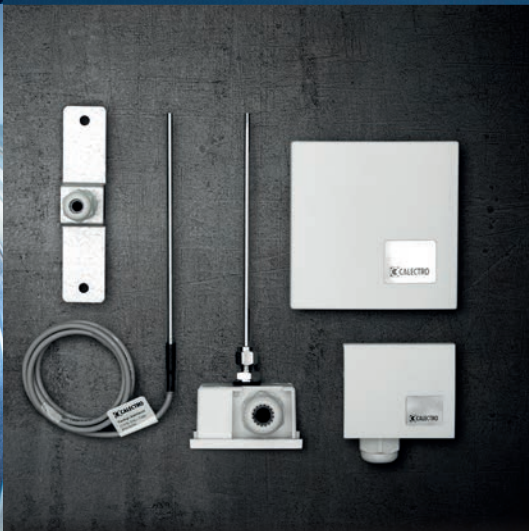# Product Range
HVAC Sensors, Regulators & Alarms
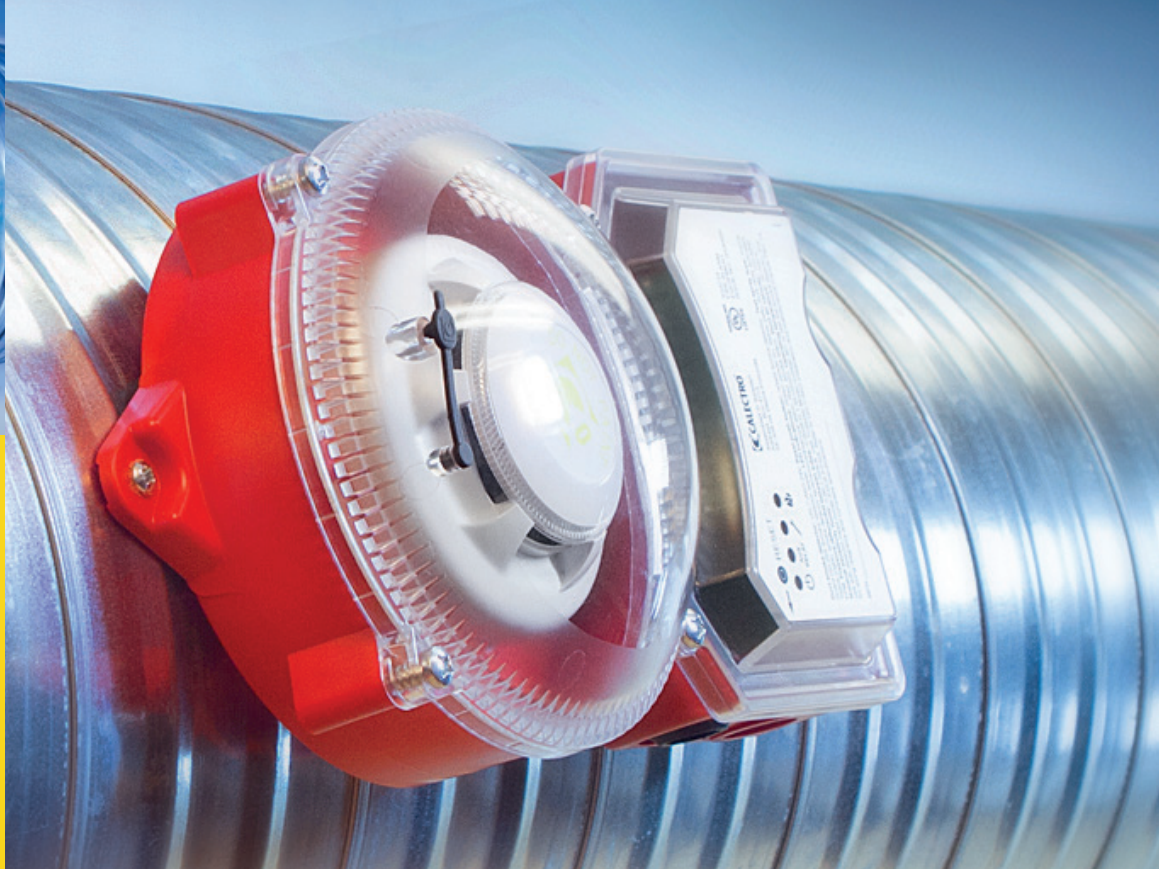
50

69-2019

years of Swedish Excellence

CALECTRO®

ESSER
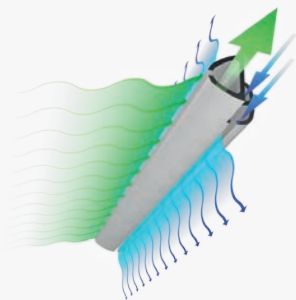by Honeywell

NK

SIEMENS   Panasonic

Calectro's unsurpassed expertise in the field of smoke detection has led to many leading technology manufacturers choosing us as their partner within the segment.

Industry leader in smoke detection technology

Calectro has been designing and selling smoke detectors for 50 years and has a proven track record. Not only is our Uniguard single-tube smoke detector recognised as one of the **world's best detectors**, the market coverage speaks for itself: **the majority** of all new installations of single-tube smoke detectors in Sweden are a Calectro product.

Fire smoke is a collection of stifling gases, soot particles and unseen particles in the air and is the dominant cause of injury from fires. For fire protection reasons, all installations must therefore aim at preventing the spread of fire and smoke and trigger the alarm early and correctly. The quicker smoke is detected at the early stages of a fire, the better chance people have of getting to safety and the easier it is for the emergency services to deal with the situation. Calectro offers a complete range of duct and room detectors. Our range of control units, for example, are backwards compatible with previous generations of smoke detectors.
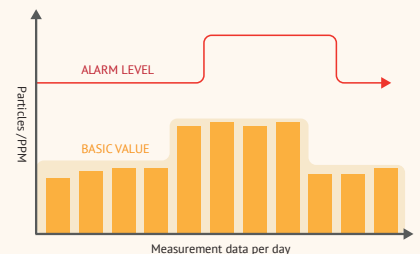
The benefits of Calectro's duct detectors

Advanced Venturi tube technology

Uniguard's patented Venturi tube is fitted with aerodynamic flanges that draw air from the depths of the entire ventilation duct and deliver it to the smoke detector. This facilitates the discovery of flue gases even in small doses and at low air speeds.

Flow-optimised housing

Uniguard's patented housing range (UG-3/4/5/7) has been specially designed to achieve a maximum concentration of flue gases around the smoke detector. Together with the venturi tube, the housings create an unsurpassed detection performance, even with low air volumes.

Automatic sensitivity adjustment

Uniguard's smoke detectors are fitted with automatic sensibility adjustment that measures the base value in the air flow every day and compensates for possible variations in the system over time. This minimises the risk of undesired alarms and unnecessary maintenance.

Product example Smoke detection

DUCT DETECTOR UG-3-A4O

Optical duct smoke detector with built-in service alarm and control unit. Uniguard Superflow is designed to detect smoke in ventilation ducts. It consists of a smoke detector, mounted in an adapter system where both tube and housing are specially designed for optimum airflow through the smoke detector and a duct air velocity range from as low as 0,2 m/sec. The detector is available with 24V or 230V voltage.

DUCT SMOKE DETECTOR UG-5-AFR

Optical duct smoke detector, with built-in service alarm and control unit, that has a compact design and the possibility to be mounted in 90, 180 and 270 degrees for a simpler installation. Uniguard is designed to detect smoke in ventilation ducts. It consists of a smoke detector, mounted in an adapter system where both tube and housing are specially designed for optimum airflow through the smoke detector. The detector is available with 24V or 230V voltage, with or without DiBt approvals.

DUCT SMOKE DETECTOR UG-7-A6O

UL-Listed optical duct smoke detector, with built-in service alarm and control unit, and a linking function for up to 100 units. Uniguard is designed to detect smoke in ventilation ducts. It consists of a smoke detector, mounted in an adapter system where both tube and housing are specially designed for optimum airflow through the smoke detector. The detector is easy to install with the one tube solution. UG-7-A6O comes in two models, 24V AC/DC and 110V AC.

SMOKE DETECTOR EVC-PY-DA

Optical smoke detector for ceiling mounting with built-in service alarm. The design of the detector makes it almost completely immune to high air speeds and dirt. The detector is equipped with a bayonet mount, making it easy to fit and remove. EVC-PY-DA has an intelligent monitoring circuit that constantly checks and adjusts the sensitivity for optimum functionality throughout its service life.
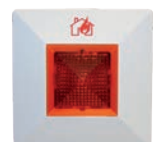
ACCESSORIES / SMOKE DETECTION

VR is a patented Venturi tube that comes in three lengths: 0.6 m, 1.5 m and 2.8 m.
The UG-MB bracket is used to mount Uniguard Superflow on ventilation ducts.
The protection cover is used as a condensation protection for Uniguard detectors installed outdoors or in cold attics.
LED-03 is a light box for indicating hidden smoke detectors.

Modbus

Modbus, available in several of Calectro's products, is a communications interface that enables central control and monitoring of all connected devices in the network

Control and exact measurements

The sensor segment is one of the cornerstones of Calectro's product range. In addition to our broad smoke detection and carbon measurement programmes, we offer several products in the areas of temperature control, the measurement of differential pressure in ventilation ducts and moisture measurement.

In the pressure sensor segment, Calectro today has a complete range to choose from, from simple pressure switch with a relay function to more complex solutions with regulation in combination with, for example, temperature sensors. The combination of temperature sensors is used primarily in residential ventilation to achieve as optimal control as possible. This is achieved by taking into account the outdoor temperature and thus compensating for the so-called chimney effect.
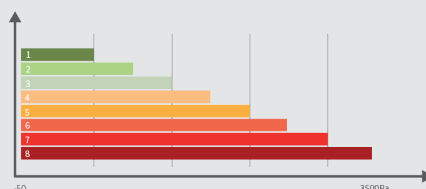
The advantages of Calectro's pressure regulators and pressure sensors

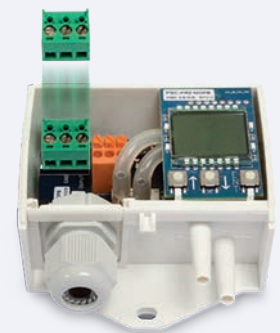

Possibility of an all-in-one solution

Pressure regulator CALAIR-PR is our all-in-one solution with both integrated pressure sensor and Modbus. The unit also has input for temperature measurement via external temperature sensors. The OLED display provides unrivalled readability, and all the settings are made through a simple menu system.

One unit, many pressure areas

Calectro's pressure sensors can measure differential pressure over a very wide pressure area. The measured values are temperature-compensated for high accuracy and linearity. CPS-A has 8 different measuring ranges between -50 to 3500 Pa, while CPS-D-A has freely adjustable ranges between -100 to 3500 Pa.

Detachable terminal block

The CPS pressure sensor has a detachable terminal block and cable port for easy installation in confined spaces. The enclosure cover is hinged at the top, has a snap fastener at the bottom and catches to keep the cover in raised position.

Product example Pressure

PRESSURE SENSOR CPS-A

CPS-A is designed for differential pressure measurement in ventilation systems. The sensor has an integrated differential pressure element that is temperature compensated for high accuracy and linearity. The sensor has 8 possible pressure range settings between -50 and 3500 Pa.

PRESSURE SENSOR CPS-D-A

CPS-D-A with backlit display is designed for differential pressure measurement in ventilation systems. The sensor has an integrated differential pressure element that is temperature compensated for high accuracy and linearity. On the display you can set the desired pressure range between -100 and 3500 Pa, output signal and signal attenuation. Also available as a high pressure range model with a span from -100 to 9500 Pa.

PRESSURE SENSOR CPS-D-MB

CPS-D-MB with Modbus and backlit display is designed for differential pressure measurement in ventilation systems. The sensor has an integrated differential pressure element that is temperature compensated for high accuracy and linearity. The measured value is shown on the display and can also be read via Modbus RTU.

PRESSURE SWITCH CPS-D-SW

CPS-D-SW with backlit display is designed for monitoring differential pressure in ventilation systems. The pressure switch has an integrated differential pressure element that is temperature compensated for high accuracy and linearity. It has selectable setpoints between 0 to 3400 Pa and the display shows the current setpoint, pressure and relay status.

PRESSURE REGULATOR CALAIR-PR-1F

CALAIR-PR-1F measures the differential pressure and regulates the ventilation system's fan via a 0-10V signal. Compensation of setpoint for outdoor temperatures requires an outdoor temperature sensor connected to the CALAIR-PR-1F. Outdoor temperature values can also be written to the regulator via Modbus. The CALAIR-PR-1F has a clock module and two digital inputs (DI1 and DI2) that can be programmed for various functions: motor alarm via the fan motor's thermal fuse, fire alarm input or change pressure setpoint.
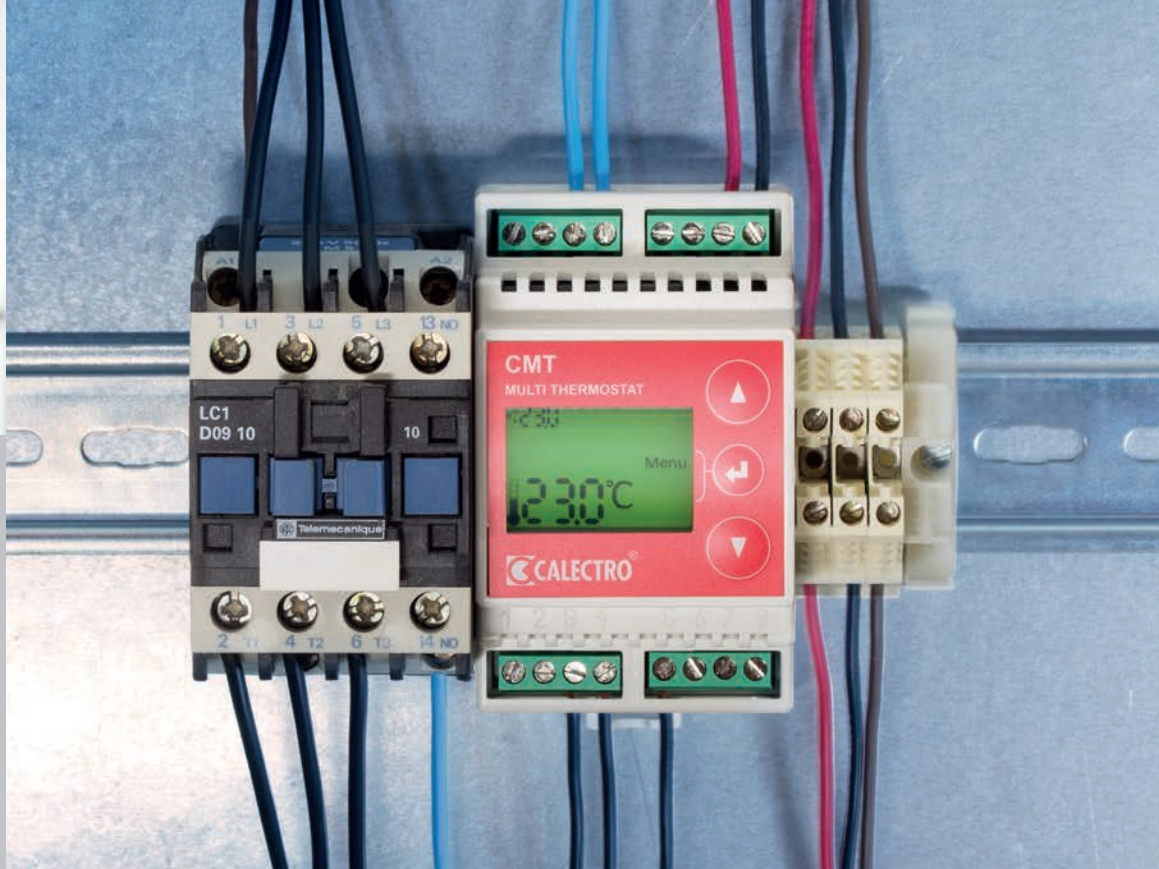

I/O MODBUS MODUL IOMB-02

IOMB-02 is used to collect and distribute analogue and digital signals to and from regulators (DUC) using Modbus RTU communication. The IOMB-02 has 4 analogue and 4 digital inputs and 2 analogue and 2 digital outputs. The analogue inputs can be configured for either 0-10V or a temperature sensor. The analogue outputs have 0-10V or PWM output.

Controls, regulates and monitors temperature

Thermostats determine how and when relays should turn on or off equipment such as fans, heat packs or pipe freeze protection. Calectro has a wide range of thermostats to cover all your regulator needs, from on/off thermostats for simpler control applications to universal thermostats with up to 11 selectable features in one and the same product. The perfect thing to have in the service vehicle and in stock as it replaces many of the models on the market.

The thermostats are used together with Calectro's Pt1000 sensor or other NTC sensors, making them compatible with a large range of Calectro's earlier sensors and other sensor brands that may already be installed. Calectro thermostats' wide application areas include floor heating, frost protection and temperature-based ventilation.

The advantages of Calectro's thermostats

230V AC
24V AC/DC

1	1-stage heating thermostat
2	1-stage cooling thermostat
3	2-stage heating thermostat
4	2-stage cooling thermostat
5	2-stage heating and cooling thermostat
6	**1-stage cooling thermostat with low temperature alarm**
7	1-stage heating thermostat with overheating alarm
8	2-stage high temperature alarm
9	High and low temperature alarm
10	Gutter thermostat
11	Gutter thermostat with whole numbers, relay 2 = fault alarm

Multi-voltage:
To simplify installation, several of Calectro's thermostats can be powered by 24 volt DC / AC power or 230 volt AC voltage.

Calectro's CMT
universal thermostat is a true multi-thermostat that can be used for 11 different functions with a single setting. CMT also handles a large number of temperature sensors such as Pt100, Pt1000, Ni1000, NTC and PTC.

Product example Thermostats

MULTI-THERMOSTAT CMT-24/230V

CMT is a universal thermostat with 11 integrated and selectable functions: The CMT is multi-voltage 24V AC/DC or 230V AC. It has two potential-free relay outputs (5A, 250V) and an adjustable hysteresis (switching differential) centred over the setpoint. CMT can be connected to five different types of temperature sensors: Pt1000 (factory setting), Pt100, Ni1000, NTC and PTC.

EXCESS TEMPERATURE ALARM CTA-24/230V

CTA is an excess temperature alarm for fire monitoring, industrial applications, etc. CTA is multi-voltage 24V AC/DC or 230V AC. CTA has two potential-free relay outputs (5A, 250V) and can be connected to five different types of temperature sensor: Pt1000 (factory setting), Pt100, Ni1000, NTC and PTC. The temperature measurement in CTA can be adjusted if necessary.

ANALOGUE UNIVERSAL THERMOSTAT CAT-230V

CAT is an analogue universal thermostat for all types of 1-step temperature control between -10 and +50°C, underfloor heating and freeze protection, for example. CAT is powered by 230V AC and has one potential-free changeover relay output with the capacity of up to 16A, 250V. The thermostat can be used together with Pt1000 or NTC sensors. The hysteresis (switching differential) is centred over the setpoint and is adjustable between 1 to 10°C.

ELECTRONIC FREEZE PROTECTION ALARM CFA

CFA is an electronic freeze protection alarm with a digital display that is used to monitor frost in air heating systems that use water as the heat carrier. CFA is multi-voltage 24V or 230V and is connected to a temperature sensor that measures the water temperature in the heating coil. CFA can be connected to five different types of temperature sensors: Pt1000, Pt100, Ni1000, NTC (factory setting) and PTC. The temperature measurement in CFA can be adjusted if necessary.

TEMPERATURE SENSOR CTS-XX-PT1000

A wide range of temperature sensors, in 19 different models, with Pt1000 sensor element. Simple mounting. The sensor is supplied with a distance plate and duct and immersion sensors with variable insertion lengths.

Detection & alarms

Alarms are part of Calectro's DNA through our popular Uniguard series of smoke detectors, but we also have a wide range from other parts of the alarm sector. We sell alarm devices, both acoustic and optical with Xenon or LED technology, and magnets and control units for door closing. The range also has alarms for water leakage in e.g. server halls and advanced carbon dioxide alarm systems for the restaurant and brewery industries.

Calectro has everything you need within alarm systems, from individual products to complete smoke systems with control units, smoke detectors, sirens, magnets and flashing lights. We have CO2 alarm systems for everything from small kiosks to complete monitoring systems for large breweries and we can help you with customised solutions.

Product example Alarms

LEAKAGE ALARM CLA-24/230V

CLA is used as a humidity monitor in places that are normally dry, such as computer rooms, archives, libraries, substations, behind dishwashers and other places that need a water leakage alarm. CLA measures the resistance value in a sensor loop (CLA-ST) consisting of 2 conductors in a textile band. If water gets onto the textile band it causes a resistance change and the CLA alarm triggers.

FIRE DOOR CLOSER KE-600 SET

The KE-600 R5 control unit is specially designed for controlling magnet-mounted doors. It has a control unit for manoeuvring fire doors and a transformer and rectifier. It connects directly to 230VAC. The fire door closing system consists of control unit KE-600 R5, smoke detectors, door magnets and sometimes also bells and sirens.

Product example Alarms

SOLEX 10

Solex 10 is a flashing light with a Xenon light source that comes in a range of colours and has automatic synchronisation. Applications include gas, fire and intruder alarms, and industrial applications. Solex 10 is powered by 10-60V DC.

SOLMAXI-AF-CL-W-S

Solista Maxi is a flashing light with a LED light source with very low power consumption compared to Xenon, and incandescent solutions. It has low, medium and high light intensity, single or double flash and steady light. All the functions are set via a DIP switch. Solista Maxi is powered by 9-60 V DC. A high base (IP65) and a base with 230V AC to 24V DC converter are available as accessories.

LOW PROFILE SIREN CAT 1992

CAT 1992 is an electronic siren with 32 selectable signals and adjustable volume. The siren can reach 110 dB(A) volume and is available in white and red. The siren is powered by 9-28Vdc and has a very low power consumption. It is standard classed IP54. A high base (IP65) and a base with 230V AC to 24V DC converter are available as accessories.

Mk9 CO2 ALARM & MONITORING SYSTEM

The CO2 Mk9 monitoring system consists of a CO2 sensor and a central processing unit.
The sensor is normally mounted in premises where CO2 gas is stored, (beer cellars, breweries, firefighting systems, etc.) and central processing units on the outside of premises.
The current CO2 reading is shown on both the sensor display and the central processing unit.
An alarm triggers flashing lights and sirens.
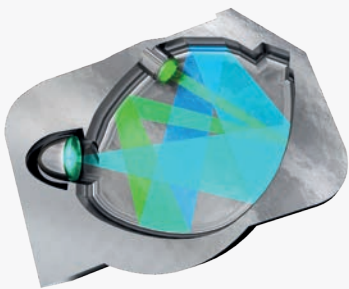For more information about CO2 monitoring systems, go to www.logico2.com.

We know demand-controlled ventilation

Carbon dioxide (CO2) is a natural gas in our exhalation air. By measuring the amount of CO2 in, for example, a conference hall, the ventilation can be naturally adjusted. This is of paramount importance, as humans are adversely affected even at slightly elevated levels of CO2. Calectro's A-SENSE/T-SENSE series facilitates simple and reliable measuring of the CO2 content and temperature in a premises and uses the readings to regulate the ventilation energy efficiently.

Demand-controlled ventilation requires high quality gas measurements. Therefore, all our CO2 detectors are produced together with Swedish SenseAir, one the most renowned gas detector producers in the world. All the sensors in Calectro's products are of the NDIR type, a sensor that delivers the most accurate readings with the minimum of maintenance.
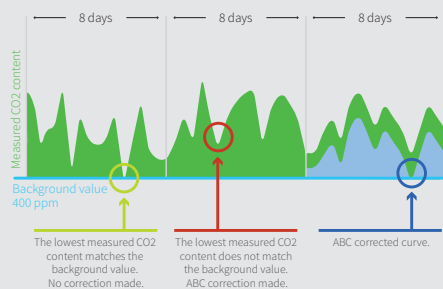
Senseair

Advantages of Calectro's CO2 controls

NDIR (Non Dispersive Infrared)

Our sensors use a pulsating infrared beam of light to detect the amount of CO2 in the ambient air. This is known as NDIR technology. This technology provides unmatched readings, is ambient and temperature-proof and is long-term stable.

Long-term stable measurements

CO2 sensors have an automatic calibration feature called "ABC" which measures the lowest CO2 content over 24 hours and corrects the sensor's measured value every eighth day. Under normal conditions, this makes the sensors completely maintenance-free.

Quick and easy to configure via PC

All A-SENSE/T-SENSE units are easily configured and viewable via a graphics computer program. This also allows many units to be configured quickly, as the parameters from one unit can easily be read down to another during major installations or service, for example.

Product example CO2

REGULATOR T-SENSE-VAV-D

T-SENSE-VAV-D is an advanced and versatile 3-in-1 control unit with a colour touchscreen. The regulator measures the CO2 concentration, temperature and relative humidity in the ambient air. It has a changeover relay output and three separate 0-10V outputs The regulator is designed to communicate via either Modbus or BAC-net.

DUCT SENSOR UG3-A-SENSE

UG3-A-SENSE is a microprocessor-based temperature and carbon dioxide sensor for installing in ventilation ducts. UG3-A-SENSE senses the ambient air, turns the readings into analogue and digital signals, and passes them on to parent systems. The sensor comes in several designs, including Modbus and VAV

ROOM SENSOR A-SENSE-D

A-SENSE is a microprocessor-based temperature and carbon dioxide sensor for installing in rooms. A-SENSE senses the ambient air, turns the readings into analogue and digital signals, and passes them on to parent systems. The sensor is available in several versions, including Modbus and VAV.

CO/CO2 SENSOR M-SENSE III

M-SENSE III is a regulator with a built-in gas sensor for carbon dioxide and carbon monoxide. With its help, the programmable unit can regulate the air change rate and trigger an alarm for personal safety. M-SENSE III is intended for use in areas where combustion represents a potential risk for dangerous air, such as vehicle garages, loading bays, tunnels and mines.

MOVEMENT DETECTOR PIR-TFT-550-B

The PIR-TFT-550-B movement detector is a very reliable detector of the dual element type. The detector is housed in a discrete white cover. The lens covers a 110° angle so easily detects a constant presence. The MB-99 bracket included makes it easy to mount on a ceiling or wall. Delay times can be set with jumpers.

Mk9 CO2 ALARM & MONITORING SYSTEM

The CO2 Mk9 monitoring system consists of a CO2 sensor and a central processing unit. The sensor is normally mounted in premises where CO2 gas is stored, (e.g. beer cellars, breweries, firefighting systems, etc.) and central processing units on the outside of premises. The current CO2 reading is shown on both the sensor display and the central processing unit. When the alarm triggers, lights flash and sirens sound. For further details about CO2 monitoring systems, go to www.logico2.com.

Welcome to Calectro!

For 50 years we have been at the disposal of our customers, both in terms of our high quality, proprietary products and our many years of industry experience.
We love working close to our customers, and we develop products that make the job of the installers less of a challenge. Since we sell ready-made units as well as OEM solutions, we can always find a solution to your specific needs through our wide range of products or special product designs.

We always strive to deliver exactly what you ask of us.

Personal service
From 8 to 4 every weekday you will get a speedy reply to your questions from our customer support.

Customised solutions
We customise and develop products that solve your technological needs

5-year warranty
The warranty includes replacement delivery for Calectro products that are not working due to fabrication or material failure.

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