PRODUCT GUIDE

Instrumentation for compressed air and gas systems

Cloud-based monitoring

Leak Detection

Dew Point Sensors

Flow Meters

and more ....

CM SENSORS

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About Us

About CAA Sensors

At CAA Sensors, we're redefining how industrial facilities manage and monitor their utility systems. Specialising in the monitoring and optimisation of critical utilities, our advanced sensor technologies deliver real-time, actionable insights that drive efficiency, reliability, and sustainability across industrial operations.

Built for the demands of modern industry, our solutions help uncover hidden inefficiencies—like leaks, pressure drops, and energy waste—before they become costly problems. Whether you're aiming to improve uptime, reduce energy consumption, or meet ESG goals, our monitoring platform gives you the data visibility you need to take control of your utilities infrastructure.

From factories and food processors to mining and manufacturing, CAA Sensors empower maintenance, engineering, and sustainability teams to make smarter decisions—backed by hard data.

Products

We provide a full range of products to measure and monitor site utilities including sensors for:

- Electricity
- Water
- Natural gas
- Compressed air
- Steam
- Liquids
- Industrial gases
- Temperature
- Flow
- Pressure

Product Features

CAA Sensors products are suitable for all industrial applications. Our sensors are:

- Accurate
- High quality
- Reliable
- Interconnectable
- Suitable for temporary or permanent applications

Our sensors can be daisy chained together and connected to a local display, our cloud-based monitoring program (GEMS) or your SCADA.

Our Difference

Our product range is backed up with over a decade of experience working directly with industrial systems and utilities. We are leaders in leakage surveys, system audits, training, monitoring, measurement, repairs and system upgrades.
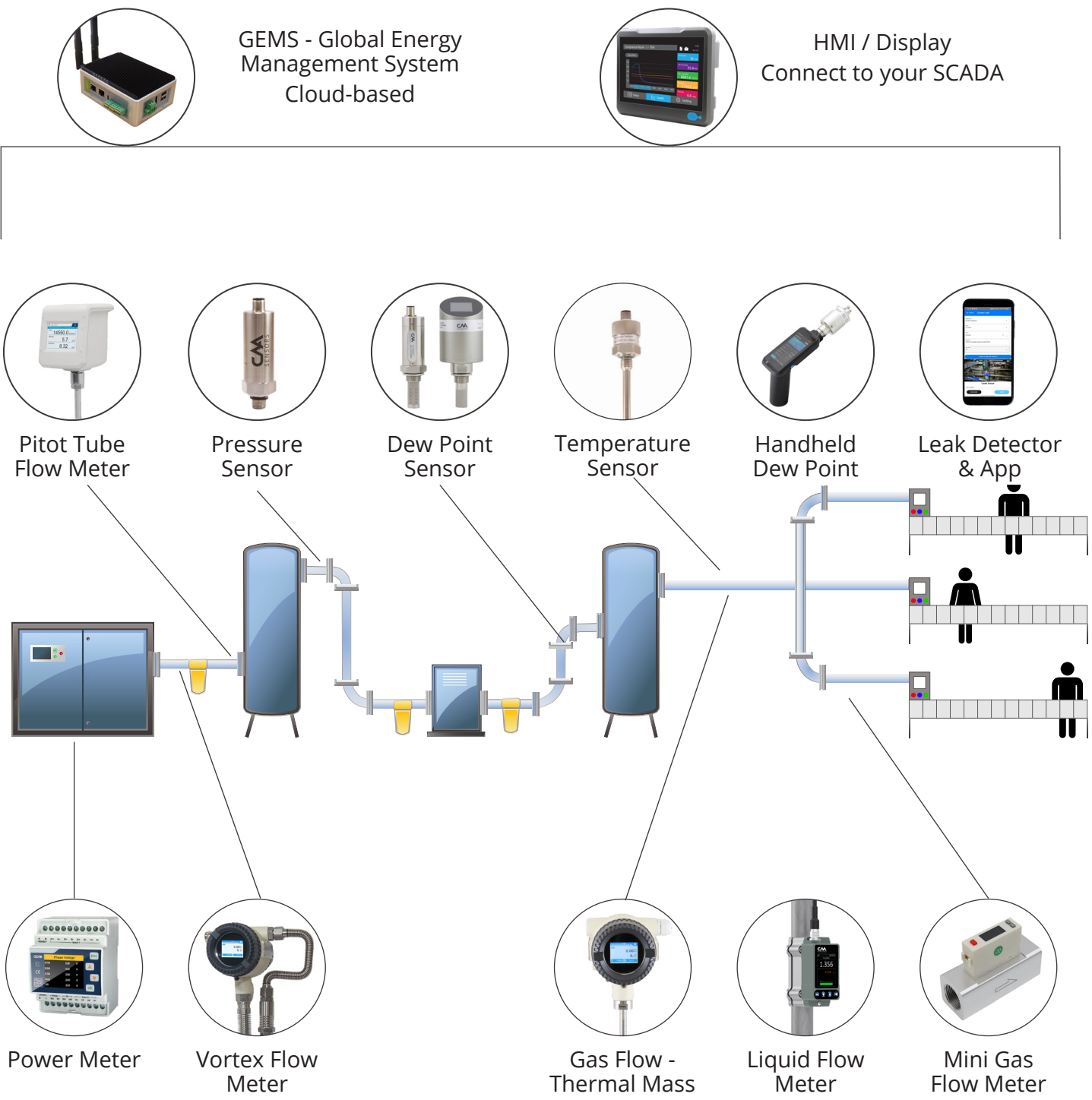
More Information

For more information on CAA Sensors products:

- visit our website: www.caasensors.com
- email us at: sales@caasensors.com
- or call us: +61 494 095 632

CAA SENSORS
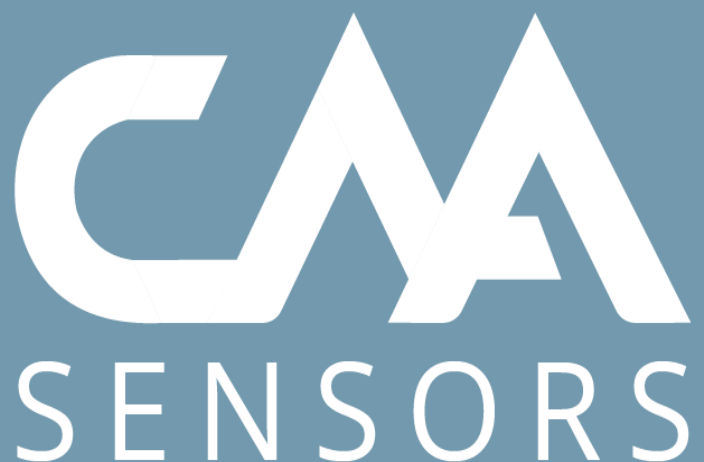
Where to Install

The diagram below shows where our sensors & equipment can be installed

GEMS - Global Energy Management System Cloud-based

HMI / Display Connect to your SCADA

Pitot Tube Flow Meter

Pressure Sensor

Dew Point Sensor

Temperature Sensor

Handheld Dew Point

Leak Detector & App

Power Meter

Vortex Flow Meter

Gas Flow - Thermal Mass

Liquid Flow Meter

Mini Gas Flow Meter

GEMS - Global Energy Management System

Remotely monitor and measure your site utilities

Connect measurement instruments to Data Acquisition Module

Data Acquisition Module

Data sent to cloud based platform
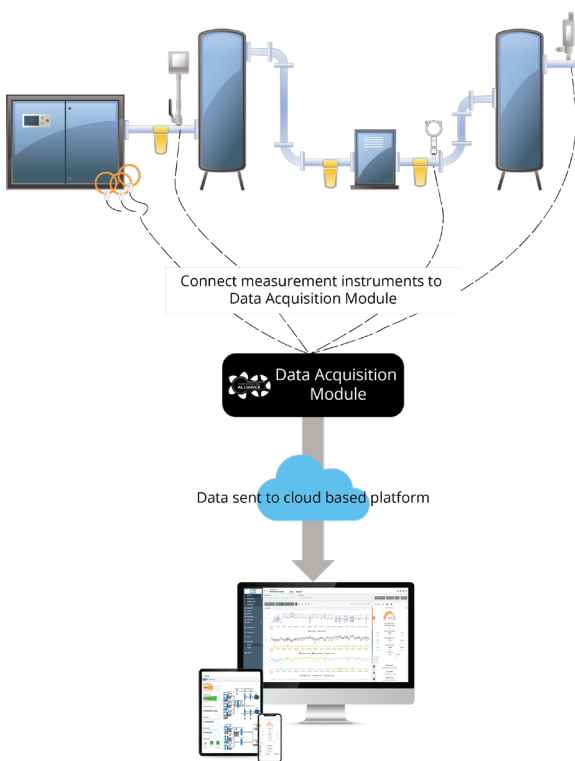
Data Acqusisition Module

The Global Energy Management System (GEMS) is our cloud-based approach for measuring and monitoring all your utilities including: compressed air, gas, steam, electricity and water usage.

Key Features
- Robust industrial design for industry and manufacturing
- Easy to install and set up
- Data available in real time, 24 hours per day, 7 days per week
- Access data on your computer or phone via an internet connection
- High data frequency and endless logging capacity
- Set alarms with SMS and/or email notifications
- Set service schedules and notifications
- Document system schematics
- Receive monthly reports
- Track performance against targets
- Secure internet connection between device and web application
- Download data in CSV format
- Remote software upgrade capability
- LTE cellular modem or LAN connection

Data Module
- Connect up to 20 Modbus devices to one Data Module
- Connect unlimited Data Modules to your cloud platform
- Suitable for temporary and permanent monitoring
- Power requirement = 24vDC

What do you need to get started?
- 1 or more Data Modules (one-off purchase)
- 1 or more sensors (eg flow meter, dew point sensor, power meter)
- Annual Subscription to GEMS - the cloud based platform

HMI / Displays

View and log data from multiple sensors

HMI / Display and Data Logger for multiple sensors

Connect and view data from multiple sensors

Display
7" IPS touch LCD, 1280 × 800 resolution

Inputs
- 2 x RS485 inputs, up to 255 Modbus registers
- 4 x channels:
    - 0-20mA / 4-20mA / 0-1VDC / 0-10VDC
- Wi-SUN wireless communication (optional)

Outputs
- Modbus RTU (RS485)
- Modbus TCP (Ethernet)
- USB Type-C

Power
24 - 30 vDC

Suitable for
- All CAA Sensors products
- Third party sensors with Modbus RTU

Mounting
- Wall Mount
- Panel Mount

Alarm
2 x alarm relays

Data Logging
Up to 2,000,000,000 values
More than 1 year of 1 second data for 60 channels

HMI / Display for a single sensor

For use with CAA Sensors Flow Meters and Dew Point Sensors

Display
4.3" TFT LCD, 480 × 272 resolution

Inputs
Digital - RS485 input

Outputs
Digital - RS485 input

Power
85 - 264 VAC
Plug into a wall socket or hard wire

Suitable for
- CAA Sensors products

Mounting
- Wall Mount

Alarm
Optional

Data Logging
No

Dew Point Sensors

Measure pressure dew point (PDP), ambient dew point, relative humidity, temperature and pressure.

Desiccant / Membrane Dryers & Nitrogen Systems

PDP Range: -110 to +20°C | -166 to +68°F

Pressure Dew Point Range Options
- -110°C to +20°C (-166°F to +68°F) or
- -80°C to +20ºC (-112°F to +68°F)

Gas Contamination
Minimal contamination

Power
10 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Outputs
Modbus RS485 & 4-20mA

Accuracy
Up to ±2%

Options
- Display
- Integrated pressure sensor
- Data cable with M12 connector

Membrane, Drum, Refrigerant & Hybrid Dryers

PDP Range: -60 to +60°C | -76 to +140°F

Pressure Dew Point Range
- -60°C to +60°C (-76°F to +140°F)

Gas Contamination
Some contamination

Power
10 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Outputs
Modbus RS485 & 4-20mA

Accuracy
±2%

Options
- Display
- Integrated pressure sensor
- Data cable with M12 connector

Membrane, Drum & Refrigerant Dryers

PDP Range: -60 to +60°C | -76 to +140°F. Compact sensor

Pressure Dew Point Range
- -60°C to +60°C (-76°F to +140°F)

Gas Contamination
Some contamination

Power
10 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Outputs
Modbus RS485 & 4-20mA

Accuracy
±2%

Options
- Stainless Steel Casing or
- Aluminium Casing

High Purity Gases operating below -80°C (-112°F)

PDP Range: -120 to +20°C | -184 to +68°F

Pressure Dew Point Range
• -120°C to +20°C (-184°F to +68°F)

Gas Contamination
Minimal to no contamination

Power
10 - 30 vDC

Operating Pressure
Up to 17 bar (246 psi)

Outputs
Modbus RS485 & 4-20mA

Accuracy
Up to ±2%

Options
• Data cable with M12 connector

Outdoor Sensor - IP67 rating and Display

PDP Range: -110 to +60°C | -166 to +140°F. Outdoor or harsh environments

Pressure Dew Point (PDP) Range Options
• -110°C to +20°C (-166°F to +68°F) or
• -60°C to +60°C (-76°F to +140°F)

Gas Contamination
Minimal contamination

Power
16 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Outputs
Modbus RS485 & 4-20mA

Accuracy
Up to ±2%

Options
• Integrated pressure sensor

Hand-held, Portable Dew Point Meter

Ideal for temporary measurements

Pressure Dew Point (PDP) Range Options
• -110°C to +60°C (-166°F to +140°F) or
• -60°C to +60°C (-76°F to +140°F)

Gas Contamination
Minimal contamination

Power
Rechargeable lithium battery

Operating Pressure
Up to 17 bar (246 psi)

Outputs
USB

Accuracy
Up to ±2%

Included
Measurement Chamber, teflon tube, charger, quick connect, data logger

Data Logger
200 million recording points

Wall Mount with Alarm and Large Display

Ideal for situations that need a large display and audio-visual alarm

Pressure Dew Point (PDP) Range Options
• -110°C to +20°C (-166°F to +68°F) or
• -80°C to +20°C (-112°F to +68°F) or
• -60°C to +60°C (-76°F to +140°F)

Power
110 - 240 vAC

Operating Pressure
Up to 17 bar (246 psi)

Outputs
• 4-20mA output
• Alarm relay

Accuracy
Up to ±2%

Included
Power cable, teflon tube, alarm light & siren

Options
• Integrated pressure sensor
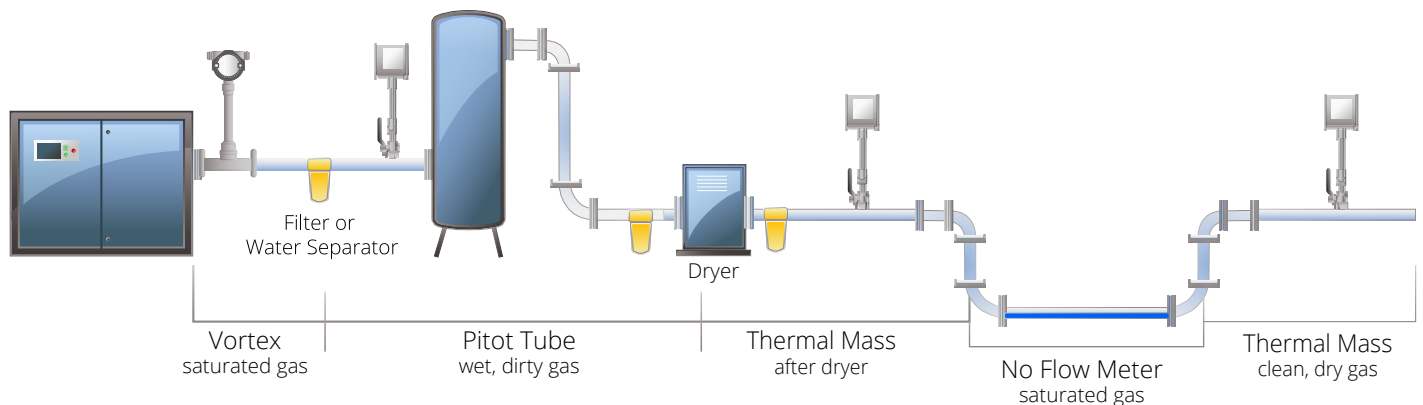
Flow Meters - Gas/Steam

Gas and steam meters
Measure flow, consumption and temperature

More Information

Flow Meter Locations

| Vortex saturated gas | Pitot Tube wet, dirty gas | Thermal Mass after dryer | No Flow Meter saturated gas | Thermal Mass clean, dry gas |

Filter or Water Separator

Dryer

Vortex Flow Meter (Gas and Steam)

Install on compressor outlets, steam systems or dirty gases

Material Quality
Gas - saturated, wet and dirty
Steam

Power
18 - 30 vDC

Operating Pressure
Up to 63 bar (913 psi)

Gas Flow Range
1.5 - 300 Nm (5 - 984 ft/sec)

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Inline style (Flange or R-Thread): DN15 to DN300

Accuracy
±(1.5% RD + 0.3% FS)

Pitot Tube (Gas)

Ideal for damp or lightly contaminated gas. Install before a dryer

Gas Quality
Wet and dirty gas (non-condensing)

Power
18 - 30 vDC

Operating Pressure
Up to 17 bar (246 psi)

Gas Flow Range
5 - 300 Nm (17 - 984 ft/sec)

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Insertion style: DN25 to DN600

Accuracy
±(1.5% RD + 0.3% FS)

Bi-directional
Optional

Mini Flow Meter (Gas)

Ideal for point of use monitoring. Install in dry gas

Gas Quality
Dry, clean gas

Power
24 vDC

Operating Pressure
Up to 16 bar (232 psi)

Gas Flow Range
0.1 - 250 Nm (0.3 - 820 ft/sec)

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Inline style: DN3 to DN40

Accuracy
±(1.5% RD + 0.3% FS)

Compact Flow Meter (Gas)

Affordable flow meter for point of use monitoring. Install in dry gas

Gas Quality
Dry, clean gas

Power
18 - 30 vDC

Operating Pressure
Up to 15 bar (217 psi)

Gas Flow Range
10-1000 L/min (1/2" connection)
20-2000 L/min (3/4" connection)
30-3000 L/min (1" connection)
60-6000 L/min (1.5" connection)

Outputs
Modbus RS485

Connection and Pipe Size
Inline style: DN15 to DN40

Accuracy
±3% FS

Thermal Mass (Gas)

For dry, clean gas. Install in clean, dry gas (eg after a dryer)

Gas Quality
Dry, clean gas

Power
18 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Gas Flow Range
0.1 - 250 Nm (0.3 - 820 ft/sec)

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Insertion style: DN25 to DN600
Inline style (Flange or R-Thread): DN15 to DN80

Accuracy
±(1.5% RD + 0.3% FS)

Outdoor Thermal Mass (Gas)

Ideal for outdoor or harsh environments. Install in clean gas. IP67 rating

Gas Quality
Dry, clean gas

Power
18 - 30 vDC

Operating Pressure
Up to 50 bar (725 psi)

Gas Flow Range
0.1 - 250 Nm (0.3 - 820 ft/sec)

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Insertion style: DN20 to DN300
Inline style (Flange or R-Thread): DN15 to DN80

Accuracy
±(1.5% RD + 0.3% FS)

Flow Meters - Liquids

Industrial water, domestic water and non-aggressive liquids
Measure flow and consumption

Electromagnetic Flow Meter

Electromagnetic flow meter for industrial water and non-aggressive liquids

Liquid Quality
- Electrically conductive, non-corrosive liquids
- Industrial and domestic water
- Sea and salt water
- Sewage, sludge

Minimum Flow
0.5m/s

Power
24 vDC

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Inline style (Flange): DN15 to DN150

Accuracy
±0.5%

Operating Pressure
Up to 16 bar (232 psi)

Clamp on Ultrasonic Flow Meter

Clamp on unit with display. For small pipes

Liquid Quality
- Clean liquids with minimal bubbles or solids
- Industrial and domestic water
- Sea and salt water

Minimum Flow
0.1m/s (0.328 ft/s)

Power
24 vDC

Outputs
Modbus RS485 & 4-20mA
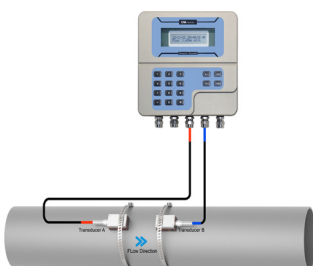
Connection and Pipe Size
Clamp-on: DN6 to DN100

Accuracy
±2%

Ultrasonic Flow Meter

Wall mount display with clamp-on transducers. For larger pipes

Liquid Quality
- Clean liquids with minimal bubbles or solids
- Industrial and domestic water
- Sea and salt water

Minimum Flow
0.1m/s (0.328 ft/s)

Power
24 vDC

Outputs
Modbus RS485 & 4-20mA

Connection and Pipe Size
Clamp-on: DN25 to DN5000

Accuracy
±0.5%

Power Meters

Measure amps (A), voltage (V), kilowatts (kW), kilowatt hours (kWh), power factor (PF) and more

3 Phase Power Meter - Din Rail mounting

Monitor your mains power supply, sub loads or individual equipment

Inputs
- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

Features
Three phase or single phase measurement
Display
Alarm relay

Power
24 vDC

Outputs
Modbus RS485
Over 220 channels available

Accuracy
±0.5%

Rogowski Coils included. Choose from:
- 500 amps
- 1,000 amps
- 3,000 amps

3 Phase Power Meter - Panel Mount

Monitor your mains power supply, sub loads or individual equipment

Inputs
- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

Features
Three phase or single phase measurement
Display
Alarm relay

Power
18 - 36 vDC

Outputs
Modbus RS485
Over 220 channels available

Accuracy
±0.5%

Rogowski Coils included. Choose from:
- 500 amps
- 1,000 amps
- 3,000 amps

Rogowski Coil with Modbus or 4-20mA Output

Single phase - Amps (Current) only

Inputs
- Input voltage up to 600 vAC
- Input current up to 9,999 Amps

Features
Single phase - measure Amps (A)
Perfect for temporary measurement

Power
24 vDC

Outputs
Modbus RS485 OR 4-20mA

Accuracy
±0.5%

Rogowski Coil Options
- 500 amps
- 1,000 amps
- 3,000 amps

Pressure & Temperature

Pressure sensors for wet and dry gas
Temperature sensors for gases, liquids, ambient air

Pressure Sensors for Gas and Non-Aggressive Liquids

Pressure Range: 16 bar (232 psi) or 50 bar (725 psi)

Pressure Range Options
- 0 to 16 bar (232 psi)
- 0 to 50 bar (725 psi)

IP Rating
IP65

Power
24 vDC

Outputs
- 0 to 16 bar sensor has Modbus RS485 & 4-20mA
- 0 to 50 bar sensor has 4-20mA only

Accuracy
±1%

Options
- Data cable with M12 connector

Temperature Sensors for Gas, Liquid and Air

Measurement Range: -50 to +200°C | -58 to +392°F

Pressure Range
- -50°C to +200°C
- -58°F to +392°F

IP Rating
IP65

Power
24 vDC

Outputs
Modbus RS485 OR 4-20mA

Accuracy
±0.5% FS

Options
- Data cable with M12 connector

ModuMesh

Wirelessly transmit Modbus RS485 data from sensors to a display or data acquisition mosule

3 Phase Power Meter - Din Rail mounting

Monitor your mains power supply, sub loads or individual equipment

Radio Frequencies
- 868MHz (EU)
- 902-928MHz (Americas, Asia and Australia).

Range
Up to 1 km (line of sight)

Data Encryption
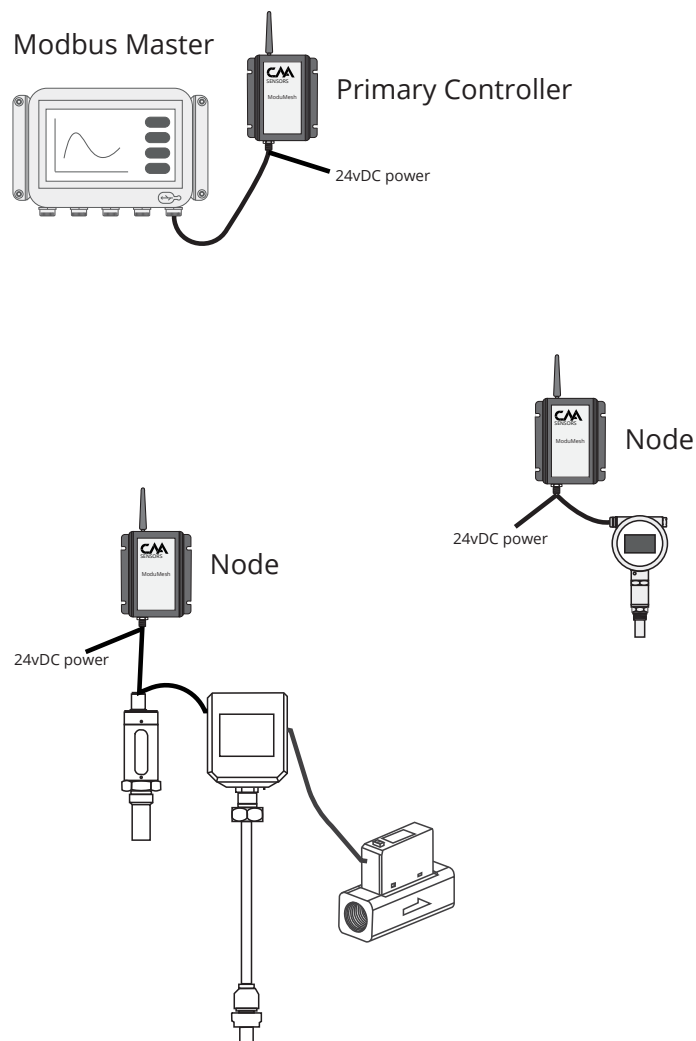Encrypted communications by AES 128bits

Power
9 to 30 vDC

IP Rating
IP54

How may ModuMesh do I need?
At a minimum, you need two (2) ModuMesh devices:
- one Primary Controller (connected to the Modus Master, eg a display or data acquisition module) and
- one Node (connected to sensors)

Modbus Master

Primary Controller

24vDC power

Node

24vDC power

Node

24vDC power

Leak Detection

Find and record leaks in compressed air, gas and steam systems

Ultrasonic Leak Detector

Find leaks in compressed air, gas and steam systems

Description
- Basic Ultrasonic Leak Detector
- Simple to use, no screen to distract you

Power
1 x 9v Alkaline Battery
Up to 10 days operation on one battery

Handset weight
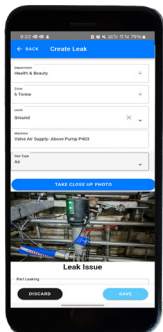0.3 kg (11 oz)

Includes
Handset, headphones, focusing probes and carry case

Leak Survey App

Record leaks and parts. Download reports

Simple to use
- Record leaks, inappropriate use and other opportunities
- Take photos
- Record parts required to fix leaks
- Quantify leak costs (cost and flow rate)
- Create customised reports
- Download reports
- Download parts lists

Leak App
- Android and iOS phones
- Use with any leak detector

Accessories

Connectors, sensor cables, hot tap drill,
portable measurement, power adapters and more

Connectors and Cables

Get your sensors connected and powered

M12 Connectors
- 5 pins, A-coded
- Female straight, Male straight, Tees, Y's
- Rated Voltage: 60V AC/DC
- Rated Current: Max 4A

M12 to M8 adapter
- M8 female straight (B-coded)
- M12 male straight (A-coded)
- 0.6m cable

Cables
- 5 cores
- Wire Colours: Black, Grey, Blue, Brown, White
- Unshielded
- Cable Specification: N*0.34mm2
- Rated Voltage: 125 V AC/DC
- Outer Insulation (Jacket): Black PVC
- 5 meter, 10 meter or 30 meter lengths
- M12 female or male connectors on either end

Hot Tap Drill

Hand drill connection points on pressurised pipes

Pressurised Pipe
Hot tap drill can be operated under pressure up to 20 bar (290 psi)

Drilling Depth
200 mm or 7.87"

Options
Tapping saddles / clamps
Ball valves

Interchangeable Dill Bits
- 8.5mm (1/4") drill bit suits 1/4" ball valve
- 14.5mm (1/2") drill bit suits 1/2" ball valve
- 19.5mm (3/4") drill bit suits 3/4" ball valve
- 24.5mm (1")" drill bit suits 1" ball valve
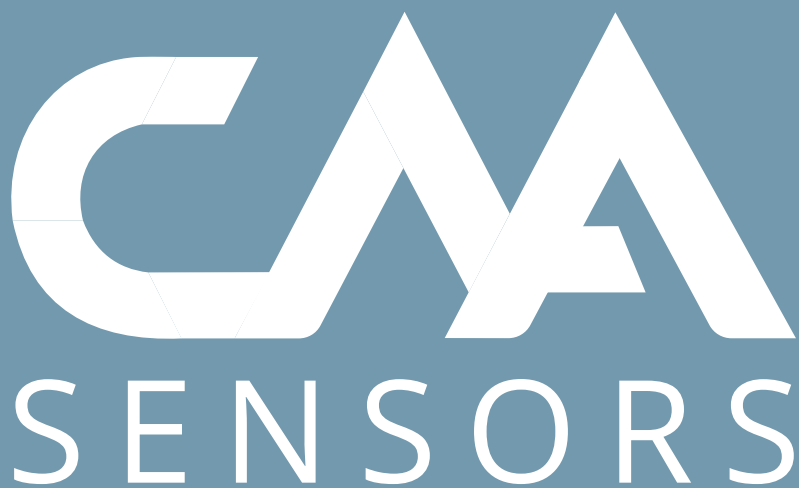
Power Adapter

Convert 100-240vAC to 24vDC

Power
- Input: 100-240vAC input (50/60 Hz)
- Output: 24vDC
- 50W
- 2.1 Amp

Features
- Interchangeable plugs – Australia, UK, Europe and USA
- M12, 5 pin female connector
- 1.7m cable length

CAA SENSORS

Product Warranty

CAA Sensors provides a 1 year warranty for all products listed in this catalogue. For more information, refer to our website: www.caasensors.com

Recalibration & Exchange Program

Sensors should be calibrated regularly. We offer a recalibration and exchange service. For more information, refer to our website:
https://www.caasensors.com/recalibration

Become a Distributor

Please contact CAA Sensors if you are interested in becoming a distributor or reseller of our products.

More Information

For more information on CAA Sensors products:
- visit our website: www.caasensors.com
- email us at: sales@caasensors.com
- or call us: +61 494 095 632

How to Order

CAA Sensors sells its products through our global distributor network. Please contact your local distributor for pricing and availability.

Find a Distributor: https://www.caasensors.com/distributors/

Email: sales@caasensors.com

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