizontal position with counter set upwards (H) or sideways (V), and in vertical position (V). Rotating counter allows easy reading from the meter.

As part of the measuring system, it allows to measure the water consumption in buildings. M.I.D. Approved.

Part Number	Size (")	Constant Flow (m^3/h)	Max Flow (m3/h)	Trade Price
JS130 NK 6.3	1	6.3	7.875	£260.00
JS130 NK 10	1¼	10	12.5	£280.00
JS130 NK 16	1½	16	20	£330.00

FLANGED MTHW HOT WATER METERS C/W PULSE OUTPUT

H&C

Nubis is propeller, dry water meter Woltman's type, with horizontal impeller axle, parallel to pipe axils. Nubis water meters are characterised by modern construction and technology solutions, which make them long-lasting and perfectly proved in co-operation with pulse transmitters and remote system for measuring data readings. M.I.D. Approved.
Suitable for hot water up to 130°C

Part Number	Size (mm)	Constant Flow (m³/h)	Overload Flow (m³/h)	Trade Price
MWN130 NK50	50	25	31.25	£490.00
MWN130 NK65	65	40	50	£610.00
MWN130 NK80	80	63	78.75	£660.00
MWN130 NK100	100	100	125	£745.00
MWN130 NK150	150	250	312.5	£1,100.00

WATER LEAK DETECTION SYSTEM

S&S NORTHERN

The Merlin WDP is a water leak monitoring system that has been specifically designed to help achieve the requirements of 2018: 1.0 BREEAM UK New construction (non-domestic buildings).

The WDP system will allow designers, M&E contractors and developers to achieve the 'Credit' available to reduce the impact of water leaks that may otherwise go undetected.

All the leak detection water meters and solenoid valves are WRAS-approved.

The system is designed to monitor water flowing through a pulse water meter. If the volume of water reaches the pre-set limit (customer adjustable) the system can isolate the mains water pipe, therefore limiting the amount of water and leak damage.

FEATURES

- Achieves one credit from BREEAM WAT 03
- Timer & programmable clock built in
- Two stage monitoring for occupied and unoccupied buildings
- BMS output available
- 2 zone input for reading 2x water meters (boundary and incoming)
- Volt free normally closed input for emergency stop buttons, fire alarm & security systems
- Remote sounder strobe output
- 230VAC & 24VDC outputs for water solenoid valves

| Part Number	Description	Trade Price
MERLIN WDP	WATER LEAK MONITORING SYSTEM	£1,200.00

NEW PRODUCT

WATER METER GUIDELINES

GENERAL TERMS OF REFERENCE AND SIZING

1. Maximum flow is only for use in emergencies, for about 1-2 minutes as it causes the bearings to overheat.

2. Minimum flow only refers to the minimum flow required to operate and record on the meter. At these very low flows, the meter will not be accurate .

3. All water meters should be sized between transitional flow (the point at which the meter is accurate) and nominal flow (everyday flow rate).
   Never use maximum flow as a basis for sizing the meter.

FILTRATION

4. The meters are designed only for use with clean water. A filter is always recommended upstream of the meter if there are any concerns.
   This filter should also have straight pipe of at least 10x diameters of the pipe from the meter to allow the flow to settle again.
   For example, a DN25 (1") meter would need 250mm (10") between the filter and the meter.
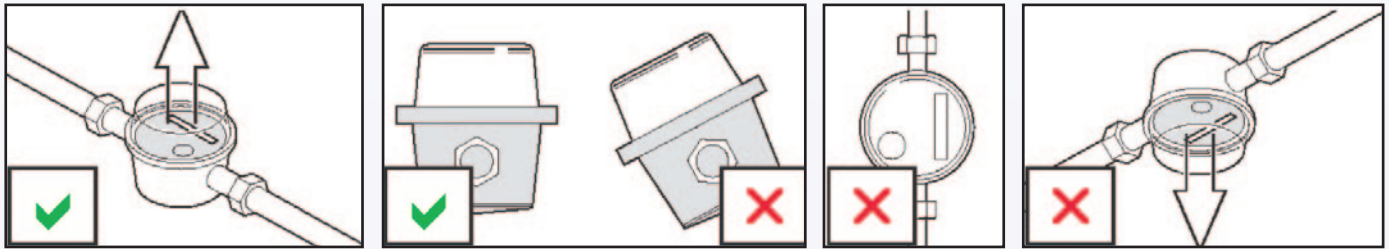
INSTALLATION

1. The preferred mounting position is horizontal with the dial facing upwards. Not to be mounted vertically.
   Never put the meter upside down or canted on its side as it will not function correctly .

2. Water meters should always be fitted with a minimum of 10x pipe diameter both up and downstream.
   For example, a 2" (Dn50) water meter would have 20" (500mm) either side of the meter as straight pipe.
   This is to ensure accurate reading by reducing water turbulence. At higher pressures (above 8 bar), this
   should be increased to 10x pipe diameter.

3. Note that there is a direction of flow arrow on the meter. Also, that the meter has the size in mm on one side and
   the maximum flow on the other in metres cubed per hour. Remember that the meter must only be used for half
   of this maximum flow for constant use, maximum flow only being used for short periods of 1-2 minutes.

4. It is recommended as good practice to fit a removeable filter element before a water meter to protect the mechanism.

5. Only clean water should be used that does not exceed the temperature specification of the meter.
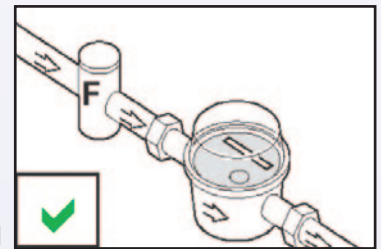
TEMPERATURE SPECIFICATION IS 30°C FOR COLD METERS AND 90°C HOT METERS

Certain inhibitors used in heating systems can damage the meter body, mechanism or the seals. This damage could cause leaks or failure of the meter.

6. When installing the reed switch (pulsed output wire), the distance from the meter to the control unit/pulse counter is best kept under 20 metres as voltage
   will drop.

The reed switches are normally open, volt free, but operate on the 0-24VDC range when the pulse is made. A magnet on the water meter will close the switch to form the circuit when the designed pulse for that meter is reached. This then sends a signal to the control unit/pulse counter. The two wires that leave the pulse cable attached to the meter are not polarity sensitive.
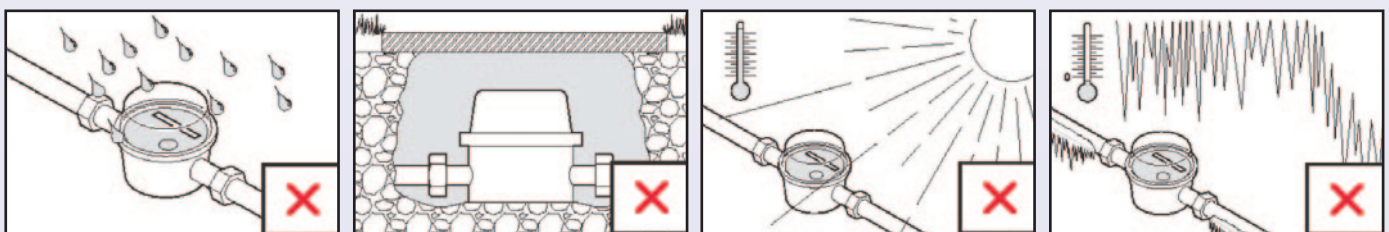
LOCATION

Water meters should never be installed where there is a risk of water ingression, for example, underground or exposed to the elements at any time. Additionally, they should not be exposed to extremes of temperature. Like any other fitting, freezing can damage the dial mechanism and crack the meter body. Meters should always be protected from these risks.

METERING ANCILLARIES

H&C

A range of metering ancillaries to complement our water, gas and heat meters.

Part Number	Description	Trade Price
PADPULS M1	SINGLE CHANNEL PULSE TO M-BUS CONVERTER	£103.00
ISMA-B-81	8 CHANNEL PULSE TO MODBUS CONVERTER	£322.50
M-BUS TO MODBUS	M-BUS TO MODBUS CONVERTER	£720.00
LPS12	PULSE SPLITTER DEVICE	£78.00
WEBLOG 250	WEB ENABLED M-BUS MASTER FOR UP TO 250 METERS	£2,800.00
MR003USB	M-BUS MIKRO-MASTER WITH SPECIAL CABLE FOR LAPTOPS (USB), FOR 10 DEVICES	£320.00
GPW60	M-BUS REMOTE DISPLAY WITH KEYBOARD / LCD AND LEVEL CONVERTER FOR 60 DEVICES WITH RS232C/RS485, CASE FOR WALL MOUNTING, WITH INTERNAL POWER SUPPLY FOR 230VAC	£880.00
CHATTERBOX-E	CHATTERBOX-E ISOLATION BARRIER RELAY	£550.00
MBM-M210X00	M-BUS MASTER MULTIPORT 250D WITH DISPLAY FOR 250 SLAVES	£850.00

SIGMA UG DIAPHRAGM GAS METERS

ΣSIGMA

A range of diaphragm gas meters to measure the volume of gas used, and pulse signal direct to a BMS system.

FEATURES

- MID Conformity
- High measuring stability
- Low noise & pressure drop
- Pre-equipped pulse output
- Back flow protection
- Supplied with unions

Part Number	Size	Min Flow (m³/h)	Max Flow (m³/h)	Trade Price
UG-G4P	¾"	0.04	6	£116.00
UG-G6P	1"	0.06	10	£192.00
UG-G10P	1 ¼"	0.10	16	£440.00
UG-G16P	1 ½"	0.16	25	£589.00
UG-G25P	2"	0.25	40	£787.00

IGTM TURBINE GAS METERS C/W PULSE OUTPUT

vemm tec
Messtechnik GmbH

The IGTM-WT meter is a precise and low-priced turbine gas meter for secondary and industrial volume measurement. In its basic design the meter has an 8-digit mechanical register and a low-frequency pulse output. The IGTM-WT meter has a wafer type design and is installed between 2 flanges.

FEATURES

- From 10 to 2,500 m³/h
- With low-frequency Reed (contact) sensor and optional medium frequency NAMUR sensor
- Aluminium housing
- The meter can be used for measurement of various types of gases, such as natural gas, air, nitrogen.

Part Number	Size (mm)	Qmin (m³/h)	Nom Flow (m³/h)	Qmax (m³/h)	Trade Price
IGTM50/65	50	10	40 & 65	100	£1,118.00
IGTM65/100	65	13	100	160	£1,178.00
IGTM80/160	80	10	100 & 160	250	£1,250.00
IGTM80/250	80	20	250	400	£1,250.00
IGTM100/250	100	13	160 & 250	400	£1,420.00
IGTM100/400	100	32	400	650	£1,420.00
IGTM150/650	150	32	400 & 650	1000	£2,190.00
IGTM150/1000	150	80	1000	1600	£2,240.00
IGTM200/1000	200	50	650 & 1000	1600	£3,400.00
IGTM200/1600	200	130	1600	2500	£3,400.00

PLEASE NOTE: FOR SMALLER LINE SIZES BETWEEN ¾" – 1½" CONTACT OFFICE

FMR ROTARY GAS METERS C/W PULSE OUTPUT

H&C

A positive displacement meter for volume and flow rate measurement.

The meter is suited for measuring clean, dry, and non-corrosive gases like natural gas, propane, butane, air, nitrogen, and others. It is used for highly accurate measurement with a very large rangeability.

The measured actual volume is often converted into volume at base conditions.

FEATURES

- DN40-DN100
- Supplied with Pulse Plug and Lead
- Optimized inlet and outlet design to reduce pressure loss
- Counter is low speed, low friction driven by gas tight magnetic coupling
- Eight-digit counter, non-resettable

- Standard equipped with 1 low frequency Reed switch, second Reed switch as an option
- Index head is 355° turnable for easy access and suitable for tropical application
- Complete with Top Hat filter
- MID approved

Part Number	Size (mm)	QMin (m³/h)	QMax (m³/h)	Trade Price
FMR40	40	0.5	40	£1,400.00
FMR50	50	0.65	100	£1,600.00
FMR80	80	1.0	160	£2,200.00
FMR100	100	1.6	250	£2,472.00
FMR150	150	4.0	650	£4,500.00

AQUA METRO OIL METERS C/W PULSED OUTPUT

aqua metro

The Contoil Aquametro Range range of fuel oil meters.

Applications for flow measurement for mineral oils and heating or propellant fuels for Burners etc.

These Oil Meters provide an accurate, reliable and economical way of obtaining all the information a user needs to control oil usage and energy costs.

FEATURES

- Wide range of sizes from 4mm to 50mm
- Accuracy of ±1% of reading with a repeatability of ±0.2%
- Available with screwed and flanged end connections

- Pulse output units available for interface with management systems and remote readouts
- Can be installed in a horizontal, vertical or inclined position

Part Number	Size (mm)	Flowrate (l/hr)	Trade Price
FB OIL METER 4	4	1-80	£690.00
FB OIL METER 8	8	4-200	£1,012.00
FB OIL METER 15	15	15-600	£1,687.00
FB OIL METER 20	20	30-1500	£1,999.00
FB OIL METER 25	25	75-3000	£2,300.00
FB OIL METER 40	40	225-9000	£3,900.00
FB OIL METER 50	50	750-30000	£7,900.00

SOCOMEC ELECTRICITY METERS COUNTIS E4X

socomec
Innovative Power Solutions

Active energy meters for electrical distribution. Three phase - connect to curent transformers up to 12,000A.

FEATURES

- MID Certified
- Modular Electrical power meter
- Shows KWh & KVA readings

- Backlit LCD
- Measurement accuracy 1%/0.5% MID

NEW PRODUCT

Part Number	Description	Trade Price
E41 48503063	PULSE VERSION	£205.00
E43 48503065	MODBUS VERSION	£249.00

NOTE: CT'S AVAILABLE ON REQUEST CONTACT H&C FOR DETAILS. AVAILABLE IN SINGLE PHASE, 3 PHASE, SPLIT CORE AND MODULATED CORE VERSIONS

ELEKTROGAS VMR GAS SOLENOID VALVES - AUTO RESET

The VMR type valve is a fast opening single-stage solenoid valve, normally closed (open when energised). This type of device is suitable for air/gas to meet class A EN161 approval.

FEATURES

- Max pressure 200mbar, (higher pressure ranges available on request)
- Protection class – IP54, (IP65 & ATEX versions available on request)
- 230V as standard, (other voltages available on request)
- Aluminium body
- Provided with ¼" pressure tappings on two sides in the inlet chamber
- Flanged models provided with additional tappings in the outlet chamber
- Provided with connection on the bottom for closed position indicator micro switch (¾" - 6")
- For ⅜" DN10 to 2" DN50, there is a 500mbar option available, for 2½" DN65 to 6" DN150, there is a 350mbar option available

Part Number	Size (")	DN	Connection	Trade Price
VMR12	½	15	SCREWED	£68.50
VMR22	¾	20	SCREWED	£95.50
VMR32	1	25	SCREWED	£101.00
VMR352	1¼	32	SCREWED	£141.50
VMR42	1½	40	SCREWED	£144.00
VMR62	2	50	SCREWED	£193.00
VMR72	2½	65	FLANGED	£418.50
VMR82B	3	80	FLANGED	£474.00
VMR92	4	100	FLANGED	£917.00
VMR932	5	125	FLANGED	£1,839.00
VMR952	6	150	FLANGED	£1,936.00

ELEKTROGAS VMH ELECTRO HYDRAULIC GAS VALVES

The VMH type valve is a safety shut off valve with hydraulic actuator. This type of device is suitable for air/gas to meet class A EN161 approval.

FEATURES

- Protection class – IP65
- 230V as standard, (other voltages available on request)
- Aluminium body
- Fitted with CPI as standard
- DN250 & DN300 – CE approved & complies to Pressure Equipment Directive (PED)

Part Number	Size (")	DN	Pressure Range (mbar)	Trade Price
VMH7	2½	65	0 - 1600	£1,107.00
VMH8	3	80	0 - 1600	£1,267.00
VMH9	4	100	0 - 1300	£1,427.00
VMH93	5	125	0 - 500	£2,127.00
VMH95	6	150	0 - 500	£2,266.00
VMH98	8	200	0 - 200	£4,028.00
VMH910*	10	250	0 - 1300	£6,721.00
VMH912*	12	300	0 - 600	£7,679.00

COKE GAS/BIOGAS/HYDOGEN OPTIONS AVAILABLE ON REQUEST FOR BOTH VMR AND VMH RANGES

ELEKTROGAS EVRM GAS SOLENOID VALVES - MANUAL RESET

elektrogas

The EVRM type valve is a manual reset safety valve that is normally closed (open when energised). This type of device is suitable for air/gas to meet class A EN161 approval.

FEATURES

- Max pressure 600mbar, 6bar options available
- Protection class – IP65 (½" to 3") & IP54 (4" to 12"), (ATEX versions available on request)
- 230v as standard, (other voltages available on request)
- Aluminium body
- Provided with ¼" pressure tappings on two sides in the inlet chamber
- Flanged models provided with additional tappings in the outlet chamber
- Provided with connection on the bottom for closed position indicator micro switch (¾" - 12")

Part Number	Size (")	DN	Connection	Trade Price
EVRM-NC - ½"	½	15	SCREWED	£70.00
EVRM-NC - ¾"	¾	20	SCREWED	£79.00
EVRM-NC - 1'	1	25	SCREWED	£81.50
EVRM-NC - 1¼"	1¼	30	SCREWED	£121.50
EVRM-NC - 1½"	1½	40	SCREWED	£128.00
EVRM-NC - 2"	2	50	SCREWED	£161.00
EVRM-NC - 2½"	2½	60	FLANGED	£565.00
EVRM-NC - 3"	3	75	FLANGED	£618.00
EVRM-NC - 4"	4	100	FLANGED	£819.00
EVRM-NC - 5"	5	125	FLANGED	£1,478.00
EVRM-NC - 6"	6	150	FLANGED	£1,638.00
EVRM-NC - 8"	8	200	FLANGED	£2,781.00
EVRM-NC - 10"	10	250	FLANGED	£4,136.00
EVRM-NC - 12"	12	300	FLANGED	£4,542.00

COKE GAS/BIOGAS OPTIONS AVAILABLE ON REQUEST

PILOT GAS VALVES VMR-OTN SERIES

elektrogas

The VMR-OTN type valve is a fast opening single-stage solenoid valve, normally closed (open when energised).

This type of device is suitable for air or gas blocking and releasing controls, required in gas power burners, atmospheric gas boilers. industrial kilns and others gas consuming appliances.

FEATURES

- The valves are made of brass
- Suitable for use with air and non-aggressive gases included in the 1, 2 and 3 families
- This valve is open only when energised: if, for any reason power supply goes down, the valve closes immediately
- Qualified for continuous service (100% ED)
- Pipe connections meet group 2 and back pressure sealing is compliant with class A, according to EN161 requirements
- Valves are 100% tested by computerised testing machines and are fully warranted

Part Number	Size (")	Min Press (mbr)	Max Press (mbr)	Trade Price
VMR01OTN	¼	0	200	£42.00
VMR02OTN	⅜	0	200	£48.00
VMR012OTN	½	0	200	£38.75

CLOSED POSITION INDICATOR FOR VMR / EVRM GAS VALVES   *elektrogas*

The PCS Closed Position Indicator switch is a mechanically activated micro-switch for monitoring the position of the gas valve. The safety device can be fitted to the vmr & evrm gas valve. Each switch is supplied with an adapting rod already fitted to make installation easier.

MICROSWITCH INSTALLATION

1) Interupt gas supply

2) Remove the 1/8" plug from valve bottom

3) Introduce the adapting rod inside 1/8" hole and screw the micro switch

ELECTRICAL CONNECTIONS (IEC 730-1)

1) Turn off power supply

2) Unscrew the Din plug and connect cables to terminals 1, 2, 3

3) Screw back the Din plug using the gasket properly

Part Number	To Suit Valve (")	Size	Trade Price
PCS3	VMR/EVRM ¾ - 1	DN 20-25	£52.50
PCS4	VMR/EVRM 1¼ - 1½	DN 32-40	£52.50
PCS6	VMR/EVRM 2	DN 50	£52.50
PCS8	VMR/EVRM 2½ - 3	DN 65-80-25	£52.50
PCS9	VMR/EVRM 4	DN 100	£52.50
PCS95	VMR/EVRM 5 - 6	DN 125-150	£52.50
PCS98	EVRM 8	DN 200	£52.50
PCS910	EVRM 10	DN 250	£52.50
PCS912	EVRM 12	DN 300	£52.50

CAUTION: THE SOLENOID VALVES MUST BE PROVIDED WITH A G⅛" THREADED HOLE ON THE BOTTOM, TO ALLOW THE SWITCH ASSEMBLY
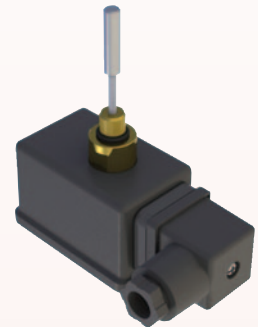
SPARE COILS/HEADS FOR VMR/EVRM/VMH GAS VALVES   *elektrogas*

Part Number	To Suit Valve (")	Size	Trade Price
VMR1930.2110	VMR ½	DN 15	£40.00
VMR1930.1311	VMR ¾ - 1	DN 20-25	£75.50
VMR1930.1416	VMR 1¼ - 2	DN 32-50	£94.50
VMR1930.1812	VMR 2½ - 3	DN 65-80	£184.00
VMR1930.1912	VMR 4	DN 100	£590.00
VMR1930.1990	VMR 5 - 6	DN 125-150	£985.00
EVRM1930.3110	EVRM ½ - 2	DN 15-50	£40.00
VRM1930.3120	EVRM 2½ - 3	DN 65-80	£40.00
EVRM1930.3130	EVRM 4 - 8	DN 100-200	£98.00
EVRM1930.3135	EVRM 10 - 12	DN 250-300	£98.00
BH98	VMH 5 – 8	DN 125-200	£1,437.00
BH912	VMH 10 – 12	DN 250-300	£1,800.00

EMERGENCY STOP BUTTONS

H&C

The emergency stop button is designed for use in boiler houses etc.

With gas valves/fire valves and accessory equipment as an emergency button to sound an alarm/render equipment safe by the operation of an electric switch which must be activated manually by hand pressure.

To reset the mechanism, turn the red push button in a clockwise direction and the switch will automatically return to the original position. All IP65 rated

Part Number	Description	Trade Price
KOB	KNOCK OFF BUTTON	£8.50
KR-KOB	KNOCK OFF BUTTON, KEY RESET	£17.00
SHROUDED KOB	KNOCK OFF BUTTON, SHROUDED	£30.00

ELECTRO THERMAL FUSIBLE LINK

H&C

Electro thermal fusible link for use in boiler houses.

The electro thermal fusible link is for installing in a position where a fire hazard may occur, e.g. above a burner, an air heater or boiler. The fire will melt the fusible metal link and interrupt the electrical supply to either a gas valve or an alarm etc.

The link consists of a purpose built cast aluminium box with a perforated cover having a temperature sensitive fuse. The unit should be mounted so that the perforated cover faces downwards and the ventilation holes in the back of the box must not be obstructed.

The link is electrically rated at 5 amps maximum on 200/250volts, single phase, 50 hertz and melts at 72°C.

Metal box version approx. 3" x 2" x 1"

Part Number	Trade Price
ETL	£8.50

EDUCATION / SCIENCE LABORATORY GAS PROVING

Single utility gas pressure proving & isolation system designed specifically for use in School and University Laboratories.

Most commonly used to control gas.

Part Number	Description	Trade Price
1000V	GAS PROVING & OPTIONAL VENTILATION INTERLOCKING C/W PRESSURE TRANSMITTER	£674.00

Dual utility gas pressure proving & isolation system designed specifically for use in School and University Laboratories.

Most commonly used to control gas & electric.

Part Number	Description	Trade Price
1000V+	GAS PROVING, ELECTRICAL ISOLATION & OPTIONAL VENTILATION INTERLOCKING C/W PRESSURE TRANSMITTER	£711.00

Triple utility gas pressure proving & isolation system designed specifically for use in School and University Laboratories.

Most commonly used to control gas, electric & water.

Part Number	Description	Trade Price
1000VW+	GAS PROVING, WATER AND ELECTRICAL ISOLATION & OPTIONAL VENTILATION INTERLOCKING C/W PRESSURE TRANSMITTER	£749.50

The pressure transmitter provides a pressure drop analysis on the gas line upon each activation of the gas proving system. This ensures all gas taps and appliances are closed before gas into the space.

The pressure drop test also ensures all pipe work is intact and free from fault or damage. this simple 30 second test provides a unique safe start up environment for the user.

Part Number	Description	Trade Price
PRESSURE TRANSMITTER	GAS PRESSURE PROVING TRANSMITTER (SUPPLIED WITH ALL MERLIN GAS PROVING SYSTEMS)	£152.00

FEATURES

- Key resettable Perspex screen
- Shrouded fascia means it can't be accidentally knocked.
- "Gas Shut Off" label on the fascia.
- Activation Indicator when the emergency knock off button has been pressed.

Part Number	Description	Trade Price
EM STOP BUTTON	REMOTE EM STOP BUTTON YELLOW, SHROUDED C/W RESET KEY	£31.00

KITCHEN VENTILATION INTERLOCKING SYSTEMS

S&S NORTHERN

NEW PRODUCT

Specifically designed for use in commercial kitchens to meet BS6173 Standards.

Energy saving demand controlled ventilation system. Built in gas interlock & optional gas proving. The 3000S automatically adjusts the speed of the ventilation based on the kitchen environment and automatically controls based on the carbon dioxide levels, smoke/steam present in the canopy, carbon monoxide, real time gas usage and temperature, thereby offering large financial savings and short payback periods for any commercial kitchen.

Part Number	Description	Trade Price
3000S	ENERGY SAVING DEMAND CONTROLLED VENTILATION SYSTEM WITH BUILT IN GAS INTERLOCK & GAS PROVING	£1,850.00

NEW PRODUCT

A ventilation interlock and gas proving system for commercial kitchens and includes two built in intelligent current monitors- comes with a gas pressure transmitter included for commercial Kitchens where gas appliances do not have flame failure devices.

Part Number	Description	Trade Price
2000X	GAS PROVING & CURRENT MONITORING SYSTEM 4 FAN INPUTS	£975.00

Ventilation interlock system specifically designed for use in commercial kitchens to meet BS6173

FEATURES

- Gas proving feature for when kitchen appliances are not fitted with flame failure devices
- Low gas pressure monitoring
- Interlock up to four fans
- BMS output for system indications
- Receive inputs from remote push buttons and fire alarms to shutdown gas in an emergency

Part Number	Description	Trade Price
2000S	GAS VENTILATION IINTERLOCK - GAS PROVING - AIR PD & CURRENT SENSING C/W PRESSURE TRANSMITTER	£726.00

IF CO₂ AS SECONDARY INTERLOCK IS REQUIRED, THEN WE RECOMMEND THE MERLIN CO-C1 OR CO2X FOR VISUAL PPM READOUT

Ventilation interlock system specifically designed for use in commercial kitchens to meet BS6173.

FEATURES

- Interlock up to two fans
- BMS output for system indications
- Receive inputs from remote push buttons and fire alarms to shutdown gas in an emergency

Part Number	Description	Trade Price
CT1250	GAS VENTILATION INTERLOCK WITH TWO BUILT IN CURRENT MONITORS	£376.50

Ventilation interlock system specifically designed for use in commercial kitchens to meet BS6173.

FEATURES

- Interlock up to two fans
- BMS output for system indications
- Receive inputs from remote push buttons and fire alarms to shutdown gas in an emergency

Part Number	Description	Trade Price
CT1200S	GAS VENTILATION INTERLOCK - AIR PD COMPATIBLE	£317.00

Designed to monitor fan current - up to two fans. Suitable for Merlin 2000S system only.

Part Number	Description	Trade Price
PM2+	2 CHANNEL CURRENT SENSOR FOR MERLIN INTERLOCK PANELS	£247.00

Accessories		
Part Number	**Description**	**Trade Price**
930-80	AIR PD SWITCH 20-300 Pa	£11.50
DUCT KIT	TO SUIT 930-80	£1.80
CS1	SINGLE CURRENT SWITCH - ALTERNATIVE TO AIR DPS	£109.00
CS2	DUAL CURRENT SWITCH - ALTERNATIVE TO AIR DPS	£146.00
OPTICAL SENSOR	TO DETECT SMOKE/STEAM - TO SEND SIGNAL BACK TO CONTROL PANEL	POA

GAS DETECTION & ISOLATION CONTROLLERS

S&S NORTHERN

FEATURES
- 2 zone gas detection system for up to 6 gas detectors
- Can accept inputs from remote push buttons, fire alarms & heat detectors
- Built-in connectivity to existing BAS/BMS system
- Gas pressure proving - low & high pressure shut off

Part Number	Description	Trade Price
1000BH	2 ZONE GAS DETECTION & GAS PROVING SYSTEM	£684.00

FEATURES
- 8 zone gas detection system for up to 8 gas detectors
- TFT screen displays live gas levels & system indications (GDP2X only)
- Can accept inputs from remote push buttons, fire alarms & heat detectors
- Built-in connectivity to existing BAS/BMS systems

Part Number	Description	Trade Price
GDP2	2 ZONE GAS DETECTION SYSTEM	£313.00
GDP2X	8 ZONE GAS DETECTION SYSTEM	£508.00
GDP4	4 ZONE GAS DETECTION SYSTEM	£500.00

FEATURES
- 8 zone gas detection system for up to 8 gas detectors
- Gas pressure proving - low & high pressure shut off
- TFT screen displays live gas levels & system indications
- Can accept inputs from remote push buttons, fire alarms & heat detectors
- Built-in connectivity to existing BAS/BMS systems

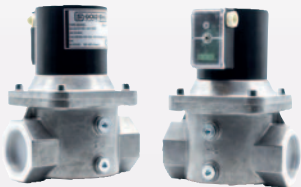| Part Number	Description	Trade Price
GDPX+	16 ZONE GAS DETECTION SYSTEM & GAS PRESSURE PROVING WITH MODBUS COMPATIBILITY	£1,100.00

FEATURES
- Emergency Shutdown of Gas & Boilers
- Compact Adaptable Design provides safety and assurances
- Individual relay outputs per gas
- Clear digital display
- Can accept inputs from remote push buttons, fire alarms & heat detectors

Part Number	Description	Trade Price
MINI MERLIN TFT CO/NG	DUAL GAS DETECTION SYSTEM - TFT COLOUR SCREEN CO & NAT GAS	£207.00
MINI MERLIN TFT CO/LPG	DUAL GAS DETECTION SYSTEM - TFT COLOUR SCREEN CO & LPG	£207.00

FEATURES

- Keyed authority over singe (S500) or dual utilities (S500+)
- Can accept inputs from remote push buttons, fire alarms & heat detectors
- Built-in connectivity to existing BAS/BMS systemsa

Part Number	Description	Trade Price
500S	SINGLE UTILITY CONTROL	£317.00
500S+	DUAL UTILITY CONTROL	£334.00

NEW PRODUCT

Part Number	Description	Trade Price
FAB1	FIRE ALARM BYPASS. CAN BE INTERGRATED WITH ANY OF THE MERLIN RANGE OF PRODUCTS TO GIVE THE OPERATOR TO GIVE THE OPERATOR THE OPPORTUNITY TO TEMPORARY BY-PASS THE GAS ISOLATION SYSTEM FOR BETWEEN 10-45 MINUTES.	£270.00
SOUNDER ALARM BEACON	A REMOTE ALARM BEACON USED IN BOILER HOUSES	£150.00

Part Number	Description	Trade Price
GSV-15-230V	230V 4 TEST POINT GAS SOLENOID	£69.00
GSV-20-230V	230V 4 TEST POINT GAS SOLENOID	£98.50
GSV-25-230V	230V 4 TEST POINT GAS SOLENOID	£113.50
GSV-32-230V	230V 4 TEST POINT GAS SOLENOID	£143.00
GSV-40 -230V	230V 4 TEST POINT GAS SOLENOID	£166.50
GSV-50-230V	230V 4 TEST POINT GAS SOLENOID	£204.50

LARGER SIZES AVAILABLE UPON REQUEST

GAS DETECTORS

The Detector i range are used in various applications such as boiler/ plant rooms, hospitals, laboratories and high-rise buildings. These sensors are specifically built to work with all Merlin control panels and can also be used directly with BMS control panels. The light indicator will summarise the gas levels - Green Safe, Yellow - Attention, Red - Danger Gases Available - Natural Gas, Carbon Monoxide, LPG, CO_2, Refrigerant, Oxygen, NO_2

FEATURES

- 24VAC/DC
- Traffic Light Indication
- Audible Alarm
- 2 x Relay Output: 1 x Pre-Alarm, 1 x Alarm
- 1 x CL Connection for GDP Range
- 0-10V output linear scale to full range
- Calibration and End of Life Reminder

Part Number	Description	Trade Price
NG I	24V AC/DC NATURAL GAS DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£143.00
CO I	24V AC/DC CARBON MONOXIDE DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£143.00
LPG I	24V AC/DC LPG DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£143.00
H_2 I	24V AC/DC H_2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£229.00
CO_2 I	24V AC/DC CARBON DIOXIDE DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£160.00
O_2 I	24V AC/DC O_2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£547.00
NO_2 I	24V AC/DC NO_2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£171.00

GAS DETECTORS

The Detector IS range expands on the I by adding a clear digital display to the user to clearly see the current gas levels and the traffic light indicator will summarise the gas levels - Green Safe, Yellow - Attention, Red - Danger. Gases Available - Natural Gas, Carbon Monoxide, LPG, CO2, Refrigerant, Oxygen, NO_2

FEATURES

- PPM/LEL on TFT screen with Traffic Light Colours
- Audible Alarm
- Modbus available on NG, CO and LPG in the form of the Detector X

Part Number	Description	Trade Price
NG IS	24V AC/DC NATURAL GAS DETECTOR, 0-10V OUTPUT, 2X VFC OUTPUT, 2X VFC SWITCH, TFT SCREEN	£167.00
CO IS	24V AC/DC CARBON MONOXIDE DETECTOR, 0-10V	£167.00
LPG IS	24V AC/DC LPG DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£167.00
H_2 IS	24V AC/DC H_2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£257.00
CO_2 IS	24V AC/DC CARBON DIOXIDE DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£200.00
O_2 IS	24V AC/DC O_2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£467.00
NO_2 IS	24V AC/DC NO2 DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£195.00

SPECIALIST GASES AVAILABLE UPON REQUEST INCLUDING REFRIGERANTS

PLEASE NOTE: ALL S&S SENSORS ARE ALL PRE-CALIBRATED PRIOR TO DESPATCH, AND ANNUAL TESTING IS NOT REQUIRED TO VALIDATE WARRANTIES BECAUSE THEY WILL FLAG UP ON THE EOL INDICATOR WHEN THEY NEED REPLACING.

ANCILLARY ITEMS

We offer a full range of bottled test gases and testing equipment. The Bump kits are used to check and maintain gas detectors.

FEATURES

- Carbon Monoxide
- Methane
- LPG
- Nitrogen

Others available on request.

Part Number	Description	Trade Price
BUMP TEST KIT	34L NATURAL GAS BOTTLE, 34L CARBON MONOXIDE BOTTLE, WEEPING VALVE, CARRY CASE	POA

34L BOTTLE OF NATURAL GAS & CARBON MONOXIDE

Flow control valve sold separately

Part Number	Description	Trade Price
34L CARBON MONOXIDE BOTTLE ONLY	34L 500PPM CARBON MONOXIDE BOTTLE (NO VALVE)	POA
34L NATURAL GAS BOTTLE ONLY	34L 0.75% NATURAL GAS BOTTLE ONLY	POA

PLEASE NOTE: DUE TO NEW LEGISLATION WE ARE UNABLE TO SEND GAS BOTTLES/HAZARDOUS GASES BY OUR NORMAL CARRIER. THEREFORE THESE CAN ONLY BE SENT VIA A DESIGNATED CARRIER. CARRIAGE CHARGE EXTRA AT COST, DEPENDENT ON POSTCODE. CONTACT HEAT & COMBUSTION FOR DETAILS.

DUOMO GAS DETECTION CONTROL PANELS

Duomo gas detection control panels are a range of wall and panel mounted microprocessor based gas detector control unit.

FEATURES

- Microprocessor control
- For use with SGM, SG & CO range of sensors
- GS300MC & BX444-MC versions complete with secure test facility which allows sensors to be fully tested by applying test gas without disconnecting the electrical supply to gas valves
- 4-20mA signal input
- 230V power supply
- 3 year guarantee

Part Number	No. of Channels	Mounting Type	Display	Trade Price
BX150	1	PANEL	NO	£274.00
GS100M	1	PANEL/WALL	NO	£307.00
GS300-MC	3	PANEL/WALL	YES	£494.00
BX444-MC	4	PANEL/WALL	YES	£538.00
BX308	8	PANEL/WALL	YES	£899.00
BX316	16	WALL	YES	£1,276.00
BXI32	32	WALL	YES	£1,433.00

DUOMO GAS DETECTION ACCESSORIES

AUDIBLE FLASHING ALARM

Audible Flashing Alarm. 230VAC supply IP66 protection. the unit is BS5839 Part 1 compliant, has a two stage alarm, over 30 different selectable alarm tones and has full volume control.

Part Number	Trade Price
AF126	£190.00

Part Number	Trade Price
GAS CANNISTER (12 LITRE)	£93.00
LPG GAS CANNISTER (12 LITRE)	£93.00
CO CANNISTER (12 LITRE)	£95.00
REUSABLE VALVE FOR ABOVE	£90.00
COLLECTING CONE	£142.00

PLEASE NOTE: DUE TO NEW LEGISLATION WE ARE UNABLE TO SEND GAS BOTTLES/HAZARDOUS GASES BY OUR NORMAL CARRIER. THEREFORE THESE CAN ONLY BE SENT VIA A DESIGNATED CARRIER. CARRIAGE CHARGE EXTRA AT COST, DEPENDENT ON POSTCODE. CONTACT HEAT & COMBUSTION FOR DETAILS.

H&C CAN PROVIDE GAS DETECTION SOLUTIONS FOR ALTERNATIVE GASES, E.G. CL2, H2S, NO2 ETC. PLEASE CONTACT OFFICE FOR MORE DETAILS

DUOMO GAS SENSORS COMPATIBLE WITH DUOMO CONTROL PANELS

Part Number	Gas	Mounting Type	IP Rating	Trade Price
SGM595	NATURAL	WALL	IP55	£153.00
SGM595-LPG	LPG	WALL	IP55	£153.00
SG500	NATURAL GAS	WALL	IP30	£95.00

Part Number	Gas	Mounting Type	IP Rating	Trade Price
CO100AR	CARBON MONOXIDE	WALL	IP55	£248.50
CO200/DUCT	CARBON MONOXIDE	DUCT	IP55	£380.00

Part Number	Gas	Mounting Type	IP Rating	Trade Price
HCF100	R134A FREON	WALL	IP55	£210.00
HCF100D	R134A FREON	DUCT	IP55	£857.00
HCF100A	R134A FREON	WALL	IP66 METAL CASED	£336.00

OTHER REFRIGERANTS AVAILABLE UPON REQUEST – I.E. R410/R404/R32+ PLEASE CONTACT OFFICE FOR DETAILS.

Part Number	Gas	Mounting Type	IP Rating	Trade Price
SG870	OXYGEN	WALL	IP66 INDUSTRIAL	£647.00
SG880	CARBON DIOXIDE	WALL	IP66 INDUSTRIAL	£829.00
SG895 ATEX	HYDROGEN	WALL	ATEX INDUSTRIAL	£611.00

PLEASE NOTE: WITH THE VOLATILE NATURE OF HYDROGEN AND WIDE FLAMMABILITY LIMITS H&C DOES NOT RECOMMEND USE OF NON-ATEX EQUIPMENT FOR MONITORING HYDROGEN.

DUOMO STAND ALONE GAS SENSORS AND CONTROLLER

METHANE OR LPG (STAND ALONE UNIT)

IP64, 230V Pre-alarm and main alarm relays

Can be connected to safety shut off valve with supply broken when main alarm triggered.

Part Number	Trade Price
SOLUS GS1	£255.00

NATURAL GAS & LPG SENSOR (STAND ALONE UNIT)

The GS920 is a methane/LPG sensor with an integrated seismetic detector that will shut off a gas valve in the advent os seismetic activity.

With a built in relay the GS920 can be used to shut off a gas valve in the event of a leak, or operate remote sirens and beacons to alert those of a hazard.

| Part Number	Trade Price
GS920 LPG	£118.00
GS920	£118.00

NATURAL GAS & CARBON MONOXIDE CONTROLLER (STAND ALONE UNIT)

The CHCO is a dual sensor, methane and carbon monoxide detector.

FEATURES

- Microprocessor control
- Detects carbon monoxide and methane
- 230V supply
- Methane alarm relay SPDT
- Carbon monoxide relay SPDT
- Catalytic sensor for methane
- Electrochemical sensor for carbon monoxide
- Sensor active indicator

Part Number	Trade Price
CHCO	£161.50
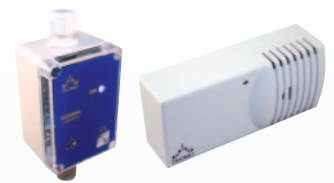
CARBON MONOXIDE SENSORS (STAND ALONE UNIT)

The CO233A is an electronic safety and protection device. The electrochemical sensor technology provides specific detection of carbon monoxide. Rugged construction and IP55 protective rating make this unit ideal for damp conditions such as boiler rooms. The CO233A is ideal for occupied areas where the concentrations of carbon monoxide need to be monitored, for example storage rooms adjacent to boiler rooms.

FEATURES

• 12-24VDC supply

• Digital display (ppm)

• Electrochemical sensor technology

• 4-20MA linear output and on / off TWA

Part Number	Description	Trade Price
C0233A	CATALYTIC CO SENSOR C/W DIGITAL DISPLAY SUITABLE FOR CAR PARKS ETC.	£410.00
C0100AR	CARBON MONOXIDE SENSOR, APPROVED TO EN50270 & EN50545-1	£248.50

GAS PROVING

The G161 and G621 range of gas proving system from ranges ½" – 4" compatible with KS22/23 controllers

The Duomo KS20 catering kitchen ventilation interlock controller (where all gas appliances have existing flame failure safeguards)

NEW PRODUCT

NEW DUOMO PRODUCTS

KLC10/11 Flamonitec UV Flame Detector

COFI Range of Ignition Transformers

ST200PT Electronic Pressure Gauges

Gas Flare & Purge Units

OTHER DUOMO PRODUCT AVAILABLE ON REQUEST. CONTACT THE OFFICE FOR DETAILS ON THE ABOVE

AXIO STAND ALONE CARBON MONOXIDE SENSOR

AX-GS-CM sensors suitable for use in occupied areas where the concentrations of carbon monoxide need to be monitored, for example, car parks, boiler rooms etc.

FEATURES

• Monitors CO levels over a range of 0-300ppm

• Easy installation with plug-in connections

• 0-5, 2-10 or 0-10Vdc selectable voltage output

• IP65

• 3 year warranty

• 24VAC/DC supply

Part Number	Description	Trade Price
AX-GS-CM-VR-65	CO SENSOR WITH RELAY	£138.00
AX-GS-CM-VRL-65	CO SENSOR WITH RELAY & DISPLAY	£168.00

AX-GS-ND-V

Nitrogen Dioxide Voltage Transmitter IP65, with optional display.

The AX-GS-ND-V Nitrogen Dioxide Voltage Transmitter provides a linear output signal for NO2 levels from 0-10ppm. The output voltage is configurable for either 0-5Vdc, 2-10Vdc or 0-10Vdc. Options include relay(s) with set trip points and an LCD display. The sensor module uses a plug-in connector, making for easy in-the-field replacement.

The unit can be mounted with the cable gland entry pointing up or down.

Part Number	Description	Trade Price
AX-GS-ND-V NITROGEN	DIOXIDE VOLTAGE TRANSMITTER	£108.50

CO₂ DETECTORS

The Detector i range are used in various applications such as boiler/ plant rooms, hospitals, laboratories and high-rise buildings. These sensors are specifically built to work with all Merlin control panels and can also be used directly with BMS control panels. The light indicator will summarise the gas levels - Green Safe, Yellow - Attention, Red - Danger.

Gases Available - Natural Gas, Carbon Monoxide, LPG, CO₂, Refrigerant, Oxygen, NO₂.

The Detector IS range builds on the I Detector by adding a clear digital display to allow the user to clearly see the current gas levels and the traffic light indicator will summarise the gas levels - Green Safe, Yellow - Attention, Red - Danger.

FEATURES

- 24VAC/DC
- Traffic Light Indication
- Audible Alarm
- 2 x Relay Output: 1 x Pre-Alarm, 1 x Alarm
- 1 x CL Connection for GDP Range
- 0-10V output linear scale to full range
- Calibration and End of Life Reminder

Part Number	Description	Trade Price
CO₂ I DETECTOR	24V AC/DC CARBON DIOXIDE DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, LEDS ON FRONT FASCIA	£160.00
CO₂ IS DETECTOR	24V AC/DC CARBON DIOXIDE DETECTOR, 0-10V OUTPUT, 2X VFC SWITCH, TFT SCREEN	£200.00

FEATURES

- Precise CO₂ & temperature sensing for integration in modern BAS systems
- Control ventilation
- Pre alarm & alarm relay outputs
- Traffic light display changes colour dependant on CO₂ or temperature levels
- 0-10VDC relay outputs to control motors & fans
- 12/24VDC or 240VAC powered - Sounder Alarm

Part Number	Description	Trade Price
CO2-X	TFT COLOUR SCREEN - FAN CONTROL - TEMP CONTROL - BB101 (CO₂)	£267.00

MERLIN CO₂ DESKTOP MONITOR

The Merlin CO₂ Desktop Monitor with NDIR sensor is designed specifically for use in classrooms, offices, or any other occupied indoor area, to monitor the air quality and help improve ventilation.

This low cost unit comes complete with a 1 meter cable with a USB connection so it can be powered by your computer or connecting to a standard USB compatible plug and perfectly meets the DfE specification for use in school class rooms.

It provides teachers and end users with a clear indication of the CO₂ levels, humidity and temperature and also has a rechargeable lithium battery built in so can be used as a portable device without the need for a constant power supply.

Part Number	Description	Trade Price
MERLIN DESKTOP CO₂ MONITOR	CO₂ TEMP AND RELATIVE HUMIDITY MEETS DFE FOR CLASSROOMS	£143.00
MERLIN DESKTOP CO₂ MONITOR BLACK	CO₂ TEMP AND RELATIVE HUMIDITY MEETS DFE FOR CLASSROOMS (IN BLACK)	£171.00

NEW PRODUCT

PLEASE NOTE: ALL S&S SENSORS ARE ALL PRE-CALIBRATED PRIOR TO DESPATCH, AND ANNUAL TESTING IS NOT REQUIRED TO VALIDATE WARRANTIES BECAUSE THEY WILL FLAG UP ON THE EOL INDICATOR WHEN THEY NEED REPLACING

MERLIN CO₂ 24HR AVG TFT MONITOR FOR SCOTTISH TECHNICAL HANDBOOK 3.14.2

S&S NORTHERN

The Merlin CO₂ AVG Monitor has a TFT display to show the user a clear and precise reading of the CO₂ level in the room and average CO₂ level over 24 & 8 hours. The monitor also provides statistics for the highest reading over a 24 hour period along with a colour system indicating the air quality in the area.

FEATURES
- TFT Colour display providing live digital CO₂ levels
- The Screen changes colour on the increase and decrease of CO₂ levels
- Ambient light sensor changes screen brightness
- Touch button to provide on/off screen control
- 240v AC Mains Powered
- Quick to install with no setup requirements
- Integral terminal outputs to activate mechanical ventilation.
- 2 Year Warranty and Manufactured in Britain

Part Number	Trade Price
MERLIN CO₂ 24HR AVG TFT	£171.00

NEW PRODUCT

MERLIN IAQ MONITOR

S&S NORTHERN

Indoor Air Quality Sensors

Monitor and measure carbon dioxide (CO₂), carbon monoxide (CO), temperature, dust (PM), volatile compounds (VOCs) and relative humidity.

Designed for all areas being directly connected to low 24VAC/DC voltage supply. e.g. residential, public, commercial and light industrial environments which support a digital RS-485 RTU or BACNET MS/TP communication protocols.

The IAQ can operate as a stand alone unit, or with 3rd party devices capable of accepting digital signals, i.e. Building Management Systems (BMS).

FEATURES
- Excellent stability and strong anti-interference, long-life sensors
- Fully calibrated
- BS50543. Harmonised BS 61010-1 & BS 50270
- WELL Performance & RESET Standards
- CIBSE Part F
- Designed, manufactured and fully tested in the UK
- Standard three year warranty guarantee

Part Number	Trade Price
RS-IAQ-NO SCREEN	POA
RS-IAQ-WITH SCREEN	POA

NEW PRODUCT

MERLIN RS SENSORS

S&S NORTHERN

Carbon Dioxide, Temperature & Humidity Room Sensors

The MERLIN RS new range of room sensors to monitor carbon dioxide (CO₂) teperature and relative humidity. Designed for ALL ocupiable spaces, including residential, public, commercial and light industrial environments. Available options from standard 0-10V version 240V; digital RS-485 Modbus RTU or BACnet MS/TP communication protocols. Various types of enclosures available ranging from blank facias, LED and screen versions.

FEATURES
- Analogue: 3x 0-10V signals for CO₂ (PPM), temperature (°C) and Humidity (% Relative)
- Digital RS-485: Modbus RTU BACnet MS/TP communication protocols
- VFC Relay (CO₂): 1 x SPST 70mA Max
- Thermistor output for 3rd party temprature monitoring
- Excellent stability and strong anti-interference, long-life sensors
- Fully calibrated IGEM/UP/11
- BS50543. Harmonised BS 61010-1 & BS 50270
- WELL Performance & RESET Standards
- Designed, manufactured and fully tested in the UK
- Standard three year warranty guarantee

ASHRAE BACnet®

Modbus

VARIOUS OPTIONS AVAILABLE PLEASE CONTACT OUR SALES TEAM TO QUOTE SUITABLE FOR YOUR REQUIREMENTS, ALTERNATIVLLY FOLLOW LINK TO SELECT YOUR OPTION
https://snsnorthern.com/merlin-rs-range

CO₂ ROOM SENSOR – 0-10V C/W THERMISTOR TEMP OUTPUT

A simple low-cost state-of-the-art infrared and maintenance free, carbon dioxide transmitter for installation in space areas C/W temperature bead 10K3A1 supplied as standard.

Optional beads available at an additional cost (i.e.: Siemens / Cylon / Satchwell / TAC / Andover etc).

IP30 rated. Measures CO_2 concentration in the air up to 2000ppm and transforms into an analogue 0-10V output signal or 4-20mA.

Temperature control via thermistor bead.

Part Number	Trade Price
'E' SENSE ROOM-TR	£195.00

CO₂ ROOM SENSOR – 0-10V C/W DISPLAY

A simple CO_2 room sensor (no temperature connector) with a digital display. IP30 rated.

Part Number	Trade Price
'E' SENSE ROOM-D	£290.00

CO₂ & TEMP ROOM/DUCT SENSOR – 0-10V

'A' Sense similar to 'E' version other than it is both 0-10V or 4-20mA outputs option for both carbon dioxide and temperature in the ambient air, it transforms the data into output signals and sends these values to a compression BMS system. IP30 wall housing, IP65 duct housing.

Part Number	Trade Price
'A' SENSE ROOM	£252.00
'A' SENSE DUCT	£400.00

PLEASE NOTE: ROOM VERSION NOW SUPPLIED WITH RELAY OUTPUT (RL) AS STANDARD

CO₂ DUCT TRANSMITTER – 0-10V

A simple low cost CO_2 sensor (no temperature connector). IP65 rated.

Part Number	Trade Price
'E' SENSE DUCT	£395.00

AURA CO₂ MONITOR TO SCOTTISH STANDARDS

CO_2, Temperature and Relative Humidity Sensor with value display and three-colour brackets indicator.

Part Number	Trade Price
AURA	£166.00

CO₂ ROOM SENSOR – TRAFFIC LIGHT DISPLAY

The Duomo CO₂-MC is designed to monitor and control the level of CO_2 as well as displaying room temperature and humidity, in applications such as offices, kitchens and classrooms (advise when ordering).

OPTIONS AVAILABLE

A) 230V Relay (230V Relay Out)

B) 24VAC /DC (VFC)

All with Audible Alarm & 3 Colour Backlight (Traffic light display). Supplied Factory Preset. Programming Tool available (below), if required, to change at a later date.

Part Number	Trade Price
CO2-MC 230V	£210.00
CO2-MC 24V	£310.00
CO2-MC REMOTE PROGRAMMING TOOL	£55.00

CO₂ ROOM SENSOR – 0-10V TRAFFIC LIGHT DISPLAY

The 0-10V version CO2 controller 24Vac / dc complete with 2 x 0-10Vdc or 2-10Vdc analogue outputs for CO2 and temperature (selectable jumper) comes with RS485 interface and modbus protocol. Wall mounting for easy use at airports, train stations, shopping centres, classrooms labs and kitchens.

Three colour LCD back light indicating ventilation requirements based on CO2 measurements, also displaying temperature.

Part Number	Trade Price
TLD1-CO2 TT MOD	£307.00

CO₂ TEMP & HUMIDITY SENSOR C/W TOUCH DISPLAY

The tSense is an advanced and versatile 3-in-1 transmitter designed for installation in the air-conditioned zone. It measures CO₂ concentration, temperature and humidity in the ambient air accurately without need for additional compensation - true read. The data transmits to a BMS system or stand-alone controller using industry standard output signals and communication protocols.

The tSense combines all the necessary elements for effective climate control in commercial office buildings, hospitals, hotels, schools and other facilities. Using CO₂-monitoring for demand control ventilation (DCV) allows healthy, comfortable and cost-effective environment for the occupants.

FEATURES
- Maintenance free
- Three sensors in one housing
- Colour touch display with possibility of customizable GUI
- Flexibility: Shows CO₂ and Temperature / Humidity
- Improved housing design for effective measurement
- Five year warranty
- Operation Temperature range 0-50c
- Power Supply 12VDC,24VAC/DC

Part Number	Trade Price
T-SENSE	£483.00

COMMUNICATION – MODBUS(MB) OR BACNET(BAC) PROTOCOL OVER RS485

DUOMO MSR MULITSENSE ROOM

The MSR Multisense Room is for Online real-time detection of indoor air quality. Features a three-color light ring IAQ level indicator and measures PM2.5, PM10, Temperature, CO₂, and relative humidity, with optional TVOC or HCHO.

Part Number	Sensors	Voltage	Communications	Trade Price
MSR-1813C	PM2.5,10,CO2,RH&T	24V	Modbus or BACnet	POA
MSR-1829C/D	PM2.5,10,CO2,RH&T	24V/230V	WiFi	POA

AIR QUALITY SENSORS

C0₂ Sensor with Dual Channel Technology meaning no annual calibration required, accurate readings for 5 years & comes with traffic light status. Also available as VOC Sensor detects a wide range of organic compounds with a built in C0₂ algorithm and PM Sensor with built in dip switch, so you can chose the PM level required on site, 3 Ranges PM10, PM2.5 & PM1. 5 year warranty.

PLEASE GET IN TOUCH FOR MORE INFORMATION AND PRICES.

AXIO CO₂ SENSORS

CO₂ Room Sensor with Traffic Light Display

Standalone 230v CO₂ room sensor suitable for applications such as classrooms, offices & kitchens.

Part Number	Trade Price
AX-GS-CD-T51S	£160.00

24V VERSION ALSO AVAILABLE ON REQUEST

CO₂ Room Sensors with 0-10v, Thermistor & Bacnet

CO₂ room sensors suitable for applications such as classrooms, offices & kitchens.

Part Number	Description	Trade Price
AX-GS-CD-T51-EVT	CO2, 0-10VDC OUTPUT + THERMISTOR TEMP OUTPUT	£165.00
AX-GS-CD-T51-EL	CO2 & TEMP, 2 X 0-10VDC & LED DISPLAY	£190.00
AX-GS-CD-T81-EHDB	CO2 & RH&T, 0-10VDC OUTPUT + LCD BACNET	£280.00

CO₂ Duct Sensors

CO₂ duct sensors suitable for applications such as classrooms, offices & kitchens..

Part Number	Description	Trade Price
AX-GS-CD-D8041	CO2, 0-10VDC OUTPUT, 105MM PROBE	£218.00
AX-GS-CD-D8041/T	CO2, 0-10V WITH 10K THERMISTOR TEMP OUTPUT	£225.00
AX-GS-CD-D8042	CO2, 0-10VDC OUTPUT, 205MM PROBE	£220.00
AX-GS-CD-RHT	CO2 & RH&T, 0-10VDC OUTPUT, 205MM PROBE	£230.00
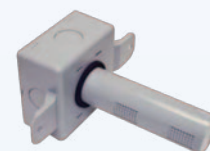
THERMISTOR AND MODBUS VERSIONS AVAILABLE ON REQUEST

CO₂ Wall Mounted Sensor in S/Steel Enclosure

- Monitors CO₂ over 0-2000ppm
- 24Vac/dc powered
- 0-10V or 4-20mA output for CO₂ (and temp. option)
- Thermistor or Analogue output for temp

Part Number	Trade Price
SSTEEL CO ENC	POA

AX-AQM-V Air Quality Monitor

The AX-AQM-V Air quality sensor monitors air purity with MOS sensor technology. The unit monitors the occupancy in a room by sensing the Volatile Organic Compounds (VOCs) which causes discomfort to humans. The reading is converted to CO₂ equivalent, which is the amount of VOCs with the same global warming potential of CO₂,and provides a linear analogue output of 0-5V/0-10V/2-10Vdc depending on the selection.

Part Number	Trade Price
AX-AQM-V	£375.00
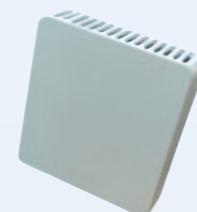
NEW PRODUCT

BACnet
Modbus

CO2 & RH&T SENSORS

TITAN Products Ltd.

The Titan range of new version 'slimline' GEN 3 and 'HALO' type C02 and RH4T sensors. New stylish appearance C02 sensors for use in all BMS type applications.

Temperature & Humidity Sensors (0-10V/4-20mA)			
Part Number	Enclosure	Description	Trade Price
TP-RS-RHT-V-10K3	SLIMLINE	ROOM TEMPERATURE & HUMIDITY SENSOR (DUAL 0-10V AND 10K3A1 TEMP AND 0-10V HUMIDITY)	£90.00
TP-RS-RHT-MA-10K3	SLIMLINE	ROOM TEMPERATURE & HUMIDITY SENSOR (DUAL 4-20MA AND 10K3A1 TEMP AND 4-20MA HUMIDITY)	£117.00

CO2 Temperature & Humidity Sensors (0-10V)			
Part Number	Enclosure	Description	Trade Price
TP-RS-CO2RHT-V-10K3	SLIMLINE	ROOM CO2 TEMPERATURE & HUMIDITY SENSOR (0-10V CO2, DUAL 0-10V AND 10K3A1 TEMP AND 0-10V HUMIDITY) - NO LED	£149.00
TP-RS-CO2RHT-V-10K3-H	HALO	ROOM CO2 TEMPERATURE & HUMIDITY SENSOR (0-10V CO2, DUAL 0-10V AND 10K3A1 TEMP AND 0-10V HUMIDITY) - HALO LED	£153.00

Temperature & Humidity Sensors (BACnet / Modbus)			
Part Number	Enclosure	Description	Trade Price
TP-RS-RHT-BMS	SLIMLINE	ROOM TEMPERATURE & HUMIDITY SENSOR (DUAL 0-10V AND 10K3A1 TEMP AND 0-10V HUMIDITY)	£106.00

CO2 Temperature & Humidity Sensors (BACnet / Modbus)			
Part Number	Enclosure	Description	Trade Price
TP-RS-CO2RHT-BMS	SLIMLINE	ROOM CO2 TEMPERATURE & HUMIDITY SENSOR - NO LED	£156.00
TP-RS-CO2RHT-BMS-H	HALO	ROOM CO2 TEMPERATURE & HUMIDITY SENSOR - WITH LED	£174.00

Wireless Humidity and Temperature Wireless Sensors (TPZ-Net Range)			
Part Number	Enclosure	Description	Trade Price
TP-RS-RHT-TPZ	HALO	TPZ-NET WIRELESS ROOM HUMIDITY AND TEMPERATURE SENSOR	£103.00

Wireless Humidity and Temperature Wireless Sensors (TPZ-Net Range)			
Part Number	Enclosure	Description	Trade Price
TP-RS-CO2RHT-TPZ	HALO	TPZ-NET WIRELESS ROOM CARBON DIOXIDE (CO2) HUMIDITY AND TEMPERATURE SENSOR - WITH LED	£159.00

Wireless CO2 Indicator			
Part Number	Enclosure	Description	Trade Price
TP-IND-CO2	HALO	WIRELESS ROOM CARBON DIOXIDE (CO2) INDICATOR	£117.00

BACnet
Modbus

BACNET/MODBUS

DUCT CO2 SENSORS

TITAN Products Ltd.

The TPVDCO2 Duct C02 Sensors measure carbon dioxide levels in extract duct systems. Using automatic calibration technology, the sensor provides a 0-10V signal depending on the C02 concentration levels within the duct work. The Smart Duct C02 Sensors expose the measurements directly onto a BACnet MS/TP or Modbus RTU network.

Trade Price	Output	Part Number
TPVDCO2	0-10V	£180.00
TPDCO2-COM	BACNET OR MODBUS	£217.00

GENERAL PURPOSE CARBON DIOXIDE TRANSMITTERS

VAISALA

Measuring CO_2 is the most economical way to monitor both indoor air quality (IAQ) and human presence with one sensor. Inadequate ventilation results in elevated CO_2 levels, causing drowsiness and decreased productivity. Good indoor air quality can be achieved based on occupancy levels. Energy is saved by minimizing the use of unconditioned outside air. 5-year warranty is valid for instruments purchased through us.

FEATURES

- IP64
- 24V AC
- Accuracy: +-60ppm at 1000ppm CO_2
- 5 year warranty

Part Number	Mount	Output	CO₂ Range PPM	Trade Price
GMW87	WALL	MODBUS	0-5000	£334.00
GMW88	WALL	4-20MA, 0-10V	0-2000/5000 VIA DIP SWITCH	£341.00
GMD110	DUCT	4-20MA, 0-10V	0-2000	POA

GENERAL PURPOSE CARBON DIOXIDE, RELATIVE HUMIDITY AND TEMPERATURE

VAISALA

FEATURES

- Wall mount
- IP30, 24VAC, CO_2
- Range 0-2000 PPM
- Accuracy: +-60ppm at 1000ppm CO2, +-3% RH, +-0.5C(0.9F)
- 5 year warranty

Part Number	Parameters	Display	Output	Trade Price
GMW83RP	CO₂+RH+T	NONE	0-10V, PT1000	£262.00
GMW83	CO₂+T	NONE	0-10V	£204.00
GMW83A	CO₂+T	CO₂ LED	0-10V	£231.00
GMW83D	CO₂+T	METRIC SCALE	0-10V	£246.00
GMW84	CO₂+T	NONE	4-20MA	£204.00
GMW84S	CO₂+T	NONE	4-20MA RELAY	£231.00

OUTPUTS AS 0-1V, 0-5V, 0-USER DEFINED, 0-10V, 4-20MA AND PT1000

PLEASE NOTE: ANY 0-10V OUTPUT CAN BE CONFIGURED TO 0-1V, 0-5V OR USER DEFINED

WEATHER TRANSMITTER – WXT530 SERIES

VAISALA

FEATURES

- IP65
- IP66 with mounting kit
- Modbus RTU
- Accuacy +-0.5hPa, +-0.3C(+-0.54F), +-3% RH, +-3% at 10m/s

Option	Rain	Wind	PTU
WXT531	✔		
WXT532		✔	
WXT533	✔	✔	
WXT534			✔
WXT535	✔		✔
WXT536			
GMW84S	✔	✔	✔

FOR PRICES, PLEASE CONTACT H&C

GENERAL PURPOSE TRANSMITTERS

VAISALA

The general purpose HVAC transmitters are renowned for their long lifetime and low total cost of ownership, their reliability and negligible maintenance needs throughout the product life cycle.

5-year warranty is valid for instruments purchased in 2021 and beyond.

Temperature Transmitters

FEATURES

- Wall mount
- IP30
- 24V
- 5 year warranty

Part Number	Accuracy	Output	Trade Price
TMW82	+-0.5C(+-0.9F)	4-20mA	£81.00
TMW83	+-0.5C(+-0.9F)	0-10V	POA
TMW110	+-0.2C(+-0.36F)	4-20mA	POA

Relative Humidity and Temperature Transmitters

FEATURES

- Wall mount
- IP30
- 24V
- Display option available
- 5 year warranty

Part Number	Accuracy	Output	Trade Price
HMW82	RH +-3%, +-0.5C(+-0.9F)	4-20mA	£109.00
HWM83	RH +-3%, +-0.5C(+-0.9F)	0-10V	£109.00
HWM110	RH +-2%, +-0.2C(+-3.6F)	4-20mA	POA

PREMIUM QUALITY TRANSMITTERS

VAISALA

Premium Quality Transmitters

Features

- Wall mount, IP65, 24VAC
- Calibration certificate included.
- Accessories available for Outdoor or Duct mounting
- Display option available
- Interchangeable probes

Part Number	Accuracy	Output	Trade Price
TMT120	+-0.1C(+-0.18F)	4-20mA	POA
TMT130	+-0.1C(+-0.18F)	0-1/5/10V or User Defined	POA

Premium Relative Humidity and Temperature Transmitters

FEATURES

- Wall mount, IP65, 24VAC
- Calibration certificate included
- Accessories available for Outdoor or Duct mounting,
- Display option available.
- Also outputs dew/frost point temperature, wet bulb temperature, enthalpy and mixing ratio
- Interchangeable probes, available for fixed or remote probe

Part Number	Accuracy	Output	Trade Price
HMT120	+-0.1C(+-0.18F) RH+-1.5%	4-20mA	POA
HMT130	+-0.1C(+-0.18F) RH+-1.5%	0-1/5/10V or User Defined	POA

DUCT AND IMMERSION TRANSMITTERS

VAISALA

Relative Humidity and Temperatre Duct Transmitters

FEATURES

• IP65, 24VAC

• Calibration certificate included

• Also outputs dew/frost point temperature, wet bulb temperature, enthalpy and mixing ratio

• 5 Year Warranty

Part Number	Accuracy	Output	Trade Price
HMD112	+-0.2C(+-0.36F) RH+-2%	4-20MA	£349.00
HMD82	+-.05C (0.9F) RH+-3%	0-1/5/10V OR USER DEFINED	£188.00
HMD83	+-.05C (0.9F) RH+-3%	0-1/5/10V OR USER DEFINED	£188.00

Immersion or Duct Temperature Transmitter

FEATURES

• IP65, 24V DC

• For use in liquids as immersion sensor with thermowell or in air as a duct sensor

• Highly accurate with fast response time

• 5 year warranty

Part Number	Accuracy	Output	Trade Price
TMI110	+-0.1C	4-20MA OR MODBUS	POA
ASM214691	THERMOWELL R 1/2		POA

Premium Relative Humidity and Temperatre Duct Transmitters

FEATURES

• IP65, 24VAC

• Calibration certificate included

• Also outputs dew/frost point temperature,wet bulb temperature, enthalpy and mixing ratio

• 5 Year Warranty

Part Number	Accuracy	Output	Trade Price
TMD62	+-0.1C(+-0.18F)	4-20MA	£409.00
HMD62	+-0.1C(+-0.18F) RH+-1.5%	4-20MA	£529.00
HMD65	+-0.1C(+-0.18F) RH+-1.5%	0-10V, MODBUS RTU, BACNET MS/TP	£529.00

> **MANY MORE VAISALA PRODUCTS AVAILABLE ON REQUEST-
> PLEASE CONTACT H&C FOR FURTHER INFORMATION**

## REGIN WIRELESS SENSORS

REGIN THE CHALLENGER

A range of wireless sensors and detectors allowing installation on surfaces which wasn't possible before, eg in heritage listed buildings with restrictions. Also a simple solution for flexible, module based offices, easy to move or add as needed and also easy to move when refurnishing.

FEATURES

• Extensive communication range and high reliability

• Wireless = low installations costs + great timesaver

• Easy to integrate with Modbus based systems

Part Number	Description	Trade Price
DCW	WIRELESS DOOR CONTACT	£71.00
EPRW	WIRELESS OPTICAL PULSE COUNTER	£186.00
IRCW	WIRELESS IR DETECTOR FOR CEILING MOUNTING, 360°	£172.00
RCW-M32	WIRELESS RECEIVER WITH MODBUS COMMUNICATION (UP TO 32 SENSORS)	£260.00
TG-R6WE	WIRELESS OUTDOOR TEMPERATURE SENSOR (PT1000 INPUT)	£202.00
HTRT-5W	WIRELESS ROOM TEMPERATURE & HUMIDITY SENSOR	£202.00
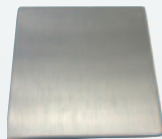
TPZ-NET WIRELESS SOLUTION

Titan Products Ltd.

The TPZ-Net range is designed to wirelessly monitor environmental conditions and transfer this information back to the Titan Products Co-ordinator. The TPZ-net Co-ordinator can then transfer this information to a BMS via BACnet MS/TP or Modbus communications.

Up to 30 sensors can be connected to one network co-ordinator and repeaters can be added to the wireless network to add mesh networking capabilities.

PLEASE NOTE: IT IS HIGHLY RECOMMENDED THAT A SITE SURVEY IS PERFORMED PRIOR TO INSTALLING ANY WIRELESS DEVICES.

PLEASE CONTACT H&C FOR FURTHER INFORMATION

ROOM/SPACE TEMPERATURE SENSORS

H&C

A direct output temperature sensor used for measuring air temperature in indoor spaces. Compatible with the below listed manufacturers equipment.

PROTECTION: IP 20
TYPE: NTC THERMISTOR
HOUSING: MATERIAL ABS
DIMENSIONS: 84mm (H) x 84mm (W) x 24mm (D)
ACCURACY: +0.2 DEG C

Part Number	Compatibility	Trade Price
TR1	TREND/HONEYWELL/THORN /NEW CYLON SYSTEMS 10K3A1	£6.50
TR1/SP	ROOM SENSOR WITH SETPOINT ADJ 10K3A1	£17.50
AX-TE-PT	10K3A1 BRUSHED S/S PLATE SENSOR	£17.00
SR	SATCHWELL DRT 10K3A1/A	£17.00
CR	CYLON PT 1000	£17.00
AR	ANDOVER / YORK UP TO 40ºC 10K4A1	£11.00
ALR	ALLERTON 3K3A1	£13.00
DR	DRAYTON 30K6A1	£12.00
TAC-R	TAC 1K87A1	£12.00
HR	HONEYWELL 20K6A1	£12.00
TE-RN1K	SIEMENS Ni 1000	£19.00
SENSOR-GUARD	FOR ALL ROOM SENSORS	£37.00
AX-TE-GUARD-P	FOR ALL ROOM SENSORS	£32.00

IMMERSION TEMPERATURE SENSORS

H&C

A direct output temperature sensor used for measuring liquid temperature in pipes. Compatible with the below listed manufacturers.

PROTECTION: IP 65
TYPE: NTC THERMISTOR
HOUSING MATERIAL: ABS
HOUSING DIMENSIONS: 80mm x 50mm
PROBE: Brass
DIMENSIONS: 150mm x 6mm
ACCURACY: +0.2 DEG C

Part Number	Compatibility	Trade Price
TI	TREND/HONEYWELL/THORN/NEW CYLON SYSTEMS 10K3A1	£12.50
SI	SATCHWELL 10K3A1/A	£21.00
CI	CYLON PT 1000	£22.00
AI	ANDOVER / YORK UP TO 40ºC 10K4A1	£17.00
ALI	ALLERTON 3K3A1	£19.00
DI	DRAYTON 30K6A1	£17.00
TAC-I	TAC 1K87A1	£17.00
HI	HONEYWELL 20K6A1	£17.00
TE-IN1K	SIEMENS Ni 1000	£23.00

IMMERSION SENSOR WITH 65MM PROBE

Compatible BMS versions listed – other Versions available on request.

Part Number	Compatibility	Trade Price
HC-TE-IT-65	TREND 10K3A1	£23.00
HC-TE-IN1K-65	SIEMENS NI 1000	£26.00
HC-TE-ISAT-65	SATCHWELL 10K3A1/A	£25.00

IMMERSION SENSOR POCKETS

Pockets are available in both brass and 316 stainless steel. Brass pockets are recommended for use with standard LPHW and DHWS systems whilst stainless steel variants can be used on high temperature and pressure installations (including steam) and are also recommended for chilled water and other low temperature applications.

TEMP RANGE: -20ºC TO +110ºC

PRESSURE: 10 BAR

DIMENSIONS: 150mm x 8mm x ½" BSP 65mm x 8mm x ½" BSP

FEATURES

• ½" BSP Thread For Direct Installation

• Brass and Stainless Steel Variants

Part Number	Trade Price
BRASS POCKET	£9.00
STAINLESS STEEL POCKET	£11.00
SP65 S/STEEL POCKET 65MM	£12.50

FOR QUANTITY RATE PRICES CONTACT H&C FOR FURTHER INFORMATION

BLACK BULB TEMPERATURE SENSORS

Compatible Black Bulb sensors (For Radiant heaters) – other BMS Versions available on request

Part Number	Compatibility	Trade Price
HC-TE-RBN-T	TREND 10K3A1	£33.00
HC-TE-RBN-N1K	SIEMENS NI 1000	£40.00
HC-TE-RBN-SAT	SATCHWELL 10K3A1/A	£37.00

DUCT TEMPERATURE SENSORS

A direct output temperature sensor used for measuring air temperature in ducts. Units compatible with the below listed manufacturers equipment.

PROTECTION: IP 65

TYPE: NTC THERMISTOR

HOUSING MATERIAL: ABS
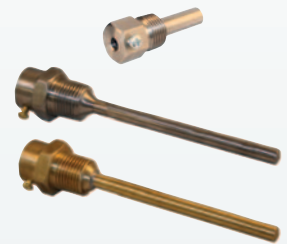
HOUSING DIMENSIONS: 80mm x 50mm

PROBE: Brass

DIMENSIONS: 150mm x 6mm

ACCURACY: +0.2 DEG C

Part Number	Compatibility	Trade Price
TD	TREND/HONEYWELL/THORN/NEW CYLON SYSTEMS 10K3A1	£12.00
SD	SATCHWELL 10K3A1/A	£20.00
CD	CYLON PT 1000	£21.00
AD	ANDOVER / YORK UP TO 40˚C 10K4A1	£17.00
ALD	ALLERTON 3K3A1	£19.00
TAC-D	TAC 1K87A1	£17.00
HD	HONEYWELL 20K6A1	£17.00
TE-DN1K	SIEMENS Ni 1000	£22.00

LONGER LENGTH SENSORS/POCKETS AVAILABLE ON REQUEST- CONTACT H&C FOR FURTHER INFORMATION

OUTSIDE TEMPERATURE SENSORS

H&C

A temperature sensor used for measuring outside air temperature.

Compatible with the below listed manufacturers equipment.

PROTECTION: IP 65
TYPE: NTC THERMISTOR
HOUSING MATERIAL: ABS
HOUSING DIMENSIONS: 80mm x 50mm
ACCURACY: +0.2 DEG C

Part Number	Compatibility	Trade Price
TO	TREND/HONEYWELL/THORN/NEW CYLON SYSTEMS 10K3A1	£10.50
SO	SATCHWELL 10K3A1/A	£25.00
CO	CYLON PT 1000	£20.00
AO	ANDOVER / YORK UP TO 40°C 10K4A1	£16.00
ALO	ALLERTON 3K3A1	£20.00
DO	DRAYTON 30K6A1	£16.00
TAC-O	TAC 1K87A1	£16.00
HO	HONEYWELL 20K6A1	£16.00
TE-ON1K	SIEMENS Ni 1000	£21.00

STRAP-ON TEMPERATURE SENSORS

H&C

A temperature sensor used for measuring outside air temperature.

Compatible with the below listed manufacturers equipment.

PROTECTION: IP 65
TYPE: NTC THERMISTOR
HOUSING MATERIAL: ABS
HOUSING DIMENSIONS: 80mm x 50mm
ACCURACY: +0.2 DEG C

Part Number	Compatibility	Trade Price
TS	TREND/HONEYWELL/THORN/NEW CYLON SYSTEMS 10K3A1	£16.00
SS	SATCHWELL 10K3A1/A	£23.00
CS	CYLON PT 1000	£20.00
AS	ANDOVER / YORK UP TO 40°C 10K4A1	£20.00
ALS	ALLERTON 3K3A1	£28.00
DS	DRAYTON 30K6A1	£20.00
TAC-S	TAC 1K87A1	£19.00
HS	HONEYWELL 20K6A1	£19.00
TE-SN1K	SIEMENS Ni 1000	£28.00

**ALL BMS SENSORS, CUSTOMERS LABELS AVAILABLE ON REQUEST,
CONTACT H&C FOR FURTHER INFORMATION**

FLYING LEAD TEMPERATURE SENSORS

H&C

A low cost direct output temperature sensor used for measuring air temperature, i.e. in fan-coil units etc. Units compatible with the below listed manufacturers equipment.

FEATURES

- Low Profile Cap
- Complete With Cable
- Large Range of Sensor Options
- Flame Retardant Acetyl Resin

Part Number	Compatibility	Trade Price
TF	TREND/HONEYWELL/THORN/NEW CYLON SYSTEMS STANDARD 2M VERSION 10K3A1	£5.50
TF 5M	TREND 5M VERSION 10K3A1	£7.50
SF	SATCHWELL 10K3A1/A	£16.00
CF	CYLON PT 1000	£13.00
AF	ANDOVER / YORK UP TO 40°C 10K4A1	£11.00
ALF	ALLERTON 3K3A1	£17.00
TE-FN1K	SIEMENS Ni 1000	£20.00

FLYING LEAD TEMPERATURE SENSORS IP68 WATERPROOF VERSIONS

H&C

10K Trend as standard other BMS versions available on request.

Part Number	Size (m)	Compatibility	Trade Price
HC-TE-W2	2	10K VERSION 3A	£13.00
HC-TE-W5	5	10K VERSION 3A	£15.00

ACTIVE TEMPERATURE SENSORS

H&C

The AX-TE-xTX-W range of active temperature sensors.

Offering an advanced, versatile method for the monitoring of temperature, in a variety of applications.

Jumper selectable output ranges cover an incredible -50°C to +400°C and the unit offers both 0-10V & loop powered 4-20mA output in the same unit.

Easy to configure with jumper selection for all options and boasting an impressive array of mounting options, the AX-TE-xTX-W is an impressive sensing solution.

Part Number	Description	Trade Price
AX-TE-DTX-W	DUCT - 150MM PROBE	£72.00
AX-TE-FTX-W	FLYING LEAD ACTIVE SENSOR	£61.00
AX-TE-ITX-W	IMMERSION - 150MM PROBE	£61.00
AX-TE-ITX-W-65	IMMERSION - 65MM PROBE	£61.00
AX-TE-OTX-W	OUTSIDE AIR	£60.00
AX-TE-RTX-W	ROOM	£58.00
AX-TE-STX-W	PIPE STRAP - 2 METER	£58.00

BUTTON SENSOR

BAPI
Sensors for HVAC/R

Temperature Only, Accuracy +/- 0.2C and the smallest room sensor size of a ten pence piece and can be painted. 5 year warranty.

Part Number	Trade Price
BUTTON WHITE	£13.50
BUTTON BLACK	£16.50

DISCREET TEMPERATURE SENSOR

Titan
Products Ltd.

Designed to be wall mounted, the Discreet Temperature Sensor from Titan Products can be lightly skimmed and painted over, making it perfect for any residential, commercial or public building application where a discreet finish is required.

The sensor has a 5m flying lead, or a terminal block version without a cable is also available.

Part Number	Description	Trade Price
TPFMTS-FL	WALL MOUNT DISCREET SENSOR W/ FLYING LEAD	£24.00

*MANY OTHER TYPES OF BMS SENSORS- IE PENDANT SENSORS/BOTTON/THIMBLE ETC AVAILABLE ON REQUEST - CONTACT H&C FOR FURTHER INFORMATION

TEMPERATURE SENSOR RESISTANCE CHART

	ALERTON	TREND, HONEYWELL, THORN, NEW CYCLON	SATCHWELL	ANDOVER, YORK UP TO 40C	HONEYWELL	DRAYTON	YORK	SEREK	CYCLON	TAC (1K87A1)	LANDIS & STAEFA	SIEMENS, LANDIS	
	3K3A1	10K3A1	10K3A1/A	10K-4A1	20K6A1	30K6A1	100K6A1	PT100	PT1000	TAC1	LST1	LS1000	SN1000
Temp °c	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω	Res Ω
-30	53005	176683	9465	135233	415479	622944	2077394	88.22	882	23800	1934	871.6	842
-20	29092	96974	9067	78930	221297	331876	1106485	92.16	922	13700	2030	913.5	893
-15	21868	72895	8796	61030	163875	245785	819378	94.12	941	10500	2078	934.7	919
-10	16589	55298	8472	47549	122473	183697	612366	96.09	961	8220	2127	956.2	946
-5	12694	42314	8093	37316	92336	138502	461683	98.04	980	6450	2176	977.9	973
0	9795	32650	7661	29490	70203	105305	351017	100	1000	5120	2226	1000.0	1000
1	9309	31030	7569	28157	66524	99787	332619	100.39	1004		2236	1004.4	1006
2	8850	29500	7475	26891	63058	94568	315258	100.78	1008		2246	1008.8	1011
3	8416	28054	7379	25689	59792	89689	298959	101.17	1012		2256	1013.3	1017
4	8006	26688	7281	24547	56713	85069	283558	101.56	1015		2266	1017.8	1022
5	7619	25396	7182	23462	53809	80713	269041	101.95	1019	4090	2276	1022.2	1028
6	7252	24173	7082	22430	51068	76604	255337	102.34	1024		2286	1026.7	1033
7	6905	23016	6980	21450	48483	72726	242414	102.73	1027		2296	1031.2	1039
8	6577	21921	6877	20517	46043	69064	230210	103.12	1031		2306	1035.7	1044
9	6266	20885	6772	19631	43739	65608	218668	103.51	1035		2316	1040.2	1050
10	5971	19904	6667	18787	41562	62347	207807	103.90	1039	3290	2326	1044.7	1056
11	5692	18974	6560	17983	39505	59257	197521	104.29	1043		2337	1049.3	1061
12	5428	18092	6453	17219	37561	56346	187803	104.68	1047		2347	1053.8	1067
13	5177	17257	6345	16490	35723	53585	178613	105.07	1051		2357	1058.4	1072
14	4940	16465	6236	15797	33985	50978	169924	105.46	1055		2387	1063.0	1078
15	4714	15714	6126	15136	32341	48511	161702	105.85	1058	2670	2377	1067.6	1084
16	4500	15001	6016	14507	30785	46178	153923	106.24	1062	2560	2368	1072.1	1090
17	4297	14325	5906	13906	29312	43969	146560	106.63	1066	2460	2398	1076.7	1095
18	4105	13623	5795	13334	27918	41877	139568	107.02	1070	2360	2408	1081.3	1101
19	3916	13053	5681	12788	26597	39895	132984	107.40	1074	2270	2418	1086.0	1107
20	3748	12494	5573	12268	26346	38019	126729	107.79	1078	2180	2429	1090.6	1112
21	3583	11943	5369	11771	24160	36240	120799	108.18	1082	2100	2439	1095.3	1118
22	3426	11420	5353	11297	23035	34554	115179	108.57	1086	2020	2449	1099.9	1124
23	3277	10923	5243	10845	21970	32955	109850	108.96	1090	1940	2460	1104.6	1130
24	3135	10450	5134	10413	20959	31438	104796	109.35	1094	1870	2470	1109.3	1136
25	3000	10000	5025	10000	20000	30000	100000	109.73	1098	1800	2480	1113.9	1141
26	2871	9572	4917	9606	19089	28635	95449	110.12	1101		2491	1119.6	1147
27	2749	9165	4809	9229	18225	27339	91128	110.51	1105		2501	1123.4	1153
28	2633	8777	4703	6869	17405	26108	87026	110.90	1110		2512	1128.1	1159
29	2522	8408	4597	8525	16625	24939	83129	111.28	1113		2522	1132.8	1165
30	2417	8056	4492	8197	15685	23828	79428	111.67	1117	1490	2532	1137.6	1171
35	1959	6530	3987	6754	12697	19046	63489	113.61	1136		2585	1161.5	1200
40	1598	5325	3518	5594	10211	15317	51058	115.54	1155	1040	2638	1185.7	1230
45	1310	4367	3089	4656	8259	12390	41301	117.47	1175		2692	1210.2	1260
50	1080	3601	2702	3893	6719	10079	33598	119.40	1194	740	2745	1234.9	1291
55	895.5	2985	2358	3271	5495	8243	27479	121.32	1213		2800	1260.0	1322
80	746.2	2487	2056	2760	4518	6777	22593	123.24	1232	540	2855	1285.4	1353
155	624.7	2082	1792	2339	3733	5600	18669	125.16	1251		2910	1311.1	1385
70	525.5	1751	1563	1990	3100	4650	15502	127.07	1271	400	2966	1337.1	1417
80	376.9	1256	1193	1458	2167	3251	10837	130.89	1309	300	3079	1390.1	1483
90	274.8	916.0	921	1084	1542	2313	7710	134.70	1347	230	3194	1444.4	1549
100	203.6	678.6	722	817.2	1115	1672	5574	138.50	1385	180	3311	1500.0	1618
110	153.0	510.1	575	624.1	818.9	1228	4092	142.29	1423		3430	1556.9	1688
120	116.6	388.6	466	482.5	609.9	914	3047	146.06	1461		3552	1615.3	1760
130	89.95	300.0	386	377.2	460.4	690	2299	149.82	1498		3675	1675.1	1833
140	70.23	234.1	324	298.1	351.8	527	1756	153.58	1536		3801	1736.4	1909
150	55.44	184.8	278	238.0	272.0	407	1357	157.31	1573		3929	1799.2	1987
160								161.04	1610				
170								164.76	1648				
180								168.46	1685				
190								172.16	1722				
200								175.84	1758				
250								194.07	1941				
300								212.02	2120				
350								229.67	2297				
400								247.04	2470				

RH & T TRANSMITTERS

The AX-RHT-3 range of RH&T Transmitters are designed for high accuracy relative humidity and temperature measurement, having selectable analogue output of both values. These units are extremely reliable and have excellent stability and a quick response time, the accuracy range is 2 or 3%

SPECIFICATION

RH Accuracy:	2 or 3% (between 5% and 95% RH)
Temperature Accuracy:	+ / - 0.1 °C
Sensor Type:	Capacitive
Sensor Protection:	PTFE Filters
Power Supply:	For 0-10V DC - 24vac/dc +/-15%
	For 4-20mA - 24vdc +/-15%
Output:	4-20mA or 0-10vdc or 0-5VDC (selectable)
Output Ranges:	RH: 0-95%
Temp:	S: -10°c to +40°c
	D: 0°c to 70°c
	O: -20°c to +50°c
Ambient Temp:	0-50°c, 0-95% RH
Protection:	S - IP23

Part Number	Description	Trade Price
AX-RHT-S	ROOM VERSION 2.5% ACC	£91.00
AX-RHT-D3	DUCT VERSION 3% ACC	£92.00
AX-RHT-O3	OUTSIDE VERSION 3% ACC	£103.00
AX-RHT-S2	ROOM VERSION 2% ACC	£123.00
AX-RHT-D2	DUCT VERSION 2% ACC	£133.00
AX-RHT-O2	OUTSIDE VERSION 2% ACC	£125.00
AX-RHT-SD	ROOM VERSION 2.5% ACC C/W DISPLAY	£101.00

THERMISTOR TYPE VERSION ALSO AVAILABLE ON REQUEST

ROOM TEMPERATURE TRANSMITTER C/W MODBUS

High quality temperature transmitters from Regin, used in heating and control applications.
Internal electronics convert the sensing temperature to either a 0-10VDC output, 4-20mA output, or Modbus signal, in proportion to the sensors temperature scale.

With an IP rating, up to IP65, these transmitters can be used in a wide variety of environments, and with the optional LCD display, the temperature reading can be read locally. The Modbus option allows for direct communication to your building management system.

ROOM TEMPERATURE TRANSMITTER		
Part Number	Description	Trade Price
TRT5	0...50°C, 0-10V, ROOM MOUNTING	£115.00
TRT5-D	0...50°C, 0-10V, DISPLAY, ROOM MOUNTING	£154.00
ROOM TEMPERATURE TRANSMITTER C/W MODBUS		
Part Number	Description	Trade Price
TRTC5	0...50°C, MODBUS, ROOM MOUNTING	£145.00
TRTC5-D	0...50°C, DISPLAY, MODBUS, ROOM MOUNTING	£175.00
IMMERSION TEMPERATURE TRANSMITTER		
Part Number	Description	Trade Price
TLT100	0...100°C, ±0.2°C, 0-10V, IMMERSION MOUNTING COMPLETE WITH POCKET	£136.00
TLT100-420	0...100°C, ±0.2°C, 4-20mA, IMMERSION MOUNTING COMPLETE WITH POCKET	£136.00
TLT50	-30…+50°C, ±2°C, 0-10V, IMMERSION MOUNTING COMPLETE WITH POCKET	£136.00
TLT50-420	-30 ….+50°C, ±1.5°C, 4-20mA, IMMERSION MOUNTING COMPLETE WITH POCKET	£136.00

RANGE OF HIGH SPECIFICATION HUMIDITY & TEMPERATURE TRANSMITTERS (& MODBUS VERSION)

≋REGIN
THE CHALLENGER

High quality humidity and temperature transmitters from Regin, used in heating and control applications. Internal electronics convert the relative humidity and/or temperature to either a 0-10VDC output, 4-20mA output, or Modbus signal, in proportion to the sensors humidity range.

With an IP rating, up to IP65, these transmitters can be used in a wide variety of environments, and with the optional LCD display, the humidity reading can be read locally. The Modbus option allows for direct communication to your building management system.

ROOM RH&T TRANSMITTER		
Part Number	Description	Trade Price
HTRT10A	HUM & TEMP TRANS, 10-90% ±3% RH, 0-10V, PT1000, ROOM	£159.00
HTRT10A-D	HUM & TEMP TRANS, 10-90% ±3% RH, 0-10V, PT1000, DISPLAY, ROOM	£196.00

Units have 0-10v HUM, 0-10v Temp & PT1000 as standard

ROOM RH&T C/W MODBUS		
Part Number	Description	Trade Price
HTRC10	HUM & TEMP TRANS, 10-90% ±2% RH, MODBUS, ROOM MOUNTING	£207.00
HTRC10-D	HUM & TEMP TRANS, 10-90%% ±2% RH, DISPLAY, MODBUS, ROOM MOUNTING	£238.00

OUTDOOR RH&T		
Part Number	Description	Trade Price
HTWT10	HUM & TEMP TRANS, 0-100% ±2%, 0-10V, WALL MOUNT	£355.00
HTWT10-420	HUM & TEMP TRANS, 0-100% ±2%, 4-20mA, WALL MOUNT	£355.00
HVS	RADIATION SHIELD FOR OUTDOOR MOUNTING INTENDED FOR HTWT10 (-420)	£233.00

DUCT RH&T		
Part Number	Description	Trade Price
DTTH	HUM & TEMP TRANS, 0-100% ±2% RH, 0-10V, DUCT MOUNT	£371.00
DTTH-420	HUM & TEMP TRANS, 0-100% ±2% RH, 4-20mA, DUCT MOUNT	£371.00

NEW PRODUCT

ASHRAE BACnet
Modbus

BACNET/MODBUS

BACNET/MODBUS

TEMPERATURE AND HUMIDITY SMART SENSORS WITH BACNET COMMUNICATIONS

TITAN
Products Ltd.

The Smart Sensors benefit from fully open communications with interoperable BACnet MS/TP and Modbus standards, increasing their compatibility and capabilities. All temperature and humidity Smart Sensors incorporate in-built environmental control capabilities.

TEMPERATURE		
Part Number	Type	Trade Price
TPOS-COM	OUTSIDE	£127.00
TPCS-RT-COM	STRAP ON	£127.00
TPIS-125-COM/NP	IMMERSION	£127.00
TPDS-S-COM	DUCT	£127.00

HUMIDITY AND TEMPERATURE		
Part Number	Type	Trade Price
TPRHT-COM	ROOM	£92.00
TPOHT-COM	OUTSIDE	£150.00
TPOHT-COM	DUCT	£157.00

QUANTUM SPACE SENSORS

Many versions available from simple temperature only with a +- 0.2C accuracy to an option with Display & Push buttons, Fan Speed Control, Cool/Heat Mode Control and Occupant Override.

Also available with Relative Humidity 2% accuracy, or guard to prevent tampering with exceptional airflow. 5 year warranty.

PLEASE CONTACT H&C FOR MORE INFORMATION AND PRICES

BAPI GUARD

The BAPI-Guard prevents tampering, physical damage, and unauthorized adjustment of thermostats. The attractive design is available in two sizes to fit most thermostats. It is made of thick, durable polycarbonate and features exceptional airflow, key lock protection, horizontal or vertical mounting and easy installation with hardware included.

Part Number	Maximum Internal Dimensions	Trade Price
BA/BG	118mm x 175mm - FITS QUANTUM PRIME AND OTHER LARGE THERMOSTATS	£27.00
BA/BG2	90mm x 88mm – FITS QUANTUM AND OTHER SMALL THERMOSTATS	£21.50

SENSORS WITH TEST SWITCH

Sensors with built in Test Switch, saves time & money on site as it enables the engineer to quickly test the sensor is connected. 10K-2 Thermistor standard, but other options available on request. IP44 with knockout plug in open port.

Part Number	Sizes	Trade Price
DUCT TEMP W/TEST	100-450MM	POA
DUCT RH-T W/TEST	100-400MM	POA
DUCT AVERAGING	2.4M, 3.7M, 7.3M	POA
CLAMP ON W/TEST	50-115MM	POA
CONCAVE PROBE	PIPES UP TO 50MM	POA

OUTSIDE AIR SENSOR

IP66 white enclosure for reduced solar gain. Weather Shade also available to protect sensor and provide even more accuracy for those critical applications. 10K-2 as standard, but 4-20mA option available. Accuracy +/- 0.2C, 2%RH, 5 year warranty.

Part Number	Trade Price
OUTSIDE AIR TEMPERATURE SENSOR	POA
OUTSIDE AIR RH-T SENOR	POA
WEATHER SHADE COVER	£72.00

VARIOUS THERMOSTATS

ALCO FROST THERMOSTATS

Frost thermostat with 6 metre capillary sensor. Application for frost protection for example on air-conditioning systems to prevent the build up of ice on filters, fans and coils etc.

Control Range:	-30 to +15°C
Switch Rating:	10 AMP AT 230V
Protection:	IP44
Housing Dimension:	85mm x 75mm x 39mm

Part Number	Description	Trade Price
TSA-A2P	AUTO RESET	£44.00
TSA-R2P	MANUAL RESET	£48.00

Thermostat comes c/w Fixing Clips as standard
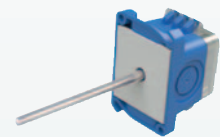
REGIN IP65 FROST THERMOSTAT

FT60 is a high quality electromechanical frost protection thermostat for use in cooling, heating and ventilation systems.

FEATURES

- Control range -10 to +10°C
- IP65 protection
- Auto Reset
- 6m Capillary

Part Number	Trade Price
FT60	£95.00

Thermostat comes c/w Fixing Clips as standard

ARTHERMO IMMERSION ADJUSTABLE THERMOSTAT

Immersion adjustable thermostat liquid filled operating, SPDT contacts, with waterproof protection pocket 1/2" X 100 mm.

Suitable for automatic adjustment of heating system, burners and pumps.

Part Number	Description	Range (°C)	Diff (°C)	Trade Price
ARTH100	ARTH100 C/W POCKET	0-90	4	£32.00

ALRE RANGE. 15AMP RATED SPDT. IP40 PROTECTION AUTO RESET SINGLE THERMOSTAT AUTO RESET

Used in ventilation technology as for monitoring supply air or as a limiter in electrical heating registers.

Switching Capacity:	15 (8) A, 24–250v ~, at 24v ~ min. 150mA
Contact:	1 micro-switch as potential-free changeover contact (changeover switch)
Ambient Temperature:	- 20…+55°C
Degree of protection:	standard IP 40
Class:	I
Immersion Sleeve:	Brass, nickel-plated or V4 A (1.4571)
Max. Sensor Temperature:	End-of-scale value +15%

NEW VERSION TO REPLACE KR80 SERIES. IP40 RATED				
Part Number	Range (°C)	Diff (°C)	Length (mm)	Trade Price
RTKSA-001-100	0-50	1.3	200	£75.00
RTKSA-001-200	0-120	3	100	£70.00
RTKSA-001-301	20-150	3.3	100	£71.00

NOTE: THERMOSTATS AS STANDARD COMPLETE WITH JZ-29 MOUNTING KIT AND THK-2-100 (100MM) OR THK-2-200 (200MM) POCKET

NOTE: TO USE AS CLAMP ON THERMOSTAT, USE JZ-31 CLAMP, TO USE AS DUCT THERMOSTAT, USE SWK-2-200 PROBE HOLDER (SEE PAGE 70)

ALRE RANGE. 15AMP RATED SPDT. IP43 PROTECTION SINGLE THERMOSTAT MANUAL RESET

NEW VERSION TO REPLACE KR80 SERIES. IP40 RATED			
Part Number	Range (°C)	Length (mm)	Trade Price
RTKSA-002-410	30-110	100	£87.00

NOTE: THERMOSTATS AS STANDARD COMPLETE WITH JZ-29 MOUNTING KIT AND THK-2-100 (100MM) POCKET'. TO USE AS CLAMP ON THERMOSTAT, USE JZ-31 CLAMP

ALRE RANGE. 15AMP RATED SPDT. IP43 PROTECTION DUAL THERMOSTAT

alre

NEW VERSION TO REPLACE KR80 SERIES. IP40 RATED				
Part Number	Range (°C)	Limit (°C)	Reset	Trade Price
RTKSA 014-210	0-120	0-120	THERMAL	£176.00
RTKSA 013-210	0-120	20-150	HAND	£209.00

NOTE: THERMOSTATS AS STANDARD COMPLETE WITH JZ-30 AND THK-2-100-17 (100MM) POCKET

NOTE: OPTIONAL STAINLESS STEEL POCKETS AVAILABLE ON REQUEST ALSO IP54 VERSIONS AVAILABLE CONTACT H&C

HIGH SPECIFICATION THERMOSTATS

REGIN
THE CHALLENGER

industrie technik

A series of high quality electromechanical immersion thermostats for use in heating, cooling & ventilation systems.

FEATURES

- Switch capacity, 24V to 240V
- Liquid filled coiled copper tube
- Contacts, dust tight micro switch with SPDT contact.
- Ambient Temp, -35°C to +65°C

SINGLE STAGE THERMOSTATS					
Part Number	Description	Rating	Differential (°C)	Length (mm)	Trade Price
MTIBL9OH	MECHANICAL IMMERSION THERMOSTAT, 20..90°C, 1-STAGE	IP65	4 ±1	120	£101.00
DBTV-2U	MECHANICAL IMMERSION THERMOSTAT, -30..30°C, 1-STAGE	IP65	1	108	£99.00
DBTV-8U	MECHANICAL IMMERSION THERMOSTAT, 0..60°C, 1-STAGE	IP65	1	108	£99.00

DUAL THERMOSTAT					
Part Number	Description	Rating	Differential (°C)	Length (mm)	Trade Price
TV09090U	MECHANICAL IMMERSION THERMOSTAT, 0..90°C, 0..90°C, 2-STAGE	IP54	4 ±1	108	£110.00
TV090UR85*	MECHANICAL IMMERSION THERMOSTAT, 20..90°C, 65..85°C, 2-STAGE	IP54	4 ±1	108	£130.00

TV090UR85*- 2nd Stage is manual reset

MANUAL RESET					
Part Number	Description	Rating	Differential (°C)	Length (mm)	Trade Price
TVR6585	MECHANICAL IMMERSION THERMOSTAT, 65...85°C, 1-STAGE	IP54	20 ±5	108	£96.00
TVR90110	MECHANICAL IMMERSION THERMOSTAT, 90...110°C, 1-STAGE	IP54	20 ±5	108	£96.00
DBTV-18U	MECHANICAL IMMERSION THERMOSTAT, 20...90°C, 1-STAGE	IP65	N/A	108	£126.00

All thermostats supplied with Brass Pocket

STAINLESS STEEL POCKET OPTIONS		
Part Number	Description	Trade Price
DR-31/14	STAINLESS STEEL POCKETS FOR MTIBL90H, TVR90110 & TVR6585	£37.00
DR-41/14	STAINLESS STEEL POCKETS FOR DUAL THERMOSTATS	£37.00
DR-17/14	STAINLESS STEEL POCKETS FOR DBTV-2U, DBTV-8U, DBTV-17U, DBTV-18U	£37.00

AXIO ET VERSIONS

▮ ELECTRONIC THERMOSTAT (WITH DISPLAY)

AXIO

The AX-ET range of Electronic Thermostats are used for the monitoring and control of fluids (gas and liquids) between the range of -5°C to +95°C.

They control heating or cooling in response to high or low temperatures.

The set point is adjustable on the pcb or via an external 1-11K Ohm Potentiometer.

The units also have an external offset input and a night setback input (requires a time switch). The unit includes a digital display of the temperature (or setpoint if display button is pressed). There are 4 link selectable ranges on the units. The units come as standard as PCB Din Rail.

FEATURES

- Four Temp. Ranges (link selectable)
- Adjustable Differential (0.5 to 12°C)
- Internal / External Setpoint
- Heating or Cooling
- Setback 0 to 10°C (requires a time switch)
- Din Rail as standard or enclosure mounting available on request.
- LED Indication of Temperature/Setpoint
- External Offset (1-11K potentiometer)-4°C to +4°C.
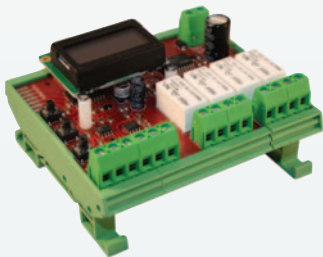
Part Number	Trade Price
ET1L 24VAC/DC	£52.00
ET1L 230V	£57.00
ET2 24VAC/DC	£70.00
ET2 230V	£87.00
ET4 24VAC/DC	£107.00
ET4 230V	£107.00
ET6 24VAC/DC	£128.00
ET6 230V	£118.00

▮ ELECTRONIC THERMOSTAT (NO DISPLAY)

AXIO

The AX-ET-1-24R Electronic Thermostat is used for the monitoring and control of fluids (gas and liquids) between the range of -5°C to +95°C.

They control heating or cooling in response to high or low temperatures.

The set point and differential are adjustable on the pcb. There are four links electable temperature ranges on the units.

The units are powered. The units come as standard as Din Rail mounted, enclosure mounting available on request.

FEATURES

- Four Temp. Ranges (link selectable)
- Adjustable Differential (0.5 to 12°C)
- Internal Setpoint
- Heating or Cooling
- 24 VAC/DC
- Din Rail or optional enclosure mounting.
- LED Indication.
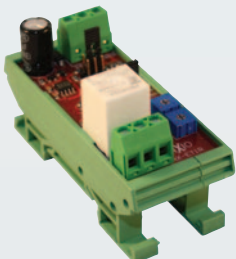
Part Number	Trade Price
ET1-1-24R 24VAC/DC (NO DISPLAY)	£33.00

CAD VERSIONS

ELECTRONIC THERMOSTAT – 1 CHANNEL

H&C
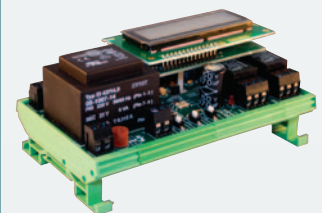
Din Rail Mounted module compatible with Building Management Systems. Monitors air or liquid temperature, and controls one User Programmable switching Relay channel in response.

Type	CAD-1DS
Input Supply +/- 15%	24V/DC 35MA (max), 230V / 240V 1VA
Sensor Type	CAD...
Temp Range	-5°C to +95°C (-9°C to +99°) C/W Ext Pot 1-10°C Differential
Output Signals	1 x C / O Relay Contact 10(5)A@240v, SamTalk (data output only)
Mounting	Din Rail (included)

FEATURES
- One unit covers entire -5°C to +95°C Range
- Separate Day and Night Set-Points
- 1-10°C Programmable Differential
- Heating or Cooling Function
- Digital LED Display with Temperature
- Connections for External Temperature Controls
- Digital Data Output for Remote Display/Options
- Din-Rail Mountable, small footprint

Part Number	Trade Price
CAD-1-DS	£78.00
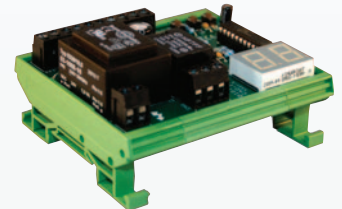
ELECTRONIC THERMOSTAT - 2 CHANNEL

H&C

Din Rail Mounted module compatible with Building Management Systems.

Monitors air or liquid temperature, and controls up to eight (optional) User Programmable switching Relay channels in response.

Type	CAD-2DS
Input Supply +/- 15%	24V / DC 150MA (max) 230V / 240V 6VA
Sensor Type	CAD...
Temp Range	-5°C to +95°C (-9°C to +99°) C/w/Ext Pot 1-10°C Differential
Output Signals	2 x C / O Relay Contact 10(5)A@240V 6 x plug-in Relays, SamTalk
Mounting	Din Rail (included)

FEATURES
- Two Relay Channels on-board, Six optional plug-in
- One unit covers entire -5°C to +95°C Range
- Separate Day and Night Set-Points
- 1-10°C Programmable Stage Differential
- 1-50°C Inter-Stage Differential
- Heating or Cooling Function
- Digital Display with Temperature and Set-Point
- Connections for External Temperature Controls

Part Number	Trade Price
CAD-2-DS	140.00

2 STAGE EXTENSION MODULE

H&C

Din-Rail Mounted extension module compatible with Building Management Systems (such as CAD-2DS), providing 2 Relay Outputs.

Type	CAD-XR2
Input Supply +/- 15%	Provided by Host 30mA (max)
Output Signals	2 x Relay Contacts 10(5)A@240V
Mounting	Din Rail (base only)

FEATURES
- 2 x Volt Free Relay Change-Over Outputs
- Individual Channel Selection for each Relay (Channels C-H)
- Din-Rail Module expansion baseplate supplied (uses mounting foot from host)
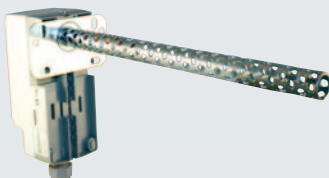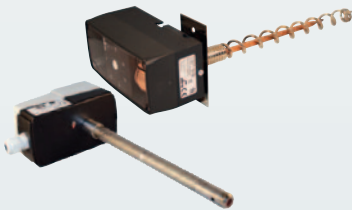- Small Footprint

Part Number	Trade Price
CAD-XR2	£65.00

SENSORS FOR CAD/ET ELECTRONIC THERMOSTATS & CAD-PI/AX-PI CONTROLLERS

H&C

Part Number	Description	Trade Price
TR1	ROOM SENSOR	£6.50
TI	IMMERSION SENSOR	£12.50
BRASS POCKET	BRASS POCKET FOR IMMERSION SENSORS	£9.00
S/S POCKET	STAINLESS STEEL POCKET FOR IMMERSION SENSORS	£11.00
TD	DUCT SENSOR	£12.00
TS	STRAP ON SENSOR	£16.00
TF	FLYING LEAD SENSOR	£5.50

DATASHEETS ARE AVAILABLE TO DOWNLOAD FROM OUR WEBSITE WWW.HEATCOMBUSTION.CO.UK

MISCELLANEOUS THERMOSTATS

OUTDOOR THERMOSTAT

Outdoor frost thermostat IP65 weatherproof range -5°C to +15°C 10AMP 230V SPDT.

Part Number	Trade Price
PTR030	£55.00

PIPE/CYLINDER THERMOSTAT

Clamp on thermostat for pipes (as standard) or with optional strap for cylinder IP40 protection 0-90°C.

Part Number	Trade Price
ARTH300	£17.00
CFS1 (1.5M) CYLINDER STRAP	£2.50

ROOM THERMOSTAT (CONCEALED DIAL)

Room thermostat single stage 5°C to 30°C spdt 6 amp.

Part Number	Trade Price
RAA11 (CONCEALED)	£23.00

ROOM THERMOSTAT (EXPOSED DIAL)

Room thermostat single stage 5°C to 30°c spdt 6 amp.

Part Number	Trade Price
RAA21 (DIAL)	£25.00

SLIMELINE ELECTRONIC ROOM THERMOSTAT

Slimline electronic room thermostat with touchscreen & communication for fan coil applications 230VAC.on-off outputs.

FEATURES

• 3 built in relays for 3-speed Fan & 2 for heat/cool control
• MODBUS communication
• Various control modes for reduced energy consumption.
• Input for presence detector and/or key card
• Flush Mounting for low profile installation

Part Number	Trade Price
RCFD-23C	£240.00

DUCT THERMOSTAT - DUCT HUMIDISTAT

Part Number	Description	Auto Reset Range	Trade Price
RTKSA-001-100 (c/w SWK-2-200)	IP40 RIGID STEM 16AMP 250VAC	0C to 50C	£99.00
HI-HF	SINGLE STAGE IP65 15AMP RATED	30C-100C	£226.00

DUCT THERMOSTAT IP65 - REGIN DUCT HUMIDISTAT

Part Number	Description	Auto Reset Range	Trade Price
MTID60	IP65 RIGID STEM 15AMP 230V	0C-60C	£128.00
HMH	SINGLE STAGE, IP54, 10AMP RATED	10-100C	£164.00

DUCT THERMOSTAT

Part Number	Description	Auto Reset Range	Trade Price
RAK-TW	IP43 RIGID STEM 10AMP 250VAC	-10C to 50C	£68.00

DANFOSS VLT® HVAC DRIVES FC102

Danfoss

The VLT® HVAC Drive is designed to bring optimized process control to all heating, ventilation and air conditioning (HVAC) applications. Easy to use and with built-in intelligence, the drive is fast and cost-effective to commission, and it has the capacity to control multiple high-efficiency permanent magnet motors in parallel. It features a wide range of functions specifically developed for use with, for example, pumps, fans and compressors to save energy, meet environmental regulations and reduce costs in modern buildings.

FEATURES

- IP20, IP55 & IP66
- Modbus & BACnet as standard
- H3 Filter (H2 Filter option available on request)

IP20			IP55			IP66		
Part Number	Rating (kW)	Trade Price	Part Number	Rating (kW)	Trade Price	Part Number	Rating (kW)	Trade Price
131B5468	1.1	£564.00	131N9572	1.1	£630.00	131Z2198	1.1	£783.00
131B5469	1.5	£647.00	131U0963	1.5	£755.00	131Z2199	1.5	£865.00
131B5470	2.2	£775.00	131U0964	2.2	£886.00	131Z2200	2.2	£995.00
131B5471	3	£866.00	131U0965	3	£977.00	131Z2201	3	£1,082.00
131B5472	4	£926.00	131U0966	4	£995.00	131Z2202	4	£1,139.00
131B5473	5.5	£1,068.00	131L9238	5.5	£1,177.00	131B9300	5.5	£1,277.00
131B5474	7.5	£1,191.00	131L9239	7.5	£1,307.00	131B9307	7.5	£1,409.00
131F8307	11	£1,547.00	131L9240	11	£1,732.00	131B9308	11	£1,815.00
131F8308	15	£1,753.00	131L9241	15	£1,967.00	131B9317	15	£2,070.00
131G0433	18.5	£2,195.00	131L9242	18.5	£2,464.00	131B9318	18.5	£2,595.00
131F9921	22	£2,569.00	131L9243	22	£2,886.00	131B9320	22	£3,040.00
131F9926	30	£2,988.00	131L9244	30	£3,359.00	131B9323	30	£3,536.00
131F9931	37	£3,611.00	131B6976	37	£3,987.00	131F2566	37	£5,122.00
131F9936	45	£4,281.00	131B7017	45	£4,875.00	131F1202	45	£6,193.00

BACKPLATES		
Part Number	To Suit Drive	Trade Price
130B3150	1.1-4KW IP55	£29.25
130B1098	5.5-7.5KW IP55	£29.25
130B3383	11-18.5kW IP20/IP55	£29.25
130B3397	22-30kW IP20/IP55	£42.75
130B3910	37-55kW IP20/IP55	£42.75

VACON 100 FLOW DRIVES

VACON

Vacon 100 Flow is an AC drive dedicated to improving flow control and saving energy in pumping and ventilating applications. The Vacon 100 Flow provides specific flow control functions to enhance pump and fan performance and protect pipes and equipment to ensure reliable operation. Vacon 100 Flow places an emphasis on user-friendliness and functionalities created for use in pump and fan applications. For instance, standard PID control eliminates the need for an external controller by using a sensor to control pump speed. This is useful when reacting to fluctuations in the demand.

FEATURES

- IP21 & IP54 – both same footprint
- Modbus & BACnet as standard
- User friendly keypad
- Larger kW ratings available on request

IP21			IP54		
Part Number	Rating (kW)	Trade Price	Part Number	Rating (kW)	Trade Price
VACON0100-3L-0003-5-FLOW	1.1	£69600	VACON0100-3L-0003-5-FLOW+IP54	1.1	£768.50
VACON0100-3L-0004-5-FLOW	1.5	£754.00	VACON0100-3L-0004-5-FLOW+IP54	1.5	£831.00
VACON0100-3L-0005-5-FLOW	2.2	£810.00	VACON0100-3L-0005-5-FLOW+IP54	2.2	£883.00
VACON0100-3L-0008-5-FLOW	3	£893.00	VACON0100-3L-0008-5-FLOW+IP54	3	£987.00
VACON0100-3L-0009-5-FLOW	4	£987.00	VACON0100-3L-0009-5-FLOW+IP54	4	£1,101.00
VACON0100-3L-0012-5-FLOW	5.5	£1,112.00	VACON0100-3L-0012-5-FLOW+IP54	5.5	£1,237.00
VACON0100-3L-0016-5-FLOW	7.5	£1,330.00	VACON0100-3L-0016-5-FLOW+IP54	7.5	£1,476.00
VACON0100-3L-0023-5-FLOW	11	£1,617.00	VACON0100-3L-0023-5-FLOW+IP54	11	£1,798.00
VACON0100-3L-0031-5-FLOW	15	£1,944.00	VACON0100-3L-0031-5-FLOW+IP54	15	£2,131.00
VACON0100-3L-0038-5-FLOW	18.5	£2,287.00	VACON0100-3L-0038-5-FLOW+IP54	18.5	£2,526.00
VACON0100-3L-0046-5-FLOW	22	£2,620.00	VACON0100-3L-0046-5-FLOW+IP54	22	£2,911.00
VACON0100-3L-0061-5-FLOW	30	£3,067.00	VACON0100-3L-0061-5-FLOW+IP54	30	£3,389.00
VACON0100-3L-0072-5-FLOW	37	£3,660.00	VACON0100-3L-0072-5-FLOW+IP54	37	£4,055.00
VACON0100-3L-0087-5-FLOW	45	£4,461.00	VACON0100-3L-0087-5-FLOW+IP54	45	£4,887.00
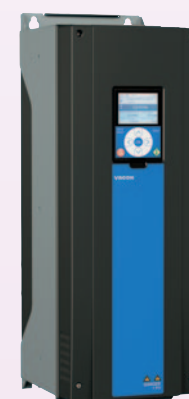
OPTIGO CONTROLLERS

A series of compact, economic and versatile stand-alone controllers. They are pre-configured and intended for smaller applications. The controllers are extremely easy to install, commission and control.

They are pre-configured and intended for smaller applications. The controllers are extremely easy to install, commission and control.

The controller has a knob with an encoder which makes the menu system very easy to use. You can read and set values shown in the backlit display.

A value is confirmed by pressing the knob.

The timer handles e.g. night setback, start or stop of fans during weekdays

or during a day. Quick and simple installation, The device is suitable for DIN-rail or cabinet mounting. Since the terminals are detachable, all connections can be made before the controller is installed.

FEATURES

- Standalone controller for heating or ventilation
- Available in 5 or 10 I/O
- Configured from encoder knob on the hardware fascia
- Din rail or fascia mountable
- 24V or 230V supply options

Part Number	Description	Trade Price
OP10	OPTIGO CONTROLLER 10 I/O, 24V, WITH DISPLAY	£191.00
OP10-230	OPTIGO CONTROLLER 10 I/O, 230V, WITH DISPLAY	£208.00
OP5U	OPTIGO CONTROLLER 51 I/O, 24V, WITH DISPLAY	£164.50

PLEASE SELECT YOUR REQUIRED SENSORS ON THE NEXT PAGE

CORRIGO CONTROLLERS

The Corrigo 5, Ventilation controller with a brand new built in webserver, HTML5.

FEATURES

- 24v configurable controllers for ventilation
- Ventilation: all types of AHU configurations
- Available in 15, 20 (Vido hardware) or 28 I/O
- Communication as standard: Modbus TCP/IP or RS485, BACnet/IP or BACnet MS/TP option, M-Bus
- Ready for Cloud service for easy remote access
- Din rail or fascia mountable
- Selection of external displays
- Download and easily configure the controller via the free software Application tool. Same software for all Configurable controller from Regin. Corrigo 5, Exigo, and Regio
- Also available without display (contact office for requirements).
- NEW! Built in HTML5 webserver

Part Number	Description	Trade Price
VCA152DW-4	CORRIGO ARDO 15 I/O'S, DISPLAY, 1 RS485, 1 WEB	£571.50
VCA152W-4	CORRIGO ARDO 15 I/O'S, 1 RS485, 1 WEB	£515.00
VCA283DW-4	CORRIGO ARDO 28 I/O'S, DISPLAY, 2 RS485, 1 TCP/IP, WEB SERVER	£959.50
VCA283W-4	CORRIGO ARDO 28 I/O'S, 2 RS485, 1 TCP/IP, WEB SERVER	£899.00
VCV203DWM-2	CORRIGO VIDO 20 I/O:S, DISPLAY, 1 RS485, 1 TCP/IP, 1 M-BUS	£872.50

PLEASE SELECT YOUR REQUIRED SENSORS ON THE NEXT PAGE

EXIGO CONTROLLERS

Exigo are versatile and cost effective controllers for heating and boiler control that
make every step from installation to operation and maintenance easier than ever.
Simply connect the controller, enter any settings as desired and start up. Exigo can be used either stand-alone
or integrated into a network. It has built-in support for many different languages. Exigo is designed for
mounting on a din-rail or in a cabinet door or over a device box. It can also be mounted directly on a wall. Exigo
supports control of up to 3 heating circuits, 2 DHW circuits and boiler control of 1-4 boilers. It also has Delta T
control over the heat exchanger.

FEATURES

- 230v configurable controllers for heating
- Heating: 1-4 boilers, up to 4 LPHW circuits, up to 2 DHW circuits
- Available in 19 I/O
- Communication as standard: Modbus TCP/IP or RS485, BACnet/IP or BACnet MS/TP option, M-Bus
- Ready for Cloud service for easy remote access
- Din rail, panel fascia or surface mounting
- On-board or external display
- Download and easily configure the controller via the free software Application tool. Same software for all
  Configurable controller from Regin. Corrigo 5, Exigo, and Regio.

Part Number	Description	Trade Price
HCV191DW-2	19 I/O, 230 WITH DISPLAY, TCP/IP	£498.50
HCV192DW-2	19 I/O, 230V WITH DISPLAY, TCP/IP, RS485	£687.00
HCV203-DWM-2	20 I/O, 230V WITH DISPLAY, TCP/IP, RS485, M-BUS	£838.50

PLEASE SELECT YOUR REQUIRED SENSORS BELOW

PT1000 SENSORS TO SUIT OPTIGO/CORRIGO/EXIGO

Part Number	Description	Trade Price
TG-UH3/PT1000	OUTDOOR SENSOR, PT1000, -30-+70°C	£35.00
TG-DHW3/PT1000	IMMERSION SENSOR, NTC10K, 10KOHM/250C C/W S.S POCKET	£45.50
TG-R5/PT1000	ROOM SENSOR, PT1000, 0..-50°C	£26.50
TG-R4/PT1000	ROOM SENSOR, PT1000 WITH SETPOINT ADJUSTMENT, 0..+50°C	£43.50
TG-KH3/PT1000	DUCT SENSOR WITH HOUSING PT1000, IP65, -30..+70°C	£43.50

REMOTE ACCES FOR ABOVE CONTROLLERS AVAILABLE VIA THE CLOUDIGO REMOTE ACCESS VIA WEB/CLOUD SERVICE - CONTACT OFFICE FOR FURTHER DETAILS

REGIO MIDI SMART ROOM CONTROLLERS

Regio Midi are controllers with a built-in temperature sensor and an RS485
communication port. Controllers in different rooms and zones can be connected to a
bus line enabling communication with a central SCADA system via RS485 (EXOline, BACnet or Modbus).
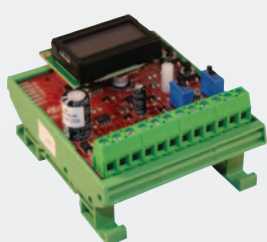
FEATURES

- 24VAC Supply Voltage
- Available with or without LCD display
- BACnet MS/TP and Modbus RS485 communication. (Both BACnet & Modbus on LCD version, Modbus only on
  non LCD versions
- Reduce your IO count by using the on-board IO. (Local zone valve control, damper actuator, additional
  temperature sensor (PT1000), PIR, window contact, CO_2 transmitter, condensation detector etc.)
- On-board tempeature sensor
- Optional fan control (includes fan button, otherwise no fan button on-board)
- Optional hidden setpoint version
- Installed in various Hotels, Schools, Universities, Nursing Homes, Primary Healthcare Centres, Offices etc.
- Download and easily configure the controller via the free software Application tool. Same software for all
  Configurable controller from Regin. Corrigo 5, Exigo, and Regio

REGIO MIDI SMART ROOM CONTROLLERS		
Part Number	Description	Trade Price
RC-C3	0-10V ON/OFF, SETPOINT, COMMUNICATION, 7I/O	£137.00
RC-C3DFOC	0-10V ON/OFF, OCCUPANCY, FAN SPEED, DISPLAY, COMMUNICATION, 0-10V 7I/O	£161.50
RC-C3DOC	0-10V ON/OFF, OCCUPANCY, DISPLAY, COMMUNICATION, 7I/O	£159.00
RC-C3H	0-10V ON/OFF, HIDDEN, SETPOINT, COMMUNICATION, 7I/O	£146.50

OTHER VERSIONS AVAILABLE ON REQUEST

DATASHEETS ARE AVAILABLE TO DOWNLOAD FROM OUR WEBSITE WWW.HEATCOMBUSTION.CO.UK

ROOM MOUNTED FAN COIL CONTROLLERS

≋REGIN
THE CHALLENGER

FEATURES

- 230VAC Supply Voltage
- BACnet MS/TP and Modbus RS485 communication
- On-board temperature sensor.
- Built-in relays for a 3-speed fan
- EC Fan Control - 3AO on-board
- Input for presence detector and/or window contact
- Suitable for 2 or 4 pipe systems
- Input for presence detector and/or window contact

REGIO MIDI SMART FAN COIL CONTROLLERS		
Part Number	Description	Trade Price
RCF-230CAD	230V, 0-10V WITH COMMUNICATION	£143.00
RCF-230CD	230V, ON/OFF, CHANGE OVER WITH COMMUNICATION	£143.00
RCF-230CTD	230V, THERMAL OR 3 POINT WITH COMMUNICATION	£146.50
RCF-230CTD-EC	230V, THERMAL OR 3 POINT WITH COMMUNICATION FOR EC FANS	£146.50

STAND ALONE UNIVERSAL ROOM CONTROLLERS

≋REGIN
THE CHALLENGER

A flexible universal stand-alone unit containing a controller supporting connection of an optional 0...10V sensor, temperature, humidity.

FEATURES

- Settable for increasing or decreasing output signal
- Adjustable set point, P-band and I-time
- Discreet, stylish design suitable for all indoor environments

Part Number	Description	Trade Price
AL230A	ROOM CONTROLLER, TEMPERATURE, 0-10V, 230V AC	£141.00

AXIO DIGITAL ROOM CONTROLLERS

AXIO

The Axio range of digital room controllers feature a high-contrast blue backlit display with white text, and fit a standard single gang plate. The unit has selection for an internal or external temperature sensor and provides an adjustable proportional and integral heating and cooling output depending on unit type.

Part Number	Description	Trade Price
AX-CNDR-HCE	0-10V, HEATING, COOLING & FANSPEED	£78.00
AX-CNDR-HCEBN	0-10V, HEATING, COOLING & FANSPEED WITH BACNET	£114.00
AX-CNDR-HC3	0-10V, HEATING, COOLING WITH 3 FANSPEED RELAYS	£87.00

FOR PROJECT ENQUIRIES CONTACT H&C

PROPORTIONAL & INTEGRAL TEMPERATURE CONTROLLER

AXIO

The AX-PI Controller is a compact cost effective solution for controlling various types of terminal units. The units have two thermistor inputs for temperature and an optional remote setpoint offset, combined with adjustable setback facilities.

The unit has one or two P.I. heating and / or cooling outputs.

The unit is designed for Din Rail mounting.

FEATURES

- Proportional and Integral Control
- Adjustable Setback
- 0-10V or 2-10VDC Output
- Heating and / or Cooling output
- Remote Setpoint option
- Adjustable Proportional band
- Adjustable Integral time
- Din Rail mounting

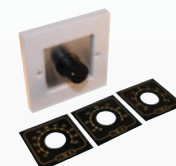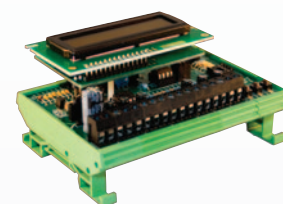| Part Number	Trade Price
AX-PI	£73.00
AX-POT	£40.00

PROPORTIONAL CONTROLLER

H&C

A versatile Din Rail mounted electronic control module. Monitors air or liquid temperature, and controls from one to (optionally) 2 or 3 Proportional Analogue Channels.

FEATURES

- One Proportional Control Channel standard, 2 or 3 optional
- One unit covers entire -5°C to +95°C Range
- Separate Day, Night and Low-Level Set-Points
- Up to 0.25°C Accuracy
- 1-20°C Proportional Band (Span)
- 0-50°C Dead Band
- Heating, Cooling (or optionally both) Function
- Digital Display with Temperature, Set-Point and Status
- Connections for External Temperature Controls and Displays
- Din-Rail Mountable, small footprint

Part Number	Trade Price
CAD-PI	£145.00
CAD-XM1A ADD ON MODULE FOR 2/3 STAGE	£31.00
CAD-POT FACIA MOUNT SET POINT CONTROL	£51.00

SENSORS FOR CAD/ET ELECTRONIC THERMOSTATS & CAD-PI/AX-PI CONTROLLERS

Part Number	Description	Trade Price
TR1	ROOM SENSOR	£6.50
TI	IMMERSION SENSOR	£12.50
BRASS POCKET	BRASS POCKET FOR IMMERSION SENSORS	£9.00
S/S POCKET	STAINLESS STEEL POCKET FOR IMMERSION SENSORS	£11.00
TD	DUCT SENSOR	£12.00
TS	STRAP ON SENSOR	£16.00
TF	FLYING LEAD SENSOR	£5.50

ROOM PROPORTIONAL & INTEGRAL TEMPERATURE CONTROLLER

AXIO

The AX-RC-P1 proportional temperature controllers provide 0-10VDC output proportional to the difference between the setpoint and the measured temperature.

The output signal can be used to control VAV Boxes, modulating damper motors, modulating valve actuators, relay modules or thyristor power controllers among others. The unit is powered from 24VAC/DC.

FEATURES

- Setpoint Adjustment
- Room sensor housing
- Heating or Cooling - jumper selectable
- 24VAC/DC
- Adjustable proportional band

Part Number	Trade Price
AX-RC-P	£46.00

DUCT PROPORTIONAL TEMPERATURE CONTROLLER

AXIO

The AX-DC-P1 proportional temperature controllers provide 0-10VDC output proportional to the difference between the setpoint and the measured temperature.

The output signal can be used to control VAV Boxes, modulating damper motors, modulating valve actuators, relay modules or thyristor power controllers among others. The unit is powered from 24VAC/DC.

FEATURES

- Internal Setpoint Adjustment
- Duct sensor housing
- Heating or Cooling - jumper selectable
- 24VAC/DC
- Adjustable proportional band

Part Number	Trade Price
AX-DC-PI	£65.00

PRESIGO 2.0 PDTX PRESSURE TRANSMITTER WITH COMMUNICATION

≈REGIN
THE CHALLENGER

FEATURES

• Pressure transmitter with market leading sensor technology

• High accuracy and long term stability

• No need for calibration

• Pressure transmitter and expansion unit in one device

• 2 UI + 2 UO place it where you need it

• Display, see values live inside the unit and all communication settings

• Joystick for navigating in all menus and for setup

• Simple menu structure for easy navigation, (same simple menu structure as RCWM 32)

• One or two pressure sensors

• 1250, 2500 or 7500Pa

• 2x UO, 0…10V or DO outputs

• 2x UI, PT1000, NI1000, 0…10V or DI inputs

Part Number	Description & Pressure Range	Trade Price
PDTX12 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA, 2XUI, 2XUO	£190.00
PDTX25 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-2500PA, 2XUI, 2XUO	£190.00
PDTX75 C S	DIFFERENTIAL PRESSURE TRANSMITTER, 0-7500PA, 2XUI, 2XUO	£190.00
PDTX12 2 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA, 2 SENSORS, 2XUI, 2XUO	£245.00
PDTX25 2 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-2500PA, 2 SENSORS, 2XUI, 2XUO	£245.00
PDTX12S25 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250/0-2500PA, 2XUI, 2XUO	£245.00
PDTX12S75 C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250/0-7500PA, 2XUI, 2XUO	£245.00

AXIO THYRISTOR CONTROLLERS

AXIO

The Axio range of power controllers are designed to provide continuously adjustable control of electric heating loads from a BMS controller or similar. Applications include; electric heating coils, heating cables and electric furnaces.

FEATURES

• 0-10vdc control input

• LED indication

• Auto reset over temperature protection

• PWM control

| Part Number	Size (kW)	No of Phases	DIN Rail Mounted	Trade Price
AX-MPR1-2	2	1	YES	£68.00
AX-MPR1-4	4	1	YES	£91.00
AX-MPR1-6	6	1	YES	£115.50
AX-MPR1-9	9	1	YES	£178.00
AX-MPR3-6	6	3	YES	£107.00
AX-MPR3-12	12	3	YES	£170.00
AX-MPR3-18	18	3	YES	£195.00
AX-PPR3-27	27	3	NO	£351.00
AX-PPR3-36	36	3	NO	£416.00
AX-PPR3-54	54	3	NO	£483.00
AX-PPR3-72	72	3	NO	£707.50
AX-PPR3-105	105	3	NO	£804.50

THYRISTOR/CONTROLLERS

H&C

Heat & Combustion's range of solid state AC controllers are designed to operate single and three phase (3 wire) resistive loads using the burst-pulse principle.

FEATURES

• All solid state design using thyristor modules or ssrs

• Normal line voltage 240V or 415VAC

• Single and two arm control of load circuit (3 arm available on request)

• Input signal 0-10V as standard optional 4-20mA, 0-5V or 5-10V

• CE compliant

• Semi-conductor fuse protection - single phase 9kW and above, three phase 28kW and above

• All ratings are at 40 ambient air

• Enclosures IP10

Part Number	Supply Phase	Max Current (AMP)	Max Heating Duty (kW)	Dimension (HxWxD) (mm)	Trade Price
S1-3DR	SINGLE	15	3.5	90x91x61	£181.00
ACL1/7	SINGLE	30	7	210x136x116	£249.00
AC1/9	SINGLE	38	9	210x136x112	£291.00
AC1/15	SINGLE	63	15	210x136x112	£312.00
AC1/28	SINGLE	117	28	210x154x152	£340.00
ACL3/10	THREE	15	10	210x136x107	£278.00
AC3/20N	THREE	28	20	210x136x107	£387.00
AC3/28	THREE	39	28	210x136x152	£448.00
AC3/36	THREE	50	36	210x136x152	£456.00
AC3/57	THREE	79	57	210x154x152	£458.00
AC3/86	THREE	120	86	239x165x205	£682.00
AC3/138	THREE	192	138	255x169x152	£853.00
AC3/172	THREE	239	172	255x169x229	£1,055.00
AC3/200	THREE	278	200	338x169x287	£1,442.00

THYRISTOR/CONTROLLERS

H&C
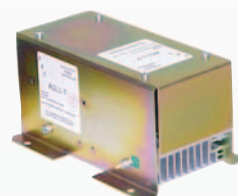
Heat & Combustion range of Din Rail mounting thyristor power controllers are designed for the control of inductive loads in electric furnaces, and heater batteries in HVAC systems.

The AC3 series, like all Heat & Combustion controllers uses zero crossover switching, and burst pulse control ensures the load is switched only in multiples of complete mains cycles thus keeping supply and electrical disturbance to a minimum.

FEATURES

• 0-10V Input Control

• Self Powered

• 12kW Output

• Din Rail (TS35) Mounting

• PWM Control

• Three Phase

Part Number	Size (kW)	Trade Price
AC3-12	12	£240.00
AC3-18	18	£285.00
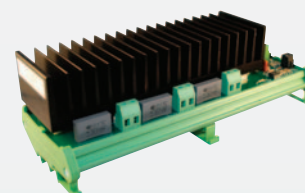
BECK DIFFERENTIAL PRESSURE SWITCHES IP54 & IP65

Adjustable differential pressure switch for monitoring overpressure, vacuum and differential pressure of air or other non-combustible, non-aggressive gases. Available as STD IP54 version also IP65 satnd alone version or IP65 version in enclosure.

Part Number	Ranges (Pa)	Protection	Trade Price
930-80	20-300	IP54	£11.50
930-83	50-500	IP54	£11.50
930-85	200-1000	IP54	£11.50
930-86	500-2500	IP54	£11.50
930-80-IP65-BOX	20-300	IP65	£55.00
930-83-IP65-BOX	50-500	IP65	£55.00
930-85-IP65-BOX	200-1000	IP65	£55.00
930-80-IP65	20-300	IP65	£26.00
930-83-IP65	50-500	IP65	£26.00
930-85-IP65	200-1000	IP65	£26.00

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES

ACCESSORIES FOR PRESSURE SWITCHES

Part Number	Trade Price
DUCT KIT (inc 2 x SPIGGOTTS & 2MTR TUBE)	£1.80
'T' PIECES	£1.75
30M ROLL OF TUBE	£23.00
METAL MOUNTING BRACKET FOR 930/PA10	£3.00

ENCLOSED SOLID CORE CURRENT SWITCH A/MCS VERSION

Part Number	Ranges	Trade Price
A/MCS	CURRENT SWITCH, FIXED VERSION, SOLID CORE	£35.00
A/MCS-A	CURRENT SWITCH, ADJUSTABLE VERSION, SOLID CORE	£52.00

ENCLOSED SOLID CORE CURRENT SWITCH RIB VERSION
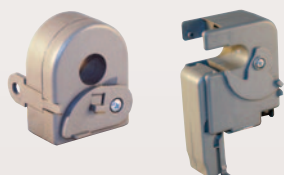
Part Number	Ranges	Trade Price
RIBXKTF	CURRENT SWITCH FIXED VERSION, SOLID CORE	£44.00
RIBXKTA	CURRENT SWITCH ADJUSTABLE VERSION SOLID CORE	£46.00
RIBXGTA-SCAL	SPLIT CORE UNIQUE SELF CALIBRATING CURRENT SWITCH	£72.00

OTHER VERSIONS AVAILABLE ON REQUEST – CONTACT H&C

PTH AIR DP. TRANSMITTERS

PTH is an electronic pressure transmitter designed primarily to measure total and differential air pressures in ventilation systems. The resulting measurements are used for monitoring, control and regulation purposes via a regulator, monitoring system.

Unique switch suitable for either 0-10V or 4-20mA output in same switch also has 8 selectable ranges.

FEATURES

- The maintenance / control of constant pressure at a given position within the duct system
- The maintenance / control of desired underpressure within the duct system
- The measurement of pressure differentials across filters to determine optimum filter replacement time
- Flow determination via differential pressure measurements across a standard aperture
- Accuracy + or -3% over the operation range

Part Number	Description	Trade Price
PTH3202	MULTI RANGE PRESSURE TRANSMITTER	£92.00
DUCT KIT	TUBE & SPIGOTS TO SUIT PTH SERIES	£1.80
Ranges (mbar)	-0.5 to +0.5, 0 to 1, 0 to 1.5, 0 to 3, 0 to 5, 0 to 10, 0 to 16, 0 to 25	

ZPM BAPI-BOX AIR DP TRANSMITTER IP66

ZPM is an IP66 pressure transmitter selectable ranges/outputs.

FEATURES

- IP66 enclosure
- Various/multirange
- Various outputs 4-20mA, 0-10V, 0-5V, 2-10V, 1-5V
- 5 year warranty
- Auto zero reset, IP66 with display and indication lights
- Field selectable voltage outputs and ranges (3 ranges low, standard & high)

Part Number	Description	Trade Price
ZPM BAPI-BOX	IP66 MULTI RANGE PRESSURE TRANSMITTER	£120.00
DUCT KIT	TUBE & SPIGOTS	£1.80

HK DPT TRANSMITTERS

Differential pressure transmitter DPT-3wire eight range model.

Unique switch suitable for either 0-10V or 4-20mA output in same switch also has 8 selectable ranges.

FEATURES

- Response Time 0.8/4s selectable by push button
- Bursting pressure 30kPa (model 2500)
- Suitable media air and non-aggressive gases
- Measuring element Piezoresistive
- Accuracy from range ±1,5% or (±6Pa <250 Pa) (including: general accuracy temperature drift, linearity, hysteresis and repetition error)
- Electrical interface Supply voltage 24VAC or VDC
- Electrical connections 4 screw terminals, max 1.5mm2
- Cable entry M16
- Pressure connections Male 5.0mm and 6.3mm
- Weight 150 grams, with accessories 290 grams
- Dimensions 90.0 x 71.5 x 36.0mm

Part Number	Description	Trade Price
DPT2500-R8	MULTI RANGE PRESSURE TRANSMITTER	£111.00
DPT2500-R8-D	COMPLETE WITH DISPLAY	£147.00
DPT2500-R8-AZ	COMPLETE WITH AUTO ZERO CALIBRATION	£168.00
DPT2500-R8-D-AZ	COMPLETE WITH DISPLAY & AUTO ZERO CALIBRATION	£195.00
DUCT KIT	TUBE & SPIGOTS TO SUIT DPT SERIES	£1.80
Ranges (Pa)	-100 to +100, 0 to 100, 0 to 250, 0 to 500, 0 to 1000, 0 to 1500, 0 to 2000, 0 to 2500	

REGIN HIGH ACCURACY & MODBUS VERSION AIR PRESSURE TRANSMITTERS

≋REGIN
THE CHALLENGER

Short facts about presigo PDT...(-2)

- Uses a sensor technology that offers very high accuracy and excellent long-term stability the <1% of full scale)
- Small and compact design
- Easy installation
- Operating temperature -25...+50°C
- 0...10V 0r 4...20mA outputs
- Can be mounted vertically or horizontally
- 1 or 2 sensor options

Short facts about presigo PDT modbus

- Uses a sensor technology that offers very high accuracy and excellent long-term stability the <1% of full scale)
- Small and compact design
- Easy installation
- Less wiring is required
- Relieves the controller of up to four I/Os
- Flexible universal inputs on board
- 1 or 2 sensor options

Part Number	Description	Trade Price
PDT12	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA, 0-10V	£119.00
PDT25	DIFFERENTIAL PRESSURE TRANSMITTER, 0-2500PA, 0-10V	£119.00
PDT75	DIFFERENTIAL PRESSURE TRANSMITTER, 0-7500PA, 0-10V	£119.00
PDT12S25-2	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA/0-2500PA, 2 SENSOR ELEMENT0-10V	£173.00
PDT12S75-2	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA/0-7500PA, 2 SENSOR ELEMENT 0-10V	£173.00
PDT12C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-1250PA, MODBUS, 2UI	£148.00
PDT12C-2	DIFFERENTIAL PRESSURE TRANSMITTER, DUAL 0-1250PA /0-1250PA MODBUS, 2UII	£205.00
PDT12S25C-2	DIFFERENTIAL PRESSURE TRANSMITTER, DUAL 0-1250PA/0-2500PA MODBUS, 2UI	£205.00
PDT12S75C-2	DIFFERENTIAL PRESSURE TRANSMITTER, DUAL 0-1250PA /0-7500PA MODBUS, 2UI	£205.00
PDT25C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-2500PA, MODBUS, 2UI	£148.00
PDT25C-2	DIFFERENTIAL PRESSURE TRANSMITTER, DUAL 0-2500PA /0-2500PA MODBUS, 2UI	£205.00
PDT75C	DIFFERENTIAL PRESSURE TRANSMITTER, 0-7500PA, MODBUS, 2UI	£148.00

Part Number	Description	Trade Price
DMD	DIFFERENTIAL PRESSURE TRANSMITTER WITH DISPLAY	£234.00
DMD-C	DIFFERENTIAL PRESSURE TRANSMITTER CONTROLLER C/W DISPLAY	£242.00

Pressure Range	1250 Pa Sensor	2500 Pa Sensor	7500 Pa Sensor
RANGE 1	0...50	0...100	0...1000
RANGE 2	0...100	0...300	0...2000
RANGE 3	0...300	0...500	0...3000
RANGE 4	0...500	0...1000	0...4000
RANGE 5	0...700	0...1500	0...5000
RANGE 6	0...1000	0...2000	0...6000
RANGE 7	0...1250	0...2500	0...7500

SMART AIR DIFFERENTIAL PRESSURE TRANSMITTERS

Titan Products Ltd.

The TPDPT8-HA-COM transmitters are designed to offer increased accuracy and stability within HVAC applications such as ventilation systems, fume cupboards, operating theatres, fan speed control, air pressure monitoring and leak detection systems. With no long term drift, temperature shift and an accuracy of 0.2% near zero, the Smart Air Differential Pressure Transmitter offer extremely high levels of stability and accuracy.

Part Number	Pressure Range	Trade Price
TPDPT8/125-HA-COM	+/- 0-25, 0-50, 0-100, 0-125PA	£146.00
TPDPT8/500-HA-COM	+/- 0-200, 0-300, 0-400, 0-500PA	£146.00

WATER DIFFERENTIAL PRESSURE SWITCH

ALCO CONTROLS

FD113 uses the pressure differential between the 2 inputs to operate an electrical switch. For application in refrigeration pumps, air-conditioning HVAC systems according to EN378. e.g. Compressor oil pressure control. Pump pressure.

FEATURES
- Range: 0.2 to 4 BAR
- Pressure connection: ¼" bsp female
- Protection: IP30
- Switch rating: 5 AMP at 230VAC

Part Number	Trade Price
FD113	£60.00

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES

WATER DIFFERENTIAL PRESSURE SWITCH (MULTIPLE RANGES)

Bailey & Mackey Ltd

This range of differential pressure switches are used to monitor the difference in two pressures. For example they can be used to monitor filter, boiler and pump condition and signal when the flow or pressure from these fall or rise to an alarm condition. For all applications where air, oil or water is to be monitored.

FEATURES
- Five standard pressure ranges
- Diaphragm operated
- Fully adjustable
- Pressure connections 1/8" bsp parallel female brass
- C/W plug and socket
- CE marked
- Complete with mounting bracket
- Enclosure rating IP65
- Weight 0.9KGS
- Switch rating, 5 AMP at 230VAC

Part Number	Range (Bar)	Trade Price
H1382P/250	0.015-0.25	£145.50
H1382P/1	0.07-1	£145.50
H1382P/4	0.2-4	£145.50
H1382P/11	0.5-11	£145.50
H1382P/28	2-28	£145.50

ACCESSORIES FOR H1382P

Bailey & Mackey Ltd

2 x ⅛" & 2 x ¼" fittings C/W 2mtr ¼" copper tube.

Part Number	Trade Price
H1382P KIT	£32.00
SPARE FITTINGS (⅛" or ¼")	£7.00 EACH
COPPER TUBE, 1M LENGTH	£6.50

PRESSURE SWITCHES - SERIES 1000

Bailey & Mackey Ltd

This series of pressure switches can be used for all applications where an electrical circuit is required to close or open at a required pressure.

The robustness of this series of pressure switches enables all applications in all industries to be satisfied.

FEATURES

- Robust & Reliable
- Diaphragm Operated <42 bar
- Piston Operated >42 bar
- Proven Performance
- Wetted parts for use with all Fluids
- Fully Adjustable and Easily Customised
- Enclosure Rating IP65
- CE marked for all Directives that apply
- LPCB Approved & UL 508 Certified

Part Number	Pressure (Bar)	Trade Price
1381/1	-1 to +1	£91.00
1381/4	0.2 to 4	£91.00
1381/11	0.5 to 11	£91.00
1381/14	0.7 to 14	£91.00
1381/28	2 to 28	£91.00
1381/42	2 to 42	£91.00
1481/125	0.005 to 0.125	£111.00
1481/250	0.015 to 0.25	£111.00
1481/400	0.025 to 0.4	£111.00

"V" VERSION GIVE AN ADJUSTABLE HYSTERESIS (ADJUSTABLE RANGE CAN BE VARIED BETWEEN 5 TO 95%)

Part Number	Pressure (Bar)	Trade Price
1381/1V	-1 to +1	£139.00
1381/4V	0.2 to 4	£139.00
1381/11V	0.5 to 11	£139.00
1381/14V	0.7 to 14	£139.00
1381/28V	2 to 28	£139.00
1381/42V	2 to 42	£139.00
1481/125V	0.005 to 0.125	£158.50
1481/250V	0.015 to 0.25	£158.50
1481/400V	0.025 to 0.4	£158.50

DIFFERENTIAL PRESSURE SWITCHES - SERIES 1000

Bailey & Mackey Ltd

This series of pressure switches is used to monitor the difference between two pressures. For example, they can be used to monitor filter condition and signal when the filter is becoming blocked.

They can also be used as flow monitoring switches if used across orifice plates.

FEATURES

- Robust & Reliable
- Diaphragm Operated
- Proven Performance
- Fully Adjustable
- Enclosure Rating IP65
- CE marked for all Directives that apply
- UL 508 Certified

Part Number	Pressure (Bar)	Trade Price
1382/1	0.07 to 1	£201.00
1382/4	0.2 to 4	£201.00
1382/11	0.5 to 11	£201.00
1382/28	2 to 28	£201.00
1482/0.125	0.005 to 0.125	£231.00
1482/0.25	0.015 to 0.25	£231.00
1482/0.4	0.025 to 0.4	£231.00

"V" VERSION GIVE AN ADJUSTABLE HYSTERESIS (ADJUSTABLE RANGE CAN BE VARIED BETWEEN 5 TO 95%)

Part Number	Pressure (Bar)	Trade Price
1382/1V	0.07 to 1	£248.50
1382/4V	0.2 to 4	£248.50
1382/11V	0.5 to 11	£248.50
1382/28V	2 to 28	£248.50
1482/0.125V	0.005 to 0.125	£278.50
1482/0.25V	0.015 to 0.25	£278.50
1482/0.4V	0.025 to 0.4	£278.50

STATIC POSITIVE PRESSURE TRANSMITTER

Bailey & Mackey Ltd

This series of miniature pressure transducers have a piezo-resistive sensor and a unique conductive seal that eliminates internal wire bonding thus enhancing reliability. Zero and full scale adjusters are provided under the top cover. They are ideal for use in areas requiring exact pressure measurement, low hysteresis and long term stability. For all applications where air, oil or water is to be monitored. Also suitable for non corrosive gases (but not certified).

FEATURES

- Piezo-resistive sensor
- Ranges from full vacuum to 20 bar
- Type 481A for 12V/24DC input, 4-20ma output.
- Type 481B for 24VAC/DC input, 0-10VDC output
- Supplied with 1M flying lead
- Pressure connection 1/4" bsp parallel male brass
- CE marked to EN 61000-6-2
- Complete with mounting bracket
- Enclosure rating IP65
- Weight 350 grams

Part Number	Ranges (Bar)	Output (Bar)	Trade Price
481A-0.5	0-0.5 (0-500 MBAR)	4-20mA	£162.00
481A-1	0-1	4-20mA	£162.00
481A-4	0-4	4-20mA	£162.00
481A-6	0-6	4-20mA	£162.00
481A-10	0-10	4-20mA	£162.00
481A-16	0-16	4-20mA	£162.00
481A-20	0-20	4-20mA	£162.00
481B-0.35	0-0.35 (0-350 MBAR)	0-10v	£162.00
481B-1	0-1	0-10v	£162.00
481B-4	0-4	0-10v	£162.00
481B-6	0-6	0-10v	£162.00
481B-10	0-10	0-10v	£162.00
481B-16	0-16	0-10v	£162.00
481B-20	0-20	0-10v	£162.00

DIFFERENTIAL PRESSURE TRANSMITTER

Bailey & Mackey Ltd

This series of miniature pressure transducers have a piezo-resistive sensor and a unique conductive seal that eliminates internal wire bonding thus enhancing reliability. Zero and full scale adjusters are provided under the top cover. They are ideal for use in areas requiring exact pressure measurement, low hysteresis and long term stability. For all applications where air, oil or water is to be monitored. Also suitable for non corrosive gases (but not certified).

FEATURES

- Piezo-resistive sensor
- Ranges from full vacuum to 20 bar
- Type 482A for 12V/24DC input, 4-20mA output.
- Type 482B for 24VAC/DC input, 0-10VDC output
- Supplied with 1m flying lead
- Pressure connection 1/8" bsp parallel female brass
- CE marked to EN 61000-6-2
- Complete with mounting bracket
- Enclosure rating IP65
- Weight 350 grams

Part Number	Ranges (Bar)	Output	Price
482A-0.035	0-0.035 (0-35 MBAR)	4-20mA	£220.00
482A-0.07	0-0.07 (0-70 MBAR)	4-20mA	£220.00
482A-0.2	0-0.2 (0-200 MBAR)	4-20mA	£220.00
482A-0.35	0-0.35 (0-350 MBAR)	4-20mA	£220.00
482A-0.4	0-0.4 (0-400 MBAR)	4-20mA	£220.00
482A-0.5	0-0.5 (0-500 MBAR)	4-20mA	£220.00
482A-1	0-1	4-20mA	£220.00
482A-2	0-2	4-20mA	£220.00
482A-4	0-4	4-20mA	£220.00
482A-6	0-6	4-20mA	£220.00
482A-7	0-7	4-20mA	£220.00
482A-10	0-10	4-20mA	£220.00
482A-12	0-12	4-20mA	£220.00
482B-0.4	0-0.4 (0-400 MBAR)	0-10v	£220.00
482B-1	0-1	0-10v	£220.00
482B-2	0-2	0-10v	£220.00
482B-4	0-4	0-10v	£220.00
482B-6	0-6	0-10v	£220.00
482B-7	0-7	0-10v	£220.00
482B-10	0-10	0-10v	£220.00
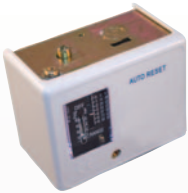
LIQUID STATIC PRESSURE SWITCH C/W ADUSTABLE DIFFERENTIAL

H&C

Pressure switch IP30 range 0-6 BAR. 1/4" BSP connection.

Part Number	Trade Price
37001	£45.00

AIR HIGH TEMPERATURE DIFFERENTIAL PRESSURE SWITCH

H&C

High temperature Air DP switch, 0.13 – 30mbar suitable for media temperature up to 300°C*, c/w 2 x brass adaptors & 2m length of copper tube.

*Switch can be used up to temperature of approx. 300c, If used with a minimum of 1m copper tube either side of switch , to act as a condensate loop. As standard , the switch is rated for use up to 80c.

Part Number	Trade Price
AFS-262-HT	£90.00

GAS STATIC PRESSURE SWITCH

elektrogas

Gas pressure switch 1/4" male connection for positive pressure.

Ranges: 10-50 mBar (Other ranges available on request)

Part Number	Trade Price
PSG901.62	£54.00

SMART I/O MODULES

Titan Products Ltd.

The Smart IO Modules from Titan offer additional and cost-effective networkable expansionfor BACnet MS/TP or Modbus RTU networks. Smart IO Modules can be used for monitoring, control, and positioning applications.

The 8-way module devices are available with 8 universal input configurations and a variety of output options that include relay, digital and analogue outputs.

Supplied with Near Field Communication (NFC) capabilities as standard, the IO modules are set up using a smart phone or tablet via the Titan Commissioning App,or alternatively a Commissioning Kit can be purchased.

Part Number	Output Type	Trade Price
IO/COM-8A0	8X ANALOGUE	£275.00
IO/COM-8DO	8X DIGITAL	£275.00
IO/COM-8R	8X RELAY	£275.00
IO-COMKIT	COMMISSIONING KIT	£20.00

PLEASE NOTE: THE COMMISSIONING KIT COMPRISES OF SMART IO CONFIGURATION TOOL AND USB TO MINI USB CABLE.

DISPLAYS

AXIO
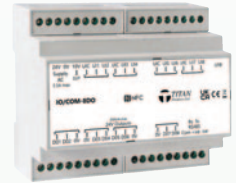
Analogue monitor with display and relays

The AX-AM8DR is a cost effective solution to display and monitor a selection of 10V or 20mA analogue signals, loop power is provided for current sensors. Each of the 8 input signals is individually scaled before being displayed, allowing a mixed combination of sensor ranges. Each input has a limit relay with independent setpoints, reversing the on and off setpoints inverts the relay action. The limit relays are also combined to drive a common alarm relay to reduce wiring.

Part Number	Trade Price
AX-AM8DR	£311.00

Dual LCD display on single gang plate

The AX-LCD-2 feature two high-contrast, blue backlit liquid crystal displays with white text. Various options are available such that the 0-10V/4-20mA input signal can be used to display a variety of ranges and units of measurement. The displays fit a standard single gang back-box. Range and Unit on the two displays can be independently configured using push button switches. The voltage/current selection is made using jumpers.

Part Number	Trade Price
AX-LCD-2	£95.00

FAN SPEED RELAY MODULES WITH TRANSFORMERS

AXIO

3 Fan Speed Relay Module with 230Vac/24Vac Transformer

The AX-FRM3-D30ET is a cost effective, DIN Rail mounted module that provides high capacity, interlocked fan speed switching relays with an integrated 24Vac transformer. The relays can switch up to 6 Amps at 250Vac. The module can be used to change the speeds on fan motors with multi-tapped windings and also transformer speed controlled motors. The transformer is fitted with fuses on both the input and output; no external fuses are required. The AX-FRM3-D30ET also features high-quality rising clamp terminals and is supplied on a TS35 DIN rail carrier for rapid installation.

Part Number	Trade Price
AX-FRM3-D30ET	£73.00

The AX-FRM3-TX modules are a range of Fan Speed Relay Modules which provide high capacity, interlocked fan speed switching relays with an integrated 24Vac transformer. The relays can switch up to 12 Amps at 250Vac. Various types include switched live or volt free output contacts, 24V or 230V relay operating coils, additional valve relay, and DIN rail mount or steel enclosure options.

The units can be used to change the speeds on fan motors with multi-tapped windings and also transformer speed controlled motors. The 'break before make' design of the relay contact configuration and common switching point ensure that only one set of contacts is active at any one time, thus preventing short circuits.

Part Number	Trade Price
AX-FRM3-230-TC-VF	£78.00

DIGITAL INPUT MULTIPLEXER

AXIO

4 x & 6 x digital input (VFC) multiplexer 0-10VDC output Din Rail module trend compatible output with built in offset (direct equivalent to trend) and other input versions.

Part Number	Trade Price
HC-DIM4-MI	£27.00
HC-DIM6-MI	£46.00

SINGLE RELAY MODULE

AXIO

Single relay Din Rail module with fixed switch point. 0-10VDC input 24VAC powered fixed switchpoint at 5VDC.

Part Number	Trade Price
HC-RM1F	£19.00

SINGLE RELAY MODULE C/W ADJUSTMENT

AXIO

Single relay Din Rail module with adjustment and also buffered output. 0-10VDC input 24VAC powered.

Part Number	Trade Price
HC-RM1AB	£28.00

IP65 ENCLOSURE AVAILABLE ON REQUEST

RESISTANCE INPUT MODULES

AXIO

Resistance input module 135 OHMS to 0-10VDC. Powered from a 24VAC/DC supply. LED indicators.
Resistance input module 1,000 (1K) to 0-10VDC. Powered from a 24VAC/DC supply. LED indicators..

Part Number	Trade Price
HC-RIM135	£35.00
HC-RIM-1K	£35.00

TWO RELAY MODULE

AXIO

2 stage relay module with timer.
Din Rail module raise/lower, high/low & binary 0-10VDC input.
24VAC/DC powered.

Part Number	Trade Price
HC-RM2T	£24.50

THREE RELAY MODULE

AXIO

3 stage relay Din Rail (0-10VDC input) adjustable time delay.
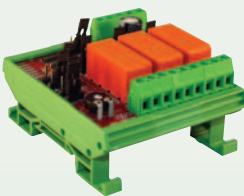24VAC/DC powered.

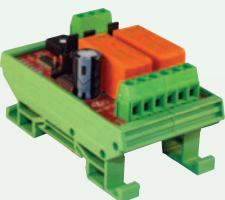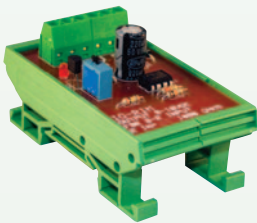| Part Number	Trade Price
HC-RM3M	£35.00

FOUR RELAY MODULE

AXIO

4 stage relay Din Rail module (0-10VDC input).
24VAC/DC powered.

Part Number	Trade Price
HC-RM4M	£39.00

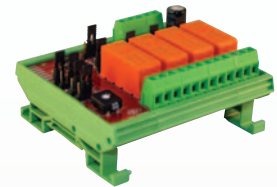**FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES**
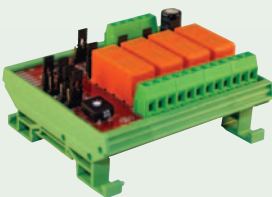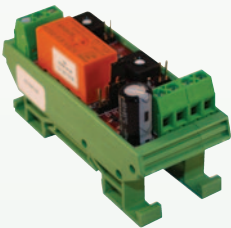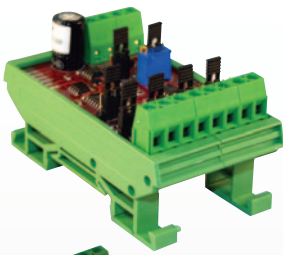
FOUR RELAY MODULE C/W ADJUSTMENT

AXIO

4 stage relay module with adjustable switchpoints. On and off switch points for each relay.
(0-10VDC input) 24VAC/DC powered.

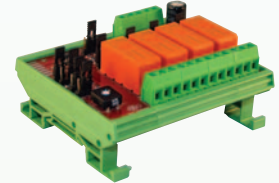| Part Number	Trade Price
HC-RM4AB	£91.00

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES

SIX RELAY MODULE

AXIO

6 stage relay Din Rail module (0-10VDC input).
24VAC/DC powered.

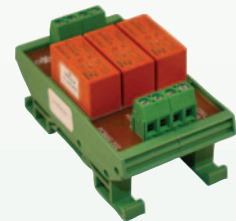| Part Number	Trade Price
HC-RM6M	£64.00

FAN SPEED RELAY MODULE

AXIO

Fan speed relay module either in 24V or 230V versions.
Designed for fan switching applications.

Part Number	Description	Trade Price
HC-FRM3-24	FAN SPEED CONTROLLER	£32.00
HC-FRM3-230	FAN SPEED CONTROLLER	£36.00

IP65 ENCLOSURE AVAILABLE ON REQUEST

The AX-CN-FXO provides automatic change over for two fans based on time or failure and includes a two line display to show current state and display the set up menu. The timed change-over can be set between 1 hour and 31 days or disabled. Failure changeover can be triggered by high or low fan supply current, loss of airflow or loss of air pressure or disabled. A Local on input is also provided with a timed run and or air quality run on. The unit also includes air filter monitoring and configurable alarm relays.

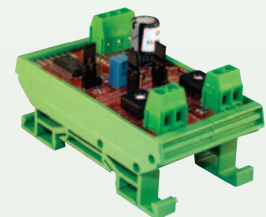| Part Number	Trade Price
AX-CN-FXO	£260.00

DUAL ANALOGUE OUTPUT MODULE

AXIO

Dual analogue output module, converts a 0-10VDC or 2-10VDC input signal to 2 x 0-10VDC or 2 x 2-10VDC output signals.
24VAC/DC powered.

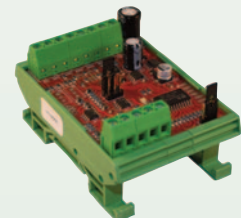| Part Number	Trade Price
HC-DAOM	£40.00

AVERAGING MODULE

AXIO

Provides the average minimum, maximum and middle values of the selected 0-10V inputs, up to 5 inputs can be selected.
24VAC/DC powered.

| Part Number	Description	Trade Price
HC-AMMM	4 CH MIN, MAX AND AVERAGING MODULE	£45.00

ANALOGUE INPUT MULTIPLEXER

AXIO

Multiplexes four 0-10V analogue signals on to two analogue lines. this doubles the number of analogue inputs available.
24VAC/DC powered.

Part Number	Description	Trade Price
HC-VMUX	4 CH ANALOGUE INPUT MULTIPLEXER	£36.00

ANALOGUE DE-MULTIPLEXER

AXIO
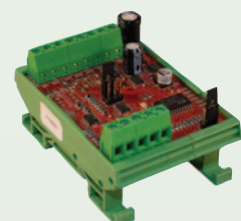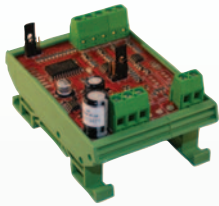
Demultiplexis one switched 0-10V analogue input to four analogue outputs. This requires two analogue lines one for the switched 0-10V and one for the output selection, this doubles the number of analogue outputs available.

24VAC/DC powered.

Part Number	Description	Trade Price
HC-VDEMUX	4 CH ANALOGUE DEMULTIPLEXER	£36.00

TRANSFORMERS

AXIO

HC-TXD range – 230V – 24VAC din rail transformers. Various VA ratings.

Listed below transformers fitted with fuses on both the input and the output.

SEM62 range – 230V – 24VAC power supply din rail module. LED indication on secondary power supply. Integral self re-setting primary fuse, secondary power supply.

Part Number	Trade Price
HC-TXD 6VA	£35.00
HC-TXD 30ET (30VA)	£57.00
ACT 230241000 -100VA – BACKPLATE MTD ONLY.	£132.00

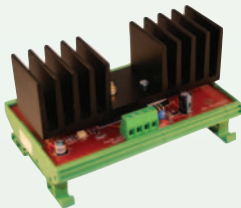| Part Number	Trade Price
HC-SEM62.1	£41.00
HC-SEM62.2	£53.00

RAISE LOWER CONTROL MODULE

AXIO

Raise lower control module.

Converts a 0-10V input signal into a raise lower relay output pair.

24VAC/DC powered.

Part Number	Trade Price
HC-ARL	£42.00

PHASE CUT MODULE

AXIO

120VA phase-cut output Din Rail module.

To convert a 0-10V input signal to drive a 0-20V phase cut output.

Part Number	Trade Price
HC-PCM1-120I	£133.00

PHASE CUT MODULE

AXIO
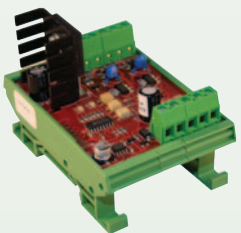
Dual 30VA phase-cut output Din Rail module.

To convert 1 or 2 0-10VDC contact input signals to 1 or 2, 0-20V phasecut outputs.

Part Number	Trade Price
HC-PCM2-301	£53.00
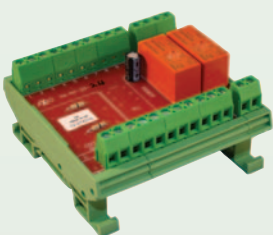
ALARM INTEGRATOR

AXIO

Alarm integration modules 240V or 24VAC/DC available in both 10 channel and 20 channel versions.

Units provide a relay output in the event of an alarm signal appearing on any one or more inputs.

Part Number	Trade Price
HC-MA10-24	£31.00
HC-MA10-230	£31.00
HC-MA20-24	£47.00
HC-MA20-230	£48.00

ANALOGUE BUFFER & CONVERSION MODULE

AXIO

Analogue buffer conversion module, designed to convert and buffer an analogue input signal to a voltage output.

24VAC/DC powered.

Part Number	Trade Price
HC-ABC	£35.00

RAISE/LOWER TO ANALOGUE MODULE

AXIO

Isolated raise / lower to analogue convertor.

Converts a raise-lower input signal into a 0-10V analogue output.

Part Number	Trade Price
HC-RLA-AC	£35.00

COMMISSIONING TOOL

AXIO

Provides 0-10VDC and 4-20mA outputs in a switch selectable range.
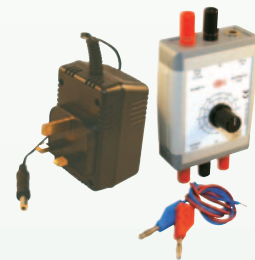
The unit is powered by a 24V plug top PSU (included with the unit).

The unit can be used to test actuators on bench top prior to installation.

Part Number	Trade Price
HC-REF-V1	£114.00

TRANSFORMERS

AXIO

24VDC 1AMP power supply Din Rail module. 230V input - 24V DC out. LED power on indicator.

24VAC to 24VDC 1AMP convertor. A low cost power supply providing a regulated 24V DC output from a 24V input - Common OV.

24VAC to 24VDC 1AMP convertor. A low cost power supply providing a regulated 24VDC output from a 24V input - Floating OV.

Part Number	Description	Trade Price
HC-PS-DR-30-24	POWER SUPPLY UNIT 24V 30 WATT DIN MOUNT	£40.00

Part Number	Description	Trade Price
HC-PS-DR-60-24	POWER SUPPLY UNIT 24V 60 WATT DIN MOUNT	£51.00

Part Number	Description	Trade Price
HC-PS-24-24-1-C (COMMON OV)	24V AC/DC 1A POWER SUPPLY COMMON EARTH	£36.00

Part Number	Description	Trade Price
HC-PS-24-24-1-F	24V AC/DC 1A POWER SUPPLY - FLOAT	£36.00

CONVERSION MODULE

AXIO

Is designed to convert a 0-10VDC input signal to a 4-20mA current output. Unit is powered by a 24VAC/DC and can power a current loop signal.

Part Number	Trade Price
HC-VI	£26.00
HC-VI-IP65	£53.00

CURRENT SPLITTER MODULE

AXIO

Current splitter module designed to split an analogue input to 2 x 4-20mA current outputs. Powered by 24VAC/DC and can power a current loop signal.

Part Number	Description	Trade Price
HC-CSM-2	ANALOGUE TO 2 X 4-20MA	£51.00
HC-CSM-3	ANALOGUE TO 3 X 4-20MA	£63.00
HC-CSM-4	ANALOGUE TO 4 X 4-20MA	£74.00

WINDOW ACTUATOR CONTROLLER

AXIO

3 channel window controller providing timed forward/reverse outputs to open/close 2 wire DC window actuators.

Part Number	Description	Trade Price
HC-WAC	3 CHANNEL WINDOW ACTUATOR CONTROLLER WITH LCD DISPLAY	£96.00

VOLTAGE RESCALING MODULE

AXIO

Voltage splitter and reference module takes 1 x 0-10VDC and splits and buffers the signal to give 3 x 0-10V outputs.

The module also includes an adjustable reference output, factory set to 10V.

Part Number	Trade Price
HC-VSR	£42.00

SINGLE PHASE FAN SPEED CONTROLLER

AXIO

New compact single phase trial fan speed controller. 8AMP rated 230V powered for regulation of single phase AC motors.

Part Number	Trade Price
HC-FC-8	£92.00

NEW PRODUCT

ETHERNET SWITCHES

H&C

FEATURES

- 5, 8 & 16 port RJ45 fast Ethernet switches
- Unmanaged (plug & play)
- Supply voltage 18-30VAC/12-48VDC
- IP30 aluminium DIN rail mount housing
- Dual LED power supply indication & full LED link/ACT indication
- Operating temperature -10°C to +60°C

Part Number	No of Ports	Trade Price
02-OC-7N1005	5 PORT	£88.00
02-OC-7N1008	8 PORT	£114.50
02-OC-7N1016	16 PORT	£440.00

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES
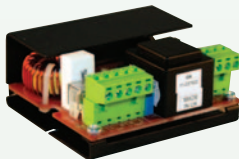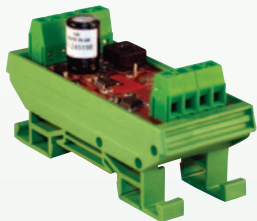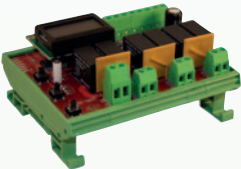
RELAYS & BASES

RM1 & RM2 Series - Relay c/w Base

Part Number	Voltage	No of Poles	Trade Price
HC-RM1-12DS-S*	12VDC	1	£5.50
HC-RM1-24A	24V	1	£5.25
HC-RM1-24D	24VDC	1	£5.25
HC-RM1-230A	230V	1	£5.50
HC-RM2-12DC	12VDC	2	£5.50
HC-RM2-24A	24V	2	£5.00
HC-RM2-24D	24VDC	2	£5.00
HC-RM2-230A	230V	2	£6.00

*SAME AS SRM HIGH IMPEDANCE VERSION

Part Number	Description	Trade Price
HF-EL	GREEN LED, 6-24VAC/DC	£1.50
HF-EN	GREEN LED, 110V-240VAC	£1.00
14FF-JUMPER BAR	8 WAY CONNECTOR BAR	£2.50

R2N, R3N & R4N Series - Relays

LED mechanical indicator and lockable front test button as standard.

Part Number	Voltage	No of Poles	Trade Price
R2N 12VDC	12VDC	2	£6.00
R2N-24VAC	24V	2	£5.00
R2N-24VDC	24VDC	2	£5.00
R2N-230VAC	230V	2	£5.00
R3N-12VDC	12VDC	3	£5.50
R3N-24VAC	24V	3	£5.50
R3N-24VDC	24VDC	3	£5.50
R3N-230VAC	230V	3	£5.50
R4N-12VDC	12VDC	4	£5.50
R4N-24VAC	24V	4	£5.00
R4N-24VDC	24VDC	4	£5.00
R4N-230VAC	230V	4	£5.00

GZT & GZM Series - Bases

Part Number	To Suit Relay Type	Terminal Connection	Trade Price
18FF-2Z-C4	R2N	TOP & BOTTOM	£2.75
18FF-3Z-C4	R3N	TOP & BOTTOM	£2.75
18FF-4Z-C4	R4N	TOP & BOTTOM	£2.75
18FF-3Z-C5	R3N	TOP	£3.00
18FF-4Z-C5	R4N	TOP	£3.00

R2N, R3N & R4N Series - Accessories

Part Number	Description	Trade Price
18FF-JUMPER BAR	5 WAY CONNECTOR BAR	£2.75

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES
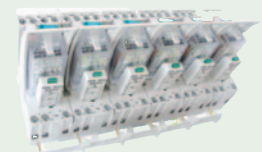
L.E.D. PANEL INDICATOR LAMPS AD22 / AD16

H&C

AD22 - 22mm versions
AD16 - 16mm versions
FEATURES

- Expected life span 30,000hrs
- Intensity 60cd/m2
- Rated current 20mA
- Insulating resistance 2m
- Voltage tolerance +/- 20%

- Operating temperature - 25°C +55°C
- Vibration frequency 2.8Hz acc 0.7g
- IP rating IP65
- CE marked
- LED type illumination

Part Number	Voltage (V)	Trade Price
AD22-R (RED)	24 or 240	£1.85
AD22-A (AMBER)	24 or 240	£1.85
AD22-G (GREEN)	24 or 240	£1.85
AD22-B (BLUE)	24 or 240	£1.85
AD22-W (WHITE)	24 or 240	£1.85
AD16-R (RED)	24 or 240	£3.10
AD16-A (AMBER)	24 or 240	£3.10
AD16-G (GREEN)	24 or 240	£3.10
AD16-B (BLUE)	24 or 240	£3.10
AD16-W (WHITE)	24 or 240	£3.10

Lamp Test version

Part Number	Voltage (V)	Trade Price
AD22-R-LT (RED)	24 or 240	£2.55
AD22-A-LT A(MBER)	24 or 240	£2.55
AD22-G-LT (GREEN)	24 or 240	£2.55
AD22-B-LT (BLUE)	24 or 240	£2.55
AD22-W-LT (WHITE)	24 or 240	£2.55

**NOTE: LAMP TEST WIRING T = TESTING TERMINAL, S = SIGNAL TERMINAL,
C = CURRENT TERMINAL (POWER IN-PUT LINE)**

AD22 FIXING TOOL

H&C

A fixing tool to help with the mounting of the AD22 series panel lamps.
The Tools engages with the locking collar to secure the AD22 panel lamps to a control panel.
A must for any panel builders and service engineers.

Part Number	Trade Price
AD22 FIXING TOOL	£6.50

2/3 POSITION SELECTOR SWITCHES AND PUSH BUTTONS

H&C

A range of 22.5mm 2&3 position Selector Switches.

Part Number	Description	Trade Price
PB22SS2B-1A	2 POS SELECTOR SWITCH C/W 1 N/O CONTACT	£7.00
PB22SS4B-1AA	3 POS SELECTOR SWITCH C/W 2 N/O CONTACT	£11.00
PB22BFB-1A	BLACK PUSHBUTTON C/W 1X N/O CONTACT	£5.50
PB22BFG-1A	GREEN PUSHBUTTON C/W 1X N/O CONTACT	£5.50
PB22BFR-1B	RED PUSHBUTTON C/W 1X N/C CONTACT	£5.50
Accesssories		
PB22-A	NORMALLY OPEN CONTACT BLOCK	£3.85
PB22-B	NORMALLY CLOSED CONTACT BLOCK	£3.85

EMERGENCY ISOLATOR - IP65 RATED

Plastic enclosed Isolators LB Series 4 Pole up to 80 AMPS.

Part Number	Size (AMPS)	Trade Price
LB204P	20	£35.00
LB324P	32	£43.00
LB404P	40	£56.00
LB634P	63	£70.00
LB804P	80	£90.00

FOR QUANTITY RATES PLEASE CONTACT OFFICE FOR PRICES

MERLIN WLD SYSTEM

Rope water leak detection system - available in 1, 2 or 4 zone versions.

The Merlin WLD System wall mounted unit is the new S&S Northern Ltd permanent water leak detection system aimed towards commercial properties and residential apartment blocks. The Merlin WLD can be used as a standalone or part of a larger multi-zone detection system and come with a clear LED status display.

The system should be connected with a combination of WLD - Water Sensing cable or WLD probes surrounding the area to identify a leak is present and automatically close water solenoid valves, it can also be linked to interface with a local sounder/alarm beacon, BMS controller or text message alert. Power supply 110-240VAC 24VAC/DC available.

Part Number	Description	Trade Price
WLD CONTROLLER SINGLE ZONE	SINGLE ZONE WATER LEAK DETECTION UNIT	£355.00
WLD Z2 CONTROLLER TWO ZONE	TWO ZONE WATER LEAK DETECTION UNIT	£384.00
WLD Z4 CONTROLLER FOUR ZONE	FOUR ZONE WATER LEAK DETECTION UNIT	£576.00

| Ancillary Items		
Part Number	Description	Trade Price
WLD CABLE - 2m	METRE 2 CORE WATER LEAK CABLE (INCLUDING 2M LEAD WIRE)	£38.00
WLD CABLE - 5m	5 METRE 2 CORE WATER LEAK CABLE (INCLUDING 2M LEAD WIRE)	£67.00
WLD CABLE - 10m	10 METRE 2 CORE WATER LEAK CABLE (INCLUDING 2M LEAD WIRE)	£115.00
WLD CABLE - 15m	15 METRE 2 CORE WATER LEAK CABLE (INCLUDING 2M LEAD WIRE)	£173.00
WLD CABLE - 25m	25 METRE 2 CORE WATER LEAK CABLE (INCLUDING 2M LEAD WIRE)	£278.00
WLD CABLE -4 CORE - 5m	5 METRE 4 CORE WATER LEAK CABLE (FAULT DETECTION INCLUDED)	£144.00
WLD CABLE -4 CORE - 10m	10 METRE 4 CORE WATER LEAK CABLE (FAULT DETECTION INCLUDED)	£259.00
WLD CABLE -4 CORE - 20m	20 METRE 4 CORE WATER LEAK CABLE (FAULT DETECTION INCLUDED)	£509.00
WLD CABLE -4 CORE - 50m	50 METRE 4 CORE WATER LEAK CABLE (FAULT DETECTION INCLUDED)	£1,298.00
WLD CABLE -4 CORE - 100m	100 METRE 4 CORE WATER LEAK CABLE (FAULT DETECTION INCLUDED)	£2,596.00
WLD CABLE - LEAD WIRE	LEAD WIRE FOR CONNECTION WITH WATER LEAK CABLE & MERLIN WLD	£38.00
WLD - PUCK/PROBE	WATER LEAK PUCK/PROBE FOR CONNECTION TO MERLIN WLD	£144.00

WRAS WATER SOLENOIDS - REFER TO PAGE 26

NEW PRODUCT

WATER LEAK DETECTION MODULES

AXIO

The AX-WLD2 is a range of single and dual zone water detection modules designed for Din Rail mounting. The water leak module can have a total of 200m of cable connected to each input (cable and header). A relay output provides an alarm signal to a remote alarm annunciator or a BMS system. The sensitivity is adjustable to ensure false returns are not given. An optional alarm buzzer can be incorporated.

FEATURES

- A total of 200m cable on each zone
- Adjustable sensitivity on each zone
- Can take inputs from a mixture of cable sensors, rain sensors or point sensors
- Audible alarm option
- LED indication of each channel alarm
- Normally open and closed contacts
- Relay output to BMS or Alarm annunciator.
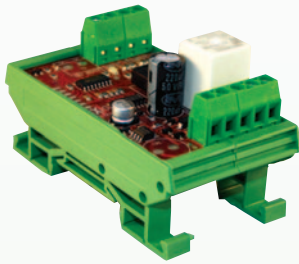
Part Number	Description	Trade Price
AX-WLD2-24	24VAC/DC ALARM ONE OR TWO ZONE DETECTION MODULE	£42.00
AX-WLD2-230	230V ALARM ONE OR TWO ZONE DETECTION MODULE	£52.00
AX-WLD2-24-A	24VAC/DC ALARM ONE OR TWO ZONE DETECTION MODULE & ALARM BUZZER	£49.00
AX-WLD2-230-A	230V ALARM ONE OR TWO ZONE DETECTION MODULE & ALARM BUZZER	£62.00
AX-WCS-5	CABLE SENSOR FOR WLD, 5M CABLE 3M HEADER	£47.00
AX-WCS-10	CABLE SENSOR FOR WLD, 10M CABLE 3M HEADER	£58.00
AX-WCS-15	CABLE SENSOR FOR WLD, 15M CABLE 3M HEADER	£75.00
AX-WCS-20	CABLE SENSOR FOR WLD, 20M CABLE 3M HEADER	£93.00
AX-WCS-xx	CUSTOMER SPECIFIED CABLE AND HEADER LENGTH	POA
AX-WPS	POINT SENSOR FOR WLD	£21.00
AX-WRS1	RAIN SENSOR WITH 1M CABLE FOR WLD	£60.00
AX-WLD-DTA	SINGLE ZONE DRIP TRAY VERSION	£87.00
AX-WLD	ENCLOSURE FOR AX-WLD2	£28.00

WATER LEAK DETECTION MODULE FOUR ZONE

AXIO

The AX-WLDF Four zone water leak detection module with open or short circuit cable sensor detection. Must be used with "F" type sensors only (see below)

- LED indication of each alarm zone

Part Number	Description	Trade Price
AX-WLDF-24	FOUR ZONE MODULE 24V	£142.00
AX-WLDF-230	FOUR ZONE MODULE 230V	£142.00
AX-WLDF-C2	CABLE SENSOR FOR WLDF 2M CABLE 1M HEADER	£35.00
AX-WLDF-C5	CABLE SENSOR FOR WLDF 5M CABLE 3M HEADER	£51.00
AX-WLDF-C10	CABLE SENSOR FOR WLDF 10M CABLE 3M HEADER	£69.00
AX-WLDF-C15	CABLE SENSOR FOR WLDF 15M CABLE 3M HEADER	£86.00
AX-WLDF-C20	CABLE SENSOR FOR WLDF 20M CABLE 3M HEADER	£103.00
AX-WLDF-CXX	CABLE SENSOR FOR WLDF – SPECIFY – UP TO 200M	POA
AX-WLDF-P2	POINT SENSOR PREMIUM FOR WLDF & 2M CABLE	£27.00
AX-WLDF-P5	POINT SENSOR PREMIUM FOR WLDF & 5M CABLE	£33.00

DRIP TRAY MONITOR 24VAC

The AX-WLD-DT is a water level alarm module intended for monitoring the condensate levels in drip trays & on air conditioning units. The relay output can be used to switch a compressor directly or to provide an alarm signal to a remote alarm or a BMS system.

Part Number	Trade Price
AX-WLD-DT	£46.00

DEWPOINT CONDENSATION SENSORS

The HC-CDM is a low-cost self contained s ensor for detecting the on-set of condensation. 24V/DC powered current output or volt free change over outputs.

Part Number	Trade Price
HC-CDM	£64.00

WIND SPEED SENSOR

The AX-WSD-V wind speed and direction sensor is designed to give an analogue output of the wind speed and direction values. This is suitable for applications such as automatic window closure and outside air damper control. The units are manufactured from anodized aluminium alloy, UPVC and stainless steel with moulded polypropylene cups.

The units are lightweight (less than 250 grams) yet very robust.

FEATURES

• Wind Speed and Direction analogue outputs

• Damped output for a stable control signal

Part Number	Trade Price
AX-WSD-V	£620.00

PLEASE NOTE: THERE IS A HIGH SPECIFICATION VAISALA WIND SPEED SENSOR ON PAGE 55

SINGLE POINT AIR VELOCITY AND TEMPERATURE TRANSMITTER

A Single Point Air Velocity and Temperature Transmitter for use in ductwork, with either a 0-10VDC or 4-20mA output for the airflow and 0-10VDC output range for the temperature.

Includes duct flange.

FEATURES

• Includes adjustable duct flange

• 5% Accuracy

• Two ranges available 8 & 16m/s (jumper selectable)

Part Number	Description	Trade Price
AX-AV-SP-ESF-35	SINGLE POINT AIR VELOCITY AND TEMPERATURE TRANSMITTER	£180.00

AIR VELOCITY PROBES

A range of small Air Velocity Probes for use in ductwork. The probes can be connected to the relevant AX-AV air velocity transmitter to output velocity pressure to the BMS which can then accurately work out air velocity in M/SEC.

FEATURES

• Includes duct flange plates for flat ducts

• Gasket seals the probe to the duct

• Push-on connectors to suit 8mm tube

Part Number	Description	Trade Price
AX-AV-EP-200	TWIN PROBE 200MM	£25.00
AX-AV-EP-250	TWIN PROBE 250MM	£29.00
AX-AV-EP-300	TWIN PROBE 300MM	£55.00
AX-AV-EP-350	TWIN PROBE 350MM	£63.00

AIR VELOCITY PROBES - MULTIPOINT

AXIO

Stainless Steel Multipoint Air Velocity Probes for use in ductwork.

The two probes can be connected to the relevant air pressure transmitter to output velocity pressure to the BMS which can then accurately work out air velocity in M/SEC.

FEATURES

• Includes duct flange plates for flat ducts

• Each set includes a pair of stainless steel probes

• Double gasket seals the probe to the duct

• Push-on connectors to suit 8mm tube

Part Number	Description	Trade Price
AX-AV-MPP-60	2 x MULTIPOINT PROBES 600MM	£119.00
AX-AV-MPP-70	2 x MULTIPOINT PROBES 700MM	£126.00
AX-AV-MPP-80	2 x MULTIPOINT PROBES 800MM	£139.00
AX-AV-MPP-125	2 x MULTIPOINT PROBES 1250MM	£164.00
AX-AV-MPP-150	2 x MULTIPOINT PROBES 1500MM	£185.00
AX-AV-MPP-175	2 x MULTIPOINT PROBES 1750MM	£228.00
AX-AV-MPP-200	2 x MULTIPOINT PROBES 2000MM	£238.00
AX-AV-MPP-230	2 x MULTIPOINT PROBES 2300MM	£270.00

NEW PRODUCT

OCCUPANCY/PIR DETECTORS

AXIO

A range of low cost occupancy/PIR sensors for ceiling and wall mounted versions, volt free output as standard (other versions available on request) both 230V and 24V versions.

FEATURES

• Low cost solution

• Ceiling and wall mounted

• Adjustable timer

• Optional switch live options

• 360C range (ceiling) curtain detection on wall mounted.

Part Number	Description	Trade Price
AX-OC-360C-24VF	CEILING MOUNTED OCCUPANCY SENSOR 24V VOLT FREE	£72.00
AX-OC-360C-230VF	CEILING MOUNTED OCCUPANCY SENSOR 230V VOLT FREE	£72.00
AX-OC-CW-24VF	WALL MOUNTED PIR 24V VOLT FREE	£72.00
AX-OC-CW-230VF	WALL MOUNTED PIR 230V VOLT FREE	£72.00

NEW PRODUCT

MICROWAVE OCCUPANCY DETECTORS

AXIO

A range of occupancy sensors for use in energy saving systems where the lighting loads are automatically controlled based on occupancy.

FEATURES

• 20m range

• Built in light sensor.

Part Number	Description	Trade Price
AX-OC-WMW-24VF	WALL MOUNTED MICROWAVE SENSOR 24V VOLT FREE	£107.00
AX-OC-WMW-230VF	WALL MOUNTED MICROWAVE SENSOR 230V VOLT FREE	£110.00

LIGHT LEVEL TRANSMITTER

AXIO

FEATURES

• 24V

• IP65

• 0-5/0-10V or 4-20mA

• Field configurable output ranges using jumpers, easing installation with plug in connections.

Part Number	Trade Price
AX-LLT	£70.00

LIGHT LEVEL TRANSMITTER

REGIN
THE CHALLENGER

Indoor or outdoor light level transmitter with a passive PT1000 temperature sensor as well as DIP switches for scaling the output signal.

FEATURES

• IP65

• Analogue 0-10VDC output

• Wall mount

Part Number	Trade Price
LTWT10N/PT100	£111.00

PADDLE AIR FLOW SWITCH

REGIN
THE CHALLENGER

Air flow paddle switch, IP65

Part Number	Trade Price
AFS1	£76.00

PADDLE WATER FLOW SWITCH

REGIN
THE CHALLENGER

Suitable for the monitoring of liquids in pipes, monitoring oil devices, cooling agents, lubrication circuits and as shortage water switch for general industrial, anti-fire and sprinkler systems, steam boilers and heat pumps.

FEATURES

• IP65

• Fluid Temp -40°C to +80°C

Part Number	Trade Price
FLS304X	£48.00

WATER LEVEL SWITCH

REGIN
THE CHALLENGER

Liquid level switch horizontal mounting. 1" BSP. Male connection - 15AMP rated IP65.

Part Number	Trade Price
SQ01	£90.00

FLOAT SWITCHES

H&C

Sealed level float switches for water & oil.

Part Number	Levels	Cable Length (m)	Media	WRAS Approved	Trade Price
LL13	1 (HIGH OR LOW)	3	WATER	NO	£27.00
LL15	1 (HIGH OR LOW)	5	WATER	NO	£33.00
AX-LS-FL-2LH	2 (HIGH & LOW)	5	WATER	NO	£180.00
A96E	1 (HIGH OR LOW)	5	OIL	NO	£205.00
MINIMATIC	1 (HIGH OR LOW)	5	WATER	YES	£135.00

WRAS
APPROVED PRODUCT

ULTRASONIC LEVEL SENSOR

AXIO
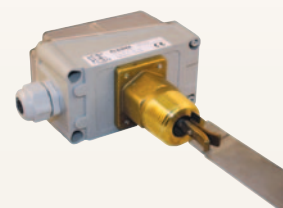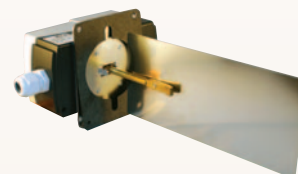
Ultrasonic level sensor designed for level measurement in tanks or sumps.

FEATURES

- Non-intrusive design
- Easy to set-up
- Mounted on the top of a tank
- Built in temperature compensation

Part Number	Output	Measuring Range	Trade Price
AX-UL-SON48	4-20MA	0.4 to 8.0m	£1,100.00

TIME SWITCHES

hugomüller

Microcomputer-Based Time switches.

Part Number	Description	Trade Price
SC18/10	1 CHANNEL, DIN RAIL MOUNTED	£108.00
SC28/21	2 CHANNEL, DIN RAIL MOUNTED	£139.00
SC44/11	1 CHANNEL, PANEL/WALL MOUNTED	£149.00
SC44/21	2 CHANNEL, PANEL/WALL MOUNTED	£149.00

PLANT EXTENSION TIMERS

AXIO

Electronic plant extension timer multi ranges from 10 minutes to 9 hours, flush or surface mounting fits a standard back box. 24VAC OR 230VAC powered simple operation.

New PET/L version complete with display and on/off switch.

Part Number	Trade Price
HC-PET	£61.00
HC-PET/L	£67.00

MULTIMODE ALARM POINT

H&C

A versatile audible/visual alarm point to BS5733, accepting either 24VAC/DC, 230V or a 0-10V input.

Part Number	Trade Price
CAD-AP	£85.00

TIMER

Multifunction timer. Din Rail 8 time ranges from 1 sec to 10 days - wide range from 12V-240VAC / DC.

Part Number	Trade Price
STM10	£40.00

SMOKE DETECTORS

H&C

The GS-SD2000 Duct Smoke Detector, has a Photoelectric sensor for high temperature applications, the sensor heads are interchangeable.

The sensor samples air currents passing through a duct using a range of sampling tubes and has 2 alarm relay outputs to switch on fans, blowers etc and send an alarm to the BMS or alarm panel. Volt Free supply voltage.

Part Number	Description	Trade Price
GS-SD2000-P	PHOTOELECTRIC SMOKE DETECTOR	£259.00
GS-SD-FT	FAST TUBE TYPE SAMPLING TUBE (FOR DUCTS UP TO 8FT WIDE)	£32.00

SMOKE DETECTORS

The SDD range of duct mounted smoke detectors for use in ventilating systems.They are constricted to meet the high demands of a modern fire installation.

Optical version available c/w duct probe as standard. IP54 protection, 24VAC supply voltage.

Tube can be shortened for smaller ducts. A mounting plate type TDS,is available on request,when Detector is mounted at a distance from the duct (IE. When insulation material is used).

Part Number	Description	Trade Price
SDD-OE65-RAC	OPTICAL SENSOR WITH RELAY OUTPUT	£240.00

ANNUNCIATORS

The HC-AA is a range of 1, 2, 3 and 4 channel alarm annunciators containing a built in sounder, mute switch and alarm relay.

The units provide local audible and visual alarm indications and an alarm relay for remote indication. To reduce unwanted alarms the unit has an adjustable input time delay. Once an input has alarmed the condition is latched until the mute switch is pressed to accept the current alarms.

The units are mounted on a single gang front plate for easy installation.

FEATURES

• Audible alarm

• Alarm output relay

• 24VAC/DC powered

• Red / Green LED indication for each input

• Adjustable input delay

• Sounder mute button

Part Number	Description	Trade Price
HC-AA-1	1 STAGE ALARM ANNUNCIATOR	£60.00
HC-AA-2	2 STAGE ALARM ANNUNCIATOR	£64.00
HC-AA-3	3 STAGE ALARM ANNUNCIATOR	£72.00
HC-AA-4	4 STAGE ALARM ANNUNCIATOR	£75.00

FIREMAN SWITCH

Fireman switch key operated.

Normal - Off - Extract only.

Part Number	Trade Price
WR9103/SW3	£60.50
SPARE KEY (FOR ABOVE)	£15.00

BESPOKE SENSORS, SWITCHES & ACCESSORIES

H&C

- Room sensors and Setpoints to match the style and finish of existing Electrical switchplates (Wandsworth, Forbes and Lomax, Focus SB, Hamilton, MK Electrical etc)
- Stainless steel (Brushed, Polished)
- All plated finishes, Chrome, Antique Bronze, Brushed Nickel, polished Brass etc
- Powder coated finish to RAL colours
- Surface mount Detector housings
- Thimble housings
- Button housings
- Black bulb housings

- All Thermistor and BMS sensor types
- Temperature / Humidity sensors
- Potentiometers
- 0 - 10VDC setpoints
- Fan Speed selector switches
- Combined Air conditioning and Lighting switchplates
- Drawings for approval
- Engraving to Customer requirements
- Quick delivery

- Single gang
- Double gang
- Special size plates
- Surface mount
- Flush mount
- Bespoke back boxes
- White plastic
- Brushed Stainless steel
- Polished Stainless steel
- Powder coated finish to RAL colours
- Grid switches

- Rocker Switches
- Multi position Rotary switches
- Key switches
- Momentary Keyswitches
- Pushbuttons
- L.E.D.
- Indicator Lamps
- Potentiometers
- Drawings for approval
- Engraving to Customer requirements
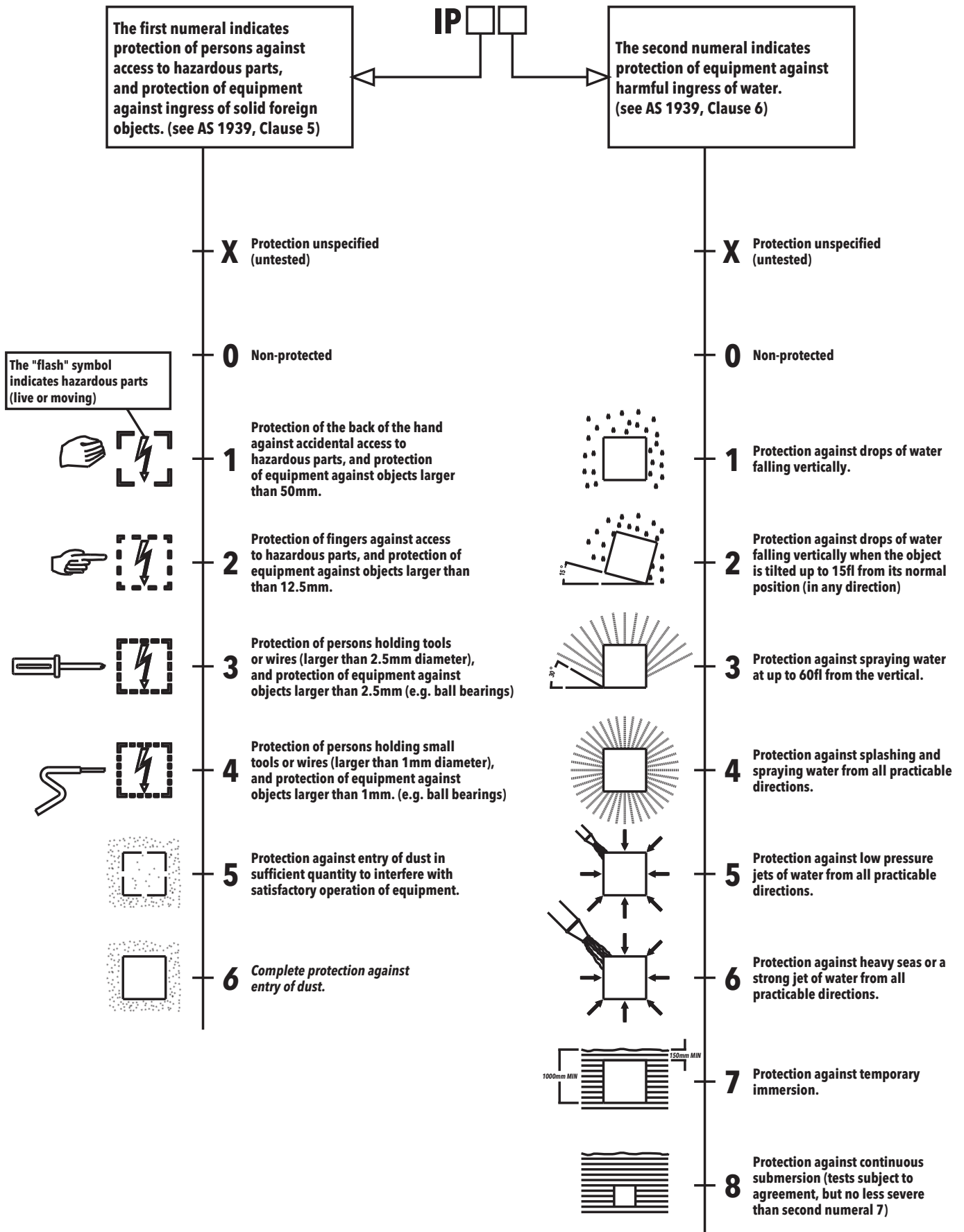- Quick delivery

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- Single gang Keyswitches
- Break glass Enclosures
- Key lockable
- Bespoke Enclosures
- Powder coated finish
- Brushed Stainless steel Fascias
- Surface mount
- Flush mount

- Bespoke back boxes
- Keyswitches
- Multi pole / multi position Rotary switches
- L.E.D.
- Drawings for approval
- Engraving to Customer requirements
- Quick delivery

CONTACT H&C FOR ENQUIRIES

Protection of persons and protection of equipment indicated by the IP code.

Protection provided by enclosures for electrical equipment is indicated by the IP codes two:
CHARACTERISTIC NUMERALS

IP ☐☐

The first numeral indicates protection of persons against access to hazardous parts, and protection of equipment against ingress of solid foreign objects. (see AS 1939, Clause 5)

The second numeral indicates protection of equipment against harmful ingress of water. (see AS 1939, Clause 6)

The "flash" symbol indicates hazardous parts (live or moving)

First numeral — protection of persons:

X Protection unspecified (untested)

0 Non-protected

1 Protection of the back of the hand against accidental access to hazardous parts, and protection of equipment against objects larger than 50mm.

2 Protection of fingers against access to hazardous parts, and protection of equipment against objects larger than 12.5mm.

3 Protection of persons holding tools or wires (larger than 2.5mm diameter), and protection of equipment against objects larger than 2.5mm (e.g. ball bearings)

4 Protection of persons holding small tools or wires (larger than 1mm diameter), and protection of equipment against objects larger than 1mm. (e.g. ball bearings)

5 Protection against entry of dust in sufficient quantity to interfere with satisfactory operation of equipment.

6 *Complete protection against entry of dust.*

Second numeral — protection against water:

X Protection unspecified (untested)

0 Non-protected

1 Protection against drops of water falling vertically.

2 Protection against drops of water falling vertically when the object is tilted up to 15fl from its normal position (in any direction)

3 Protection against spraying water at up to 60fl from the vertical.

4 Protection against splashing and spraying water from all practicable directions.

5 Protection against low pressure jets of water from all practicable directions.

6 Protection against heavy seas or a strong jet of water from all practicable directions.

7 Protection against temporary immersion.

8 Protection against continuous submersion (tests subject to agreement, but no less severe than second numeral 7)

These are just some of the projects that utilise products supplied by Heat & Combustion.

CHELSEA BARRACKS
Westminster, London

22 BISHOPSGATE
London

SWANSEA ARENA
Swansea

RUH PIERCE WARD ICU UNIT
Bath

BATTERSEA POWER STATION
Battersea, London

SHARD PLACE
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BBC STUDIOS
Central Square, Cardiff

GILEAD SCIENCES
Cork, Ireland

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Knightsbridge, London

60 LONDON WALL
London

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