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PRODUCT CATALOGUE

INSTRUMENTATION FOR COMPRESSED AIR AND GAS SYSTEMS

www.compressedairalliance.com

Contents

04

Introduction and Ordering

08 Data Acquisition System

12 Portable Measurement Kit

<u>15</u>

Dew Point Sensors

39 Flow Meters

<u>61</u>

Power Meters

77 Pressure Sensors

87 Temperature Probes

95 Condensate Drains

104 Dust Collector Controllers

109 Leak Detection

115 Accessories

www.compressedairalliance.com



About Compressed Air Alliance

Compressed Air Alliance Pty Ltd is an Australian owned company that works with manufacturers and industry to improve their compressed air systems.

We sell a range of high quality, reliable monitoring and measurement equipment for compressed air and inert gas systems. Our sensors and equipment are ideal for temporary or permanent applications.

Compressed Air Alliance offers several services to help you improve your compressed air systems performance and reduce energy usage, including leakage surveys, system audits, training, monitoring, measurement, repairs and system upgrades.

Become a Distributor

Please contact Compressed Air Alliance if you are interested in becoming a dealer or reseller of our products in your area.

Product Warranty

Compressed Air Alliance provides a 12-month warranty for all products listed in this catalogue. For more information, refer to our website: **www.compressedairalliance.com**

If you have any questions about our products, please email: **sales@compressedairalliance.com**

More Information

For more information on Compressed Air Alliance and our products or services, please visit our website **www.compressedairalliance.com**, email us at **sales@compressedairalliance.com** or call us (Australia) 1300 558 526.

Use our QR code:



Product codes in this catalogue list the most common combinations for that item. However, other combinations may be available. Please contact us if you require a configuration that isn't listed in this catalogue.

Contact your local agent

How to Order

Visit our website: compressed air alliance.com/products

Phone (Australia): 1300 558 526

Contact us by email: sales@compressedairalliance.com

Introduction to Measuring Compressed Air & Gas Systems

Compressed air and gas systems rarely operate at peak efficiency. Depending on the size of the system, wasted energy can be in the tens if not hundreds of thousands of dollars every year, with virtually all of it going unnoticed.

Unless there is an existing problem like a compressor or dryer failure, engineering and maintenance personnel rarely have the time, information, and knowledge to manage and improve system performance.

Measuring compressed air and gas systems can provide information on system performance and help with troubleshooting. At the fundamental level, measuring the input energy and output flow will highlight some opportunities for improvement, be it adjusting your compressor settings or staging the compressors more effectively. Additional sensors, such as pressure, dew point and temperature, will highlight the actual system performance by providing a clear picture of every moment, fluctuation or change.

The actions taken from the detailed knowledge of how the system performs, responds, and changes as improvements are made will make significant inroads in reducing the energy use of your compressed air and gas systems. Those improvements can be demonstrated and verified with powerful visualisation tools, giving you the confidence to continue your savings journey.

What should I measure?



Dew Point

Dew Point Sensors are the simplest way to monitor dryer performance and detect moisture issues before they can cause a problem.



Flow

Flow meters are used to understand compressed air or gas consumption, identify compressor issues, establish compressor or system efficiency, and monitor for changes in the system, such as increases in leakage.



Power

Power meters provide insight into how much energy a piece of equipment (eg a compressor) uses, how long it operates, when it produces compressed air and how it interacts with the other compressors in the system.



Pressure

Pressure sensors at multiple points can identify issues with compressors, filters, dryers, and pipework. It can also help maintain system efficiency.

Temperature

Temperature probes are used to measure gas and liquid temperatures or ambient conditions. Understanding the temperature your equipment operates at can help to prevent issues with equipment failures, diagnose problems, improve performance, and optimise efficiency.

System Efficiency

Compressed air system efficiency measures how much energy the system will use for a given flow rate. Poor system efficiencies mean that the compressors are being run inefficiently, and more energy is being consumed than should otherwise be required.

Monitoring System Performance

Monitoring System Performance

Once you have installed your measurement equipment, you'll need powerful visualisation and analysis tools to help you understand and identify opportunities.

Our cloud-based **Data Acquisition System** (DAS) for measuring, monitoring and analysis of compressed air, gas, steam, energy and water is ideally suited to the industrial and manufacturing sectors.

Simply connect your measurement equipment to the data acquisition module, then view and analyse data on the web.



Permanent or Temporary Measurement

Compressed Air Alliance offers both permanent and temporary measurement solutions.

Our **potable measurement kits** come with everything you need to measure and monitor compressed air or gas systems.

Alternatively, our **portable dew point meter** connects to an existing quick connect point, allowing you to quickly test dew point at various locations.

Creating a connection point on a pressurised pipe is easy with our **hot tap kit**. The kit comes with a hot tap drill, clamp and ball valve.

Optimising Compressed Air Systems

Compressed air systems generate a large volume of condensate every day. Removing that moisture is fundamental to operating a reliable system. **Condensate drains** are the weakest link in any system. Timed drains are wasteful and inefficient; similarly, float drains are unreliable and fail without warning. Protect your system with our zero-loss condensate drains while maintaining efficiency. These drains effectively remove condensate from your system and can sound the alarm in the event of a failure.

Industrial dust collectors use significant amounts of compressed air to clean the collector bags or filters using time-based controls. Our **Dust Collector Controllers** monitor the volume of dust collecting in the elements and pulses the valves only when cleaning is needed. This provides a more effective clean, increases bag or filter life and reduces compressed air usage. Pulse control can save up to 50% of the compressed air being used and increase filter life by up to 30%.

Where do I install measurement equipment?

The diagram below shows where our products can be installed.



Data Acquisition System



Data Acquisition System

Remotely monitor and measure your site utilities





Gathering and recording data is the key to all good decision making. Trends need to be visualised, system performance needs to be analysed, and problems must be identified and rectified. With Compressed Air Alliance's Data Acquisition System, not only will your system be continuously monitored, but historical data can be trended, stored, reviewed and analysed.

The Data Acquisition System (DAS) is our cloud-based approach for measuring and monitoring compressed air, gas, steam, energy and water data usage. It is ideally suited to the industrial and manufacturing sectors and can be accessed from anywhere there is an internet connection.

Data is recorded every second and transmitted regularly so you can view your system in real time.

The DAS automatically generates monthly reports to help you stay on top of your system. Alarms can be set for virtually every parameter of your system, notifying you the moment something changes via SMS or email. Receive maintenance notifications to help plan compressor and equipment servicing.





Monitor & Measure

Compressed air, gas, steam, energy, water

Inputs

Up to 20 Modbus or 8 Analogue signals per module

Cloud-based System

Access data from any device with internet access

Temporary or Permanent Suitable for both temporary

or permanent measurement



Benefits of monitoring site utilities

Monitoring and measuring your site's utilities and systems will help:

- Identify trends
- Manage system performance
- Manage system maintenance schedules
- Reduce energy and
- Quickly detect and respond to potential issues before they happen.



Key Features

- Easy to install and set up
- Cloud based access data from any computer, mobile phone or tablet with internet access
- Data available in real time, 24 hours per day, 7 days per week
- High data frequency and endless logging capacity
- ullet Set alarms with SMS and/or email notifications
- Set service schedules and notifications
- Document system schematics
- Receive monthly reports
- Track performance against targets
- Simulation tools
- Energy management tools Specific power, M/T, CUSUM analysis
- Compressed Air Performance Scorecards find out how your system compares to best practice and what steps you can take to improve your system
- Secure internet connection between device and web application
- Download data in CSV format
- Remote software upgrade capability
- LTE cellular modem
- Robust industrial design
- Suitable for use in environments with a temperature range: -25°C to +60°C (-13°F to +140°F)



Data Acquisition Module

Product Code Subscription 0 - Extra Small Signal Input 1 - Small 2 - Medium 1 - Modbus only 3 - Large 8 - Modbus and/or 4-20mA 4 - Extra Large D М 0 0 0 А 1 **Product Prefix Power Cable Plug** 0 - No Plug 1 – AUS Style Plug 2 - USA Style Plug **3** – EURO Style Plug **4** – UK Style Plug Contact us for other plugs EURO Style Plug UK Style Plug USA Style Plug AUS Style Plug (Type B) (Type F) (Type G) (Type I) Mainly used in: Mainly used in: Mainly used in: Mainly used in: Canada, USA, Mexico Europe UK, Ireland, Malaysia, Singapore Australia, NZ, Argentina More Info

Portable Measurement Kit

Temporary measurement kit for compressed air and gas systems



The portable measurement kit contains everything you need to monitor and measure your compressed air or gas system. The standard kit comes with:

- 4 x Rogowski coils, 500Amp
- 1 x Thermal Mass insertion Flow Meter
- 1 x DEK series dew point sensor with integrated pressure sensor (for dry pressure measurements)
- 1 x Modbus Pressure Sensor (for wet or dry pressure measurements)
- 1 x Temperature Sensor
- 1 x Data Acquisition Module
- 1 year subscription to the Data Acquisition System (to view, download and analyse data)
- Cables and accessories
- Hard carry case.

Options:

- Design your own kit
- Hot tap kit for drilling connection points on pipes under pressure.







Portable Measurement





Sensor	Measure	Examples of Data Analysis	
Rogowski Coil	 Amps Estimate power use (kWh) of each compressor as run the compressors Check system configuration and control Check compressor performance Combine kW with flow rate to get system perform (specific power) 		
Pressure Sensor	Gas Pressure • Wet or dry pressure at critical points • Analyse pressure cycles and losses (pressure drop		
Flow Meter	Gas Flow Gas Temperature	 Gas flow rate, peak, average and minimum Gas consumption (eg hourly, daily, weekly, monthly) Check for excessive baseline gas flows which could indicate poorly utilised consumption Combine flow with kW to get system performance (specific power) 	
Dew Point Sensor (with integrated Pressure sensor)	Dew Point Dry Pressure	 Check moisture levels in the gas Check dryer function Combine with other pressure data to understand losses (pressure drops) 	
Temperature Sensor Ambient Temperature		 Check if ambient temperature is effecting compressor or dryer performance Check compressor / dryer inlet and outlet temperatures 	

Product Code

Contact us for other options



0 - No Temperature Sensor**1** - Temperature Sensor

Dew Point Sensor



Introduction

When it comes to monitoring compressed air and gas systems, nothing offers a better payback than a dew point sensor. Once you have moisture in your system, everything becomes a problem. If you have ever had this occur, you'll know the problem happened days before you discovered it, and it took even longer to dry out after the issue was fixed.

Most people don't think of dew point sensors as providing efficiency, but wet compressed air or gases will cause irreparable damage to components, create reliability issues throughout your entire plant and allow bacteria, rust and corrosion to build up in your system. Moisture issues are extremely difficult to rectify, and component failures will go on for years.

If you have a system running a desiccant dryer or with a specified purity requirement, then you are already aware that dew point is a critical component of your system and, therefore, should be constantly monitored.

Indicators on refrigerant dryers don't measure dew point

The indicator on your refrigerant dryer is exactly that, an indicator. It is not measuring the dew point entering your plant. It is only measuring the temperature of the refrigerant gas. Any number of issues before and after your dryer can lead to the dew point deteriorating and will not be shown on the dryer indicator.

Benefits of monitoring dew point

- Improve system reliability
- Reduce product contamination risks
- Reduce system maintenance
- Reduce operating and energy costs
- Reduce the risk of rust and corrosion build up
- Reduce the risk of bacteria, fungus and yeast build up
- Improve dryer reliability
- Improve filter life and performance
- Alert you to changes in dryer performance
- Alert you to condensate drain and other equipment failures

Easy to install and low maintenance

Compared to your compressed air and gas system, dew point sensors are cheap, easy to install and have low maintenance requirements. They are the most cost effective and beneficial sensor purchase you are ever likely to make.



Installing a dew point sensor

Installation - Dew Point Sensor (A, K, Q & Mini Series)





Product Range

Compressed Air Alliance offers six dew point sensors to suit various dew point ranges and dryer types.

W Series Dew Point Sensor

- Pressure dew point ranges of -110°C to +60°C
- Wall mount dew point monitor
- Ideal for applications that require a self contained unit, large display or visual alarm



Q Series Dew Point Sensor

- Pressure dew point range of -110°C to +0°C (-166°F to +32°F)
- Ideal for desiccant dryers with extremely dry dew points below -20°C
- Best suited to high purity gases
- Uses advanced Quartz sensor technology
- Options available for an integrated pressure sensor, in-built display and data cable



A Series Dew Point Sensor

- Pressure dew point range of -80°C to +20°C (-112°F to +68°F)
- Ideal for nitrogen generators or desiccant dryers operating at -70°C or -40°C (-94°F or -40°F)
- Best suited to gases with minimal contamination
- Uses Alumina-Oxide sensor technology
- Options available for an integrated pressure sensor, in-built display and data cable



K Series Dew Point Sensor

- Pressure dew point range of -60°C to +60°C (-76°F to +140°F)
- Ideal for desiccant or refrigerant dryers operating between -50°C to +50°C
- Robust sensor, suitable for harsh conditions and moderate levels of contamination
- Uses Polymer sensor technology
- Options available for an integrated pressure sensor, in-built display and data cable

Product Range (Cont)



Mini Dew Point Sensor

- Pressure dew point of -60°C to +60°C (-76°F to +140°F)
- Ideal for desiccant or refrigerant dryers operating between -50°C to +50°C
- Compact design that can be used in small spaces or where there are moderate levels of contamination
- Uses Polymer sensor technology
- No integrated pressure or in-built display available



P Series Dew Point Sensor

- Pressure dew point ranges of -110°C to +60°C
- Portable dew point meter
- Ideal for temporary measurement

Dew Point Ranges





Product Selector

	W Series	Q Series	A Series	K Series	Mini Series
		S AND	A STATE	A REAL PROPERTY OF	A REAL PROPERTY.
Technology	Wall Mount	Quartz	Alumina-Oxide	Polymer	Polymer, Compact Design
Gas Contamination	Some contamination	High purity gases	Minimal contamination	Some cont	amination
Desiccant dryers	1	(below -20°C)	(-70°C to 0°C)	(above -50°C)	(above -40°C)
Membrane dryers	1	1	1	1	1
Refrigerant dryers	1	×	×	1	1
Dew Point Range	-110°C to +60°C -166°F to +140°F	-110°C to +0°C -166°F to +32°F	-80°C to +20°C -112°F to +68°F	-60°C to -76°F to	o +60°C o 140°F
Operating Pressure	0 to 17 bar (246psi)	*0 to 17 bar (246	0 to 50 bar (725 psi psi) if fitted with int sensor	egrated pressure 0 to 50 bar (725psi)	
Pressure Dew Point (PDP)	1	1	1	1	1
Gas Temperature	1	1	1	1	1
Relative Humidity (RH)	 Image: A set of the set of the	 Image: A start of the start of	1	✓	 Image: A second s
Pressure transducer	Optional	Optional	Optional	Optional	×
Display	1	Optional	Optional	Optional	×
4-20mA output	×	1	1	 Image: A start of the start of	 Image: A start of the start of
Modbus output	×	 Image: A start of the start of	1	 Image: A start of the start of	 Image: A start of the start of
Alarm	1	Only available with Display option			
Installation	Permanent or Temporary Installation				
Measurement Chamber	NA	1	1	1	1

Dew Point Monitor – W Series

Wall mount dew point monitor with display and alarm



With this all-in-one, wall mounted unit you can continuously monitor your dryer performance and system pressure (if fitted with the integrated pressure sensor). Should an issue occur, the integrated alarm light and buzzer will draw immediate attention.

The precision dew point monitor is ideal for compressed air and inert gas systems up to 1.7 MPa (246 psi) with refrigerant, desiccant, or membrane dryers. The optional integrated pressure sensor makes measuring simpler and easier to manage, reducing wiring and installation costs. The fast response time ensures an accurate and up to date reading, giving you peace of mind that your system is under control.



Notes:

- This dew point sensor does not have an output connection.
- The sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Ultra-fast response time
- Long term stability
- Resistant to condensation, particulate contamination, oil vapours and most chemicals
- High resistance to electrical disturbance
- Simple to install



Outputs

None. Stand alone unit only

Specifications

Dew Point Monitor - W Series

Technology	Quartz, Alumina-Oxide or Polymer sensor (depending on the dew point range)
Dryer Type	Refrigerant, Desiccant, Drum or Membrane dryers up to 4 MPa (600psi)
Gases	Air, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen, Oxygen
Accuracy ¹	Dew Point (+20°C to -60°C) : ±2°C Dew Point (-60°C to -110°C) : ±3°C Temperature: ±0.5°C Pressure: ±0.3% FS (at 23°C)
Minimum gas flow rate	> 1 L/min
Dew Point Measurement	-110°C to 0°C (-166°F to +32°F) Or -80°C to +20°C (-112°F to +68°F) Or -60°C to +60°C (-76°F to +140°F)
Pressure Measurement	0 to 17 bar (246 psi)
Gas Temperature Measurement	-40°C to +100°C -40°F to +212°F
Output	None - Stand alone unit
Display	11cm (4.3") LCD colour touch screen
Display Signals	Pressure Dew Point (PDP) Relative Humidity (RH) Temperature (°C or °F) Optional integrated pressure transducer

Power Supply	Standard wall socket, 100 - 240 vAC		
Electrical Connection	M12 PG Plug		
EMC	According to IEC 61326-1		
Alarm Relay	Red/green light Buzzer		
Process Connection	6 mm stainless steel quick connector		
Ambient Temperature	-30°C to +70°C -22°F to +158°F		
Relative Humidity	0 to 95% RH		
Dimensions	320 mm L x 158 mm W X 95 mm D 12.6" L x 6.2" W x 3.7" D		
Casing	Plastic		
IP Rating	IP52		
Installation Type	Permanent installation Temporary installation		
Calibration Frequency ²	Every 2 years		
Warranty Period	12 Months		

¹The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.



(Type B) Mainly used in: Canada, USA, Mexico

(Type F) Mainly used in:

Europe

(Type G) Mainly used in: UK, Ireland, Malaysia, Singapore

(Type I) Mainly used in: Australia, NZ, Argentina

Order Online



Dew Point Sensor – Q Series

For desiccant dryers with dew point between -100°C to 0°C (-148°F to +32°F)



The most advanced quartz technology dew point sensor available. Its moisture sensitive materials provide superior signal sensitivity under ultra-low humidity conditions, and provide long term stability to measure humidity down to -110°C (-166°F) pressure dew point.

The innovative temperature compensation algorithm and multi-point temperature compensation calibration greatly improves the sensor's temperature drift and ensures high-precision measurements over a wide temperature range. The precision sensor design compensates for contamination and aging, providing long-term highaccuracy measurements.





Notes:

- This dew point sensor is not recommended for dew points above -20°C (-4°F).
- This dew point sensor is not recommended for refrigerant dryers.
- The sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Ultra-fast response time
- Multi-point temperature compensation
- High resistance to electrical disturbance
- Excellent long-term stability

- Unique contamination resistant technology
- IP65 rated
- Digital (Modbus) and Analogue (4-20mA) outputs
- Measurement chamber included as standard

Specifications



Dew Point Sensor - Q Series

Technology	Advanced Quartz Technology	EMC	
Dryer Type	Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)	Alarm Relay Output	
Gases	Air, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen, Oxygen		
Accuracy ¹	Dew Point (-20°C to -80°C) : ±2°C Dew Point (-80°C to -110°C) : ±3°C Temperature (-40°C to +100°C) : ±0.5°C Pressure: ±0.3% full scale	Display Measurement	
Minimum gas flow rate	> 1 L/min	Chamber	
Dew Point Measurement	-110°C to +0°C -166°F to +32°F	Process Connection Ambient	
Pressure Measurement	0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with integrated pressure sensor	Temperature Relative Humidity	
Gas Temperature Measurement	-40°C to +100°C -40°F to +212°F		
Output	Analogue: 4 to 20mA Digital: RS485 Modbus / RTU	Dimensions	
Modbus Output Signals	Pressure Dew Point (PDP) Relative Humidity (RH) Temperature (°C or °F) Optional integrated pressure transducer	Casing	
Analogue Output Signals	Pressure Dew Point (PDP) only	Sinter cap	
Power Supply	Standard Sensor (no-display): 10 to 30V / 30 mA + 4-20mA Current output Sensor with Display: 16 to 30vDC	IP Rating Installation Type	
Electrical Connection	Standard Sensor (no-display): 1 x 5 pin M12, female Sensor with Display:	Calibration Frequency ²	
	2 x 5 pin M12, female	Warranty Period	

EMC	According to IEC 61326-1
Alarm Relay Output	Standard Sensor (no-display): Not available Sensor with display: 1.5" touch screen
Display	Standard Sensor (no-display): Not available Sensor with display: 1.5" touch screen
Measurement Chamber	1/2" Quick coupling (Nitto type) with Adjustable Silencer G1/4" thread on measurement chamber
Process Connection	ISO G 1/2" thread
Ambient Temperature	-30°C to +70°C -22°F to +158°F
Relative Humidity	0 to 95% RH
Dimensions	Standard Sensor (no-display): 135 mm L x 35 mm W (5.3" L x 1.4" W) Sensor with display: 148 mm L x 67 mm W (5.8" L x 2.6" W)
Casing	Standard Sensor (no-display): Stainless Steel Sensor with display: Anodised Aluminium
Sinter cap	Stainless steel mesh filter, pore size 30-45 um
IP Rating	IP65
Installation Type	Permanent installation Temporary installation
Calibration Frequency ²	Every 2 years
Warranty Period	12 Months

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas such as oil, moisture, particles or other impurities can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

Product Code



Dew point sensor comes with a measurement chamber and M12 connector as standard.

Standard sensor (no display) shown

Order Online



Dew Point Sensor – A Series

For desiccant dryers operating between -70°C and 0°C (-94°F and +32°F)



This alumina-oxide dew point sensor with self-calibration circuitry ensures industry leading accuracy and consistency of readings down to -80°C (-112°F).

The fast response time means you can see dew point changes sooner. The A Series sensor is suitable for a range of applications, including dryers, nitrogen generators and industrial gases.



Notes:

This dew point sensor is not recommended for gases with high contamination levels.
The sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Ultra-fast response time
- Long term stability
- Anti-condensation, anti-particulate pollution, oil vapour and most chemicals
- High humidity resistance

- IP65 rated
- Digital (Modbus) and Analogue (4-20mA) outputs
- Measurement chamber included as standard
- Optional integrated pressure transducer and in-built display



Specifications

Dew Point Sensor - A Series

Technology	Alumina-Oxide	EMC	According to IEC 61326-1
Dryer Type	Refrigerant, Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)	Alarm Relay Output	Standard Sensor (no-display): Not available Sensor with display: Normally open, 32 VDC/500 mA
Gases	Monoxide, Helium, Hydrogen, Nitrogen, Oxygen Dew Point: ±2°C	Display	Standard Sensor (no-display): Not available Sensor with display:
Accuracy ¹	Temperature: ±0.5°C Pressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C	Measurement Chamber	1/2" Quick coupling (Nitto type) with Adjustable Silencer G1/4" thread on measurement chamber
Minimum gas flow rate	> 1 L/min	Process Connection	ISO G 1/2" thread
Dew Point Measurement	-80°C to +20°C -112°F to +68°F	Ambient Temperature	-30°C to +70°C -22°F to +158°F
Pressure Measurement	0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with	Relative Humidity	0 to 95% RH
Gas Temperature Measurement	-40°C to +100°C -40°F to +212°F	Dimensions	Standard Sensor (no-display): 135 mm L x 35 mm W (5.3" L x 1.4" W) Sensor with display: 148 mm L x 67 mm W (5.8" L x 2.6" W)
Output	Analogue: 4 to 20mA Digital: RS485 Modbus / RTU Pressure Dew Point (PDP) Relative Humidity (RH)	Casing	Standard Sensor (no-display): Stainless Steel Sensor with display: Anodised Aluminium
Output Signals	Temperature (°C or °F) Optional integrated pressure	Sinter cap	Stainless steel mesh filter (filter level 70 um)
Analogue Output	Pressure Dew Point (PDP) only	IP Rating	IP65
	Standard Sensor (no-display):	Installation Type	Permanent installation Temporary installation
Power Supply	Current output Sensor with Display:	Calibration Frequency ²	Every 2 years
Electrical	Standard Sensor (no-display): 1 x 5 pin M12, female	Warranty Period	12 Months
Connection	Sensor with Display: 2 x 5 pin M12, female		

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.



Sensor with display shown



Dew Point Sensor – K Series

For dryers with dew point above -50°C (-58°F)





Notes:

This dew point sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Ultra fast response time
- Excellent long-term stability
- Anti-condensation, anti-particulate pollution, oil vapour and most chemicals
- IP65 rated

- High resistance to electrical disturbances
- Digital (Modbus) and Analogue (4-20mA) outputs

conditions

- Measurement chamber included as standard
- Optional integrated pressure transducer and in-built display

Specifications



Dew Point Sensor - K Series

Polymer sensor	ЕМС	According to IEC 61326-1
Refrigerant, Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)	Alarm Relay Output	Standard Sensor (no-display): Not available Sensor with display:
Air, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen, Oxygen		Normally open, 32 VDC/500 mA Standard Sensor (no-display):
Dew Point: ±2°C Temperature: ±0.5°C	Display	Sensor with display: 1.5" touch screen
Pressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C	Measurement Chamber	1/2" Quick coupling (Nitto type) with Adjustable Silencer G1/4" thread on measurement chamber
> 1 L/min	Process Connection	ISO G 1/2" thread
-60°C to +60°C (-76°F to +140°F)	Ambient Temperature	-30°C to +70°C -22°E to +158°E
0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with integrated pressure sensor	Relative Humidity	0 to 95% RH
-40°C to +100°C -40°F to +212°F Analogue: 4 to 20mA	Dimensions	Standard Sensor (no-display): 135 mm L x 35 mm W (5.3" L x 1.4" W) Sensor with display: 148 mm L x 67 mm W (5.8" L x 2.6" W)
Digital: RS485 Modbus / RTU Pressure Dew Point (PDP) Relative Humidity (RH) Temperature (°C or °F)	Casing	Standard Sensor (no-display): Stainless Steel Sensor with display: Anodised Aluminium
Optional integrated pressure transducer	Sinter cap	Stainless steel mesh filter (filter level 40-50 um)
Pressure Dew Point (PDP) only	IP Rating	IP65
Standard Sensor (no-display): 10 to 30V / 50 mA @ 24 V+ 4-20mA	Installation Type	Permanent installation Temporary installation
Current output Sensor with Display: 16 to 30vDC / 150 mA @24 V	Calibration Frequency ²	Every 2 years
Standard Sensor (no-display): 1 x 5 pin M12, female Sensor with Display:	Warranty Period	12 Months
	Polymer sensorRefrigerant, Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)Air, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen, OxygenDew Point: ±2°CTemperature: ±0.5°CPressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C> 1 L/min-60°C to +60°C (-76°F to +140°F)0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with integrated pressure sensor-40°C to +100°C -40°E to +212°FAnalogue: 4 to 20mA Digital: R5485 Modbus / RTUPressure Dew Point (PDP) Relative Humidity (RH) Temperature (°C or °F)Optional integrated pressure transducerPressure Dew Point (PDP) onlyStandard Sensor (no-display): 10 to 30V / 50 mA @ 24 V + 4-20mA Current output Sensor with Display: 16 to 30vDC / 150 mA @24 VStandard Sensor (no-display): 1 × 5 pin M12, female Sensor with Display:	Polymer sensorImage: Additional sensorEMCRefrigerant, Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)Alarm Relay OutputAir, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen, OxygenDisplayDew Point: ±2°CDisplayDew Point: ±2°CMeasurement ChamberTemperature: ±0.5°CPressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°CMeasurement Chamber> 1 L/minAmoient Temperature: ±0.5°CAmoient Temperature: ±0.5°C0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with integrated pressure sensorAmoient Temperature: Analogue: 4 to 20mAAmoient Temperature0 to 50 bar (725 psi) or 0 to 17 bar (246 psi) if fitted with integrated pressure sensorRelative HumidityMeasurement cerAmoient TemperatureAmoient TemperatureAnalogue: 4 to 20mADigital: R5485 Modbus / RTUBinter capPressure Dew Point (PDP) Relative Humidity (RH) Temperature (°C or °F)Sinter capOptional integrated pressure transducerInstallation TypeStandard Sensor (no-display): 10 to 30V / 50 mA @ 24 V + 4-20mA Current output Sensor with Display: 1 k 5 pin M12, femaleAilbration Frequency²Standard Sensor (no-display): 1 x 5 pin M12, femaleWarranty Period

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

Product Code



Dew point sensor with measurement chamber and optional 5 meter data cable with M12 connector.

Standard sensor (no display) shown

Order Online



Dew Point Sensor - Mini Series

Compact sensor for dryer with dew point above -50°C (-58°F)



This economical, compact dew point sensor is suitable for refrigerant, desiccant and membrane dryers.

The precision sensor design provides long-term, reliable, high-accuracy measurements. Its proven polymer film technology provides strong contamination resistance and the ability to withstand exposure to higher moisture levels.





Notes:

- This dew point sensor does not have a pressure sensor option.
- The sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Ultra fast response time
- Excellent long-term stability
- Resistant to condensation, particulate pollution, oil vapour and most chemicals
- IP65 rated

- Digital (Modbus) and Analogue (4-20mA) outputs
- High resistance to electrical disturbances
- Includes measurement chamber and 5 meter data cable with M8 connector as standard

Specifications

Dew Point Sensor - Mini Series

Technology	Polymer sensor EMC		According to IEC 61326-1	
Dryer Type	Refrigerant, Desiccant, Drum and Membrane dryers up to 4 MPa (600psi)	Alarm	No	
Gases	Air, Argon, Carbon Dioxide, Carbon Monoxide, Helium, Hydrogen, Nitrogen,	Display	No	
Accuracy ¹	Dew Point: ±2°C Temperature: ±0.5°C	Measurement Chamber	1/2" Quick coupling (Nitto type) with Adjustable Silencer G1/4" thread on measurement chamber	
	Pressure: ±0.3% full scale (at 23°C), ±0.01 bar/10°C	Process Connection	ISO G 1/2" thread	
Minimum gas flow rate	> 1 L/min	Ambient Temperature	-30°C to +70°C -22°F to +158°F	
Dew Point Measurement	-60°C to +60°C (-76°F to +140°F)	Relative Humidity	0 to 95% RH	
Pressure Measurement	0 to 50 bar (725 psi)	Dimensions	106 mm L x 28 mm W 4.2" L x 1.1" W	
Gas Temperature Measurement	-40°C to +100°C -40°F to +212°F	Casing	Stainless Steel or Aluminium	
Output	Analogue: 4 to 20mA Digital: RS485 Modbus / RTU	Sinter cap	Stainless steel mesh filter (filter level 40-50 um)	
Output Signals	Pressure Dew Point (PDP) Relative Humidity (RH)	IP Rating	IP65	
	Temperature (°C or °F)	Installation Type	Permanent installation	
Signals	Pressure Dew Point (PDP) only	Calibration	Every 2 years	
Power Supply	10 to 30V / 50 mA @ 24 V+ 4-20mA	Frequency ²		
Electrical Connection	1 x 5 pin M8, female	Warranty Period	12 Months	

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.





Mini dew point sensor comes with a measurement chamber and a 5 meter data with M8 connector as standard.

Aluminium casing shown

Order Online



Dew Point Monitor – P Series

Portable dew point and pressure sensor with data logger



Portable dew point meter, easy to install, easy to use. Simply connect the portable logger to your gas pipe via a 6 mm quick connect and start viewing / recording data.

Measure dew point, relative humidity and temperature at the same point. With the optional integrated pressure sensor, you can instantly test and adjust your dryer for optimal performance.



Notes:

• The sensor requires a minimum flow rate of > 1 L/min to operate effectively.

Key Features

- Super fast response time
- Long term stability
- Resistant to condensation, particulate contamination, oil vapours and most chemicals
- High resistance to electrical disturbance



Specifications



Dew Point Meter - P Series

	Quartz, Alumina-Oxide or Polymer
Technology	sensor (depending on the dew point
	range)
	Refrigerant, Desiccant, Drum, or
Dryer Type	Membrane dryers
	up to 4 MPa (600psi)
	Air, Argon, Carbon Dioxide, Carbon
Gases	Monoxide, Helium, Hydrogen, Nitrogen,
	Oxygen
	Dew Point (-20°C to -60°C) : ±2°C
Accuracy	Dew Point (-60°C to -110°C) : ±3°C
	Temperature: ±0.5°C
	Pressure: ±0.3% FS (at 23°C)
Minimum gas flow	
rate	> 1 L/min
	-110°C to 0°C (-166°F to +32°F) Or
Dew Point	-80°C to +20°C (-112°F to +68°F) Or
Measurement	-60°C to +60°C (-76°F to +140°F)
Pressure	
Measurement	0 to 17 bar (246 psi)
Gas Temperature	-40°C to +100°C
Measurement	-40°F to +212°F
Output	Modbus RS485
Display	18cm (7") LCD colour touch screen
	Pressure Dew Point (PDP)
	Relative Humidity (RH)
Display Signals	Temperature (°C or °F)
	Optional integrated pressure
	transducer

Data Logging	Yes	
Data Recording	Max 16G USB Flash Disk	
Power Supply	Standard wall socket, 220vAC , 10 W	
Electrical Connection	M12 PG Plug	
EMC	According to IEC 61326-1	
Process Connection	6 mm stainless steel quick connector	
Ambient Temperature	0 to +50°C 32 to +122°F	
Relative Humidity	0 to 95% RH	
Dimensions	346 mm L x 220 mm W X 103 mm D 13.6" L x 8.7" W x 4.1" D	
Casing	Hard Plastic Carry Case	
Installation Type	Temporary installation	
Calibration Frequency ²	Every 2 years	
Warranty Period	12 Months	

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas such as oil, moisture, particles or other impurities can affect the accuracy and calibration requirements.

² Dew point sensors require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.
Product Code



Flow Meters



Introduction

Flow meters are very popular for measuring compressed air and gas systems. Depending on where they are installed, flow meters can tell you the compressor output, factory consumption, identify peaks and troughs, as well as average usage.

When used well, flow metering can help keep your system under control and highlight any unusual activity or changes in usage.

Close attention should be paid to the installation location and contamination levels to ensure accuracy is maintained.

Benefits of monitoring flow

- Improve system efficiency
- Reduce system maintenance
- Reduce operating and energy costs
- Increase system understanding and operation
- Identify changes in system performance
- Identify non-productive air demand and leakage
- Identify peak and average demand

Applications

Flow meters are widely used in industry applications, including:

- Compressed air consumption measurement
- Process gas measurement, such as nitrogen, carbon dioxide, oxygen, natural gas, steam, etc.
- Gas consumption measurement for a single machine/plant

- Determination of gas leaks or leakage rate
- Chimney gas measurement or Flue
- Heating furnace gas measurement
- Oxygen and flare gas measurement

Key Features of Flow Sensors

Compressed Air Alliance flow sensors come with:

- 2.8" ultra-wide viewing angle LCD touch screen
- In built data logging with memory for up to 10,000,000 points
- Accuracy of ±1% reading, ±0.3% full scale
- Two outputs as standard:
 - Modbus (Digital)
 - 4-20mA (Analogue)
- Integrated gas temperature measurement
- Wireless configuration
- No moving parts
- Low pressure drop
- Stable signals
- Vibration resistance

Multiple Gas Options

Flow sensors are suitable for Air, Argon (Ar), Carbon Dioxide (CO2), Helium (He), Hydrogen (H), Natural Gas, Nitrogen (N), Nitrous Oxide (NO), Oxygen and Steam.

Flow Meter App - View data on your phone

The Compressed Air Alliance App allows you to view data and check / update settings on your phone.

This feature is great for viewing flow readings when your flow meter is installed in high locations.



Installation - Pitot Tube Flow Meters



- The system must have a flow velocity above 5 Nm/sec.
- The flow sensor **cannot** be installed upside down.



Product Range

Compressed Air Alliance offers four flow meters



Pitot Tube – Insertion Style

- Suited to wet compressed air or gas and, to a limited extent, dirty applications
- Flow range: 5 to 300 Nm/sec (17 to 984 ft/sec)
- Pressure range: 0 to 16 bar (232psi)
- Pipe Size: DN25 to DN60
- Can be installed on the outlet of compressors
- Easy to install under pressure through a 1/2" ball valve
- Requires a minimum flow velocity of 5 Nm/sec (17 ft/sec)

Thermal Mass – Insertion Style

- Suited to clean dry compressed air or gas
- Flow range: 0.1 to 250 Nm/sec (0.3 to 820 ft/sec)
- Pressure range: 0 to 50 bar (725psi)
- Pipe Size: DN20 to DN600
- Must be installed after a dryer
- Easy to install under pressure through a 1/2" ball valve

Thermal Mass – Inline Style

- Suited to clean dry compressed air or gas
- Flow range: 0.1 to 250 Nm/sec (0.3 to 820 ft/sec)
- Pressure range: 0 to 40 bar (600psi)
- Pipe Size: DN15 to DN80
- Must be installed after a dryer
- Ideal for permanent installations or where shutting down the system to install the sensor is not an issue



Product Range (Cont)





Vortex – Inline Style

- Suitable for gas OR steam
- Flow range: 1.5 to 300 Nm/sec (5 to 984 ft/sec)
- Pressure range: 0 to 63 bar (913psi)
- Pipe size: DN15 to DN 300
- Requires a minimum flow velocity of 1.5 Nm/sec (4.9 ft/sec)

Flow Range



Gas Velocity (Nm/s or ft/s)

Product Selector

	Insertion	Inermal Mass – Inline	Inermal Mass – Insertion	Vortex – Inline Style		
	All		AND AND			
Technology	Differential Pressure	Thermal mass	Thermal mass	Vortex		
Bi-directional	Optional	×	×	×		
Dry gas	\checkmark	\checkmark	\checkmark	\checkmark		
Wet gas	\checkmark	×	×	\checkmark		
Gas velocity	High	Medium	Medium	High		
Clean gas	✓	 ✓ 	✓	✓		
Dirty / contaminated gas	\checkmark	×	×	\checkmark		
Flow rate	5 to 300 Nm/sec 17 to 984 ft/sec	0.1 to 250 Nm/sec 0.3 to 820 ft/sec	0.1 to 250 Nm/sec 0.3 to 820 ft/sec	1.5 to 300 Nm/sec 5 to 984 ft/sec		
Pressure	0 to 17 bar (246psi)	0 to 16 bar (232psi) or 0 to 40 bar (580psi)	0 to 16 bar (232 psi) Up to 50 bar (725 psi) if using a retention cage	0 to 63 bar (913psi)		
Temperature measuring		-40°C to +150°C -40°F to +302°F		-40°C to +280°C -40°F to +536°F		
Flow	1	 Image: A set of the set of the	 Image: A set of the set of the	 Image: A set of the set of the		
Measurement Type	Volumetric	Mass Flow	Mass Flow	Volumetric		
Consumption	\checkmark	\checkmark	\checkmark	\checkmark		
Temperature	\checkmark	\checkmark	\checkmark	\checkmark		
Pressure	\checkmark	×	×	\checkmark		
Output Signals	Modbus (RS485) and 40-20mA					
Display	\checkmark	\checkmark	\checkmark	\checkmark		
Data logger	\checkmark	\checkmark	\checkmark	×		
Pipe Size	DN25 to DN600	DN15 to DN80	DN20 to DN600	DN15 to DN300		
Install under pressure	\checkmark	×	\checkmark	×		
Installation	Temporary or Permanent	Permanent	Temporary or Permanent	Permanent		

Pitot Tube – Insertion type

For wet & dirty or high velocity gases

Pitot tube measurement with patented anti-condensation technology

Pitot tube flow meters are ideally suited to wet, dirty, and high velocity compressed air and gas systems that contain some level of contamination. This makes pitot tube flow meters ideal for measuring flow, temperature, and pressure near the outlet of compressors and other difficult environments.

The extremely sensitive differential pressure measurement allows this sensor to be used over a wide flow range. The patented anti-condensation technology ensures the sensor can be used under saturated conditions.

The innovative auto-calibration technology compensates for temperature and pressure changes and ensures stable, accurate measurements for years to come.



Notes:

• Pitot tube flow meters require a minimum flow velocity of 5 Nm/s. Below this, the meter will read zero (0).

Key Features

- Data logging with 10,000,000 recording points
- No moving parts, low pressure drop
- Full electrical isolation to filter out disturbances
- Stable signals, vibration resistant
- Extremely sensitive differential pressure sensor
- Integrated pressure and temperature sensors for real-time monitoring of gas pressure and temperature
- Innovative auto-calibration function to compensate for temperature and pressure changes
- Anti-condensation technology
- Anti-particulate pollution technology and resistance to oil vapour and most chemicals
- Tube sensing technology to remove blockages

Flow Range

Pressure Range

Highlights



5 to 300 Nm/s | 17 to 984 ft/sec





Gas Types Wet and dry gas / High velocities



Installation

Insertion, can be installed under pressure

Specifications

Flow Meter - Pitot Tube

Technology	Pitot Tube Anti-condensation	Turndown Ratio	1:60
Gases	Air, Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Nitrous Oxide,	Power Supply	18 to 30V DC/6.5W @ 24V
Gas Quality	Oxygen Wet , dry, dirty, clean, non-corrosive and	Anti Condensate Power up	18 to 30V DC/24W @ 24V
	Flow: ±(1.5% RD + 0.3% FS)	Electrical Connection	2 × 5 pin M12, Female
Accuracy ¹	(contact us for higher accuracy) Pressure: ±0.5% FS Temperature: ±0.5°C	ЕМС	According to IEC 61326-1
Minimum gas flow rate	> 5 Nm/sec (> 17 ft/sec)	Process Connection	ISO G1/2" thread
Flow Measurement	5 to 300 Nm/sec 17 to 984 ft/sec	Pipe Size • 250 mm shaft • 400 mm shaft	DN25 to DN250 DN200 to DN600
Pressure Measurement	0 to 17 bar (246 psi)	Shaft Lengths	250 mm or 400 mm 9.8" or 15.7"
Gas Temperature Measurement	-40°C to +150°C -40°F to +302°F	Ambient Temperature	-20°C to +60°C -4°F to +140°F
Output	Analogue: 4-20mA Digital: Modbus RS485	IP Rating	IP65
Output Signals	Flow, Consumption, Pressure, Temperature	Installation Style	Insertion (can install in pressurised pipes)
Display	2.8" LCD touch screen	Installation Type	Permanent installation Temporary installation
Data Logging	10,000,000 samples	Calibration Frequency ²	Every 2 years
Sampling Rate	>20 samples per second	Warranty Period	12 Months
Bi-directional	Optional		

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Flow meters require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

Flow Range



Pitot Tube Flow Meter - Flow Rate 300 Nm/sec

Pipe Size		Flow Rang	e (Nm3/h)	Flow Range (cfm)	
DN	Inches	Min Flow	Max Flow	Min Flow	Max Flow
25	1″	8.8	530	5	312
32	1.25″	14.5	868	9	511
40	1.5″	22.6	1,357	13	798
50	2″	35.3	2,120	21	1,247
65	2.25″	59.7	3,583	35	2,108
80	3"	90.5	5,428	53	3,193
100	4"	141.4	8,482	83	4,990
125	5″	220.9	13,253	130	7,797
150	6"	318.1	19,085	187	11,228
200	8"	565.5	33,929	333	19,962
250	10"	883.6	53,014	520	31,190
300	12"	1,272.3	76,340	749	44,913



Product Code





Thermal Mass – Insertion type

For clean and dry gases, where shutting down the system is difficult



Insertion type thermal mass flow sensors are perfectly suited for measuring clean, dry compressed air and inert gases, where shutting down the system is difficult or impossible.

The streamlined design ensures minimal impact on gas flow while maintaining accuracy over a wide flow range. This thermal mass flow meter has full digital signal processing instead of a traditional analogue bridge design, making the flow meter more accurate and allowing a wider measuring range.

Suitable for DN20 to DN600 and can be installed through 1/2" ball valve under pressure.

Highlights Flow Range 0.1 to 250 Nm/sec | 0.3 to 820 ft/sec Pressure Range 0 to 16 bar | 0 to 232 psi Up to 50 bar with retention cage Gas Types Clean and dry gases Installation

Insertion, can be installed under pressure

Key Features

- Data logging with 10,000,000 recording points
- Measures standard flow, mass flow, consumption, and temperature
- Thermal mass flow technology, independent of temperature and pressure change
- Ultra-wide 1:2500 turn-down ratio, measurement range from 0.1 Nm/s to 250 Nm/s
- Full digital signal processing for higher precision and better stability
- Integrated gas temperature measurement
- Wireless sensor configuration
- No moving parts
- Minimal effect on gas flow
- Full electrical isolation to filter out disturbances
- Vibration resistant

Specifications

Flow Meter - Thermal Mass - Insertion

Technology	Thermal Mass
Gases	Air, Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Nitrous Oxide, Oxygen
Gas Quality	Dry, clean, non-corrosive gas
Accuracy ¹	Flow: ±(1.5% RD + 0.3% FS) (contact us for higher accuracy) Pressure: ±0.5% FS Temperature: ±0.5°C
Flow Measurement	0.1 to 250 Nm/sec 0.3 to 820 ft/sec
Pressure Measurement	0 to 16 bar (232 psi) Up to 50 bar (725 psi) if using a retention cage
Gas Temperature Measurement	-40°C to +150°C -40°F to +302°F
Output	Analogue: 4-20mA Digital: Modbus RS485 Full digital signal processing
Output Signals	Flow, Mass Flow, Consumption, Pressure, Temperature
Display	2.8" LCD touch screen
Data Logging	10,000,000 samples
Sampling Rate	>20 samples per second
Bi-directional	No

Turndown Ratio	Ultra-wide, 1:2500
Power Supply	18 to 30 vDC / 5W @ 24V
Electrical Connection	2 × 5 pin M12, Female
ЕМС	According to IEC 61326-1
Process Connection	ISO G1/2" thread
Shaft Lengths	250 mm or 400 mm 9.8" or 15.7"
Pipe Size • 250 mm shaft • 400 mm shaft	DN20 to DN250 DN200 to DN600
Ambient Temperature	-30 to +70°C -22 to +158°F
IP Rating	IP65
Installation Style	Insertion (can install in pressurised pipes)
Installation Type	Permanent installation Temporary installation
Calibration Frequency ²	Every 2 years
Warranty Period	12 Months

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Flow meters require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

Flow Range



Thermal Mass - Insertion Flow Meter - Flow Rate 250 Nm/sec

Pipe Size		Flow Range (Nm3/h)		Flow Range (cfm)	
DN	Inches	Min Flow	Max Flow	Min Flow	Max Flow
20	3/4"	0.1	282	0.1	166
25	1″	0.2	441	0.1	259
32	1.25″	0.3	723	0.2	425
40	1.5″	0.5	1,131	0.3	665
50	2″	0.7	1,767	0.4	1,040
65	2.5″	1.2	2,986	0.7	1,757
80	3″	1.8	4,523	1.1	2,661
100	4"	2.8	7,068	1.6	4,158
125	5″	4.4	11,044	2.6	6,498
150	6″	6.4	15,904	3.8	9,357
200	8″	11.3	28,274	6.6	16,635
250	10"	17.7	44,178	10.4	25,991
300	12″	25.4	63,617	14.9	37,428



Product Code

FLOW

Order Online



Thermal Mass – Inline type

For clean and dry gases in smaller pipes



Inline type, thermal mass flow sensors are perfectly suited for measuring clean, dry compressed air and inert gases, where accuracy on smaller pipe sizing is important.

The streamlined sensor tip design ensures minimal impact on gas flow while maintaining accuracy over a wide flow range.

Threaded pipe sections are available from DN15 to DN80.



Key Features

- Integrated 2.8" touch screen display
- Data logging with 10,000,000 recording points
- Measures standard flow, mass flow, consumption, and temperature
- Thermal mass flow technology, independent of temperature and pressure change
- Wide 1:2500 turn-down ratio, measurement range from 0.1 Nm/s to 250 Nm/s
- Full digital signal processing for higher precision and better stability

- Integrated gas temperature measurement
- Wireless sensor configuration
- No moving parts, low pressure drop
- Full electrical isolation to filter out disturbances
- Stable signals
- Vibration resistant

FLOW

Specifications

Flow Meter - Thermal Mass - Inline

Technology	Thermal Mass
Gases	Air, Argon, Carbon Dioxide, Helium, Hydrogen, Nitrogen, Nitrous Oxide, Oxygen
Gas Quality	Dry, clean, non-corrosive gas
Accuracy ¹	Flow: ±(1.5% RD + 0.3% FS) (contact us for higher accuracy) Pressure: ±0.5% FS Temperature: ±0.5°C
Flow Measurement	0.1 to 250 Nm/sec 0.3 to 820 ft/sec
Pressure Measurement	0 to 16 bar (232 psi) 0 to 40 bar (580 psi)
Gas Temperature Measurement	-40°C to +150°C -40°F to +302°F
Output	Analogue: 4-20mA Digital: Modbus RS485 Full digital signal processing
Output Signals	Flow, Mass Flow, Consumption, Pressure, Temperature
Display	2.8" LCD touch screen
Data Logging	10,000,000 samples
Sampling Rate	>20 samples per second
Bi-directional	No

Turndown Ratio	Ultra-wide, 1:2500
Power Supply	18 to 30 vDC / 5W @ 24V
Electrical Connection	2 × 5 pin M12, Female
ЕМС	According to IEC 61326-1
Process Connection	R thread
Pipe Size	DN15 to DN80
Ambient Temperature	-30 to +70°C -22 to +158°F
IP Rating	IP65
Installation Style	Inline
Installation Type	Permanent installation
Calibration Frequency ²	Every 2 years
Warranty Period	12 Months

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Flow meters require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

Flow Range



Inline Thermal Mass - Flow Rate 250 Nm/sec

Pipe Size		Flow Range (Nm3/h)		Flow Range (cfm)	
DN	ID (mm)	Min Flow	Max Flow	Min Flow	Max Flow
20	3/4"	0.1	282	0.1	166
25	1"	0.2	441	0.1	259
32	1.25″	0.3	723	0.2	425
40	1.5″	0.5	1,131	0.3	665
50	2"	0.7	1,767	0.4	1,040
65	2.5″	1.2	2,986	0.7	1,757
80	3"	1.8	4,523	1.1	2,661

Product Code



Order Online



Vortex – Inline type

For gas and steam



Vortex flow meters are perfectly suited for measuring the flow and consumption of inert gases and steam in both clean or dirty gas environments. With no moving parts, these sensors are both durable and easy to maintain.

The design of this meter allows for precise measurements of most gases and steam no matter how heavily contaminated. With built-in pressure and temperature sensors, all parameters of your gas or steam system are monitored in one unit, saving you install and maintenance costs. The integrated display allows installers to set the flow meter without any additional equipment and for users to read the information in real time right at the meter.

Pipe sections are available from DN15 to DN300.

Highlights



Flow Range 1.5 to 300 Nm/s | 5 to 984 ft/sec



Pressure Range 0 to 63 bar | 0 to 913 psi



Gas Types Wet and dirty gas



Installation Inline, ideal for permanent monitoring

Key Features

- Integrated 2" touch screen display
- Measures flow, pressure, and temperature
- Ultra-high sensitivity vortex probe
- Turn-down ratio well beyond traditional Vortex flow meters
- Full digital signal processing for higher precision and better stability
- No moving parts
- Full electrical isolation to filter out disturbances
- Vibration resistant
- All-welded construction for corrosion, high pressure and temperature resistance

Specifications

Flow Meter - Vortex

Technology	Vortex principle	Turndown Ratio	
Medium	lnert Gas Steam	Power Supply	
Gas Quality	Wet & Dirty or Clean & Dry non-corrosive gas	Electrical Connection	
Accuracy ¹	Flow: ±(1.5% RD + 0.3% FS) (contact us for higher accuracy) Pressure: ±0.5% FS	EMC	
Flow Measurement	1.5 to 300 Nm/s 5 to 984 ft/sec	Pipe Size	
Pressure Measurement	0 to 16 bar (232 psi) 0 to 63 bar (931 psi)	Ambient Temperature	
Gas Temperature Measurement	Gas: -40°C to +150°C (-40°F to +302°F) Steam: -40°C to +280°C (-40°F to +536°F)	IP Rating	
Output	Analogue: 4-20mA Digital: Modbus RS485 Full digital signal processing	Installation Type	
Output Signals	Flow, Consumption, Pressure, Temperature	Calibration Frequency ²	
Display	2.8" LCD touch screen	Warranty Period	
Data Logging	No		
Bi-directional	No		

¹ The accuracy and response time of the sensor can be affected by the on-site conditions. Contaminants in the gas, such as oil, moisture, particles or other impurities, can affect the accuracy and calibration requirements.

² Flow meters require calibration every 2 years, provided the sensor is not exposed to relative humidity above 85%. Annual calibration is required if the sensor is exposed to relative humidity above 85%. Compressed Air Alliance can arrange calibration for you.

1:53

18 to 30 vDC / 10W @ 24V

1 × 5 pin M12, Female

According to IEC 61326-1

Flange

DN15 to DN300

-40 to +85°C -40°F to +185°F

IP65

Inline

Permanent installation

Every 2 years

12 Months

Flow Range



Flow Meter - Vortex

Pipe Size		Flow Rat	te (m3/h)	Flow Rate (cfm)	
DN	Inches	Min	Мах	Min Flow	Max Flow
15	1/2	3.5	50.9	2.0	30.0
20	3/4	5.7	90.4	3.3	53.2
25	1	7.1	141.3	4.2	83.2
32	1.25	8.7	231.5	5.1	136.2
40	1.5	9.0	361.7	5.3	212.9
50	2	10.6	565.2	6.2	332.6
65	2.5	17.9	955.2	10.5	562.2
80	3	27.1	1,446.9	15.9	851.6
100	4	42.4	2,260.8	25.0	1,330.7
125	5	66.2	3,532.5	39.0	2,079.1
150	6	95.4	5,086.8	56.1	2,994.0
200	8	169.6	9,043.2	99.8	5,322.6
250	10	265.1	141,30.0	156.0	8,316.6
300	12	381.7	20,347.2	224.6	11,975.9

Product Code



FLOW



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Power Meters and Current Clamps



Introduction

Power Meters

Most factories use significant amounts of three-phase power to operate compressors and other equipment. To truly understand energy usage and efficiency, input (power) must be measured and compared to the output. Monitoring power consumption will give you a clear indication of the energy and cost of running your systems.

Power meters provide all the details required to ensure your system is running as efficiently and reliably as possible. Small variations in readings can indicate that much larger issues are starting to occur. Power meters will show you voltage (V), current (Amps) and kilowatts (kW) for each phase, calculate power factor (PF), kilovolt amps (kVa), total kilowatts (kW), kilowatt hours (kWh) and electrical system harmonics.

With a high data resolution, you can see the cyclic nature of load/unload compressors, the continuous draw of centrifugal compressors and understand the unique nature of your compressed air system, as well as getting a clear picture of how your compressors react to varying system demands.

Installing power meters on compressors is not difficult but should be done by suitably qualified and experienced technicians. Some knowledge of MODBUS communications is required to connect the power meters to your network.

Benefits of monitoring your compressor's power use

- Reduce operating and energy costs
- Improve understanding of energy usage (e.g. spikes, variation, usage)
- Identify phase and voltage issues
- Identify power factor and harmonic issues
- Compare and challenge your energy bill
- Improve efficiency and reduce waste
- Monitor your mains power supply usage and quality
- Monitor individual equipment usage or sub system loads
- Monitor transformer performance

Current Clamps

While current clamps are not as effective or accurate as power meters, the information they provide should not be underestimated, especially when your budget is limited. A simple current clamp installed on a single phase of a motor can show you how much energy your equipment uses and what opportunities may be available.

This style of power measurement will only give you the current draw of the phase being measured. To calculate your energy use and costs, you will need to estimate a power factor and voltage to get your Kilowatts and Kilowatt hours. Current clamps are often favoured in temporary measurement surveys due to their simplicity to install and remove even when the equipment is running. This reduces the impact of energy surveys on a site's operation.

Current clamps come with a 4-20mA or Modbus output and require minimal effort to install.

Product Range



Compressed Air Alliance offers three types of power meters and a Rogowski Coil with Integrator



Power Meter - No Display, Din Rail Mounting

- 3 phase power
- No display
- Din rail mounting
- Modbus output
- Power Supply = 24 vDC, 3.5 W
- Voltage Range = 100 to 500 vAC
- Comes with 3 Rogowski Coils (choice of 500 amps, 1,000 amps or 3,000 amps)



Power Meter – In-built Display, Din Rail Mounting

- 3 phase power
- In-built colour display
- Din rail mounting
- Modbus output
- Power Supply = 85 to 265 vAC/DC, 3.0 W
- Voltage Range = 100 to 500 vAC
- Comes with 3 Rogowski Coils (choice of 500 amps, 1,000 amps or 3,000 amps)



- 3 phase power
- In-built colour display
- Panel mount
- Modbus output
- Power Supply = 85 to 265 vAC/DC, 3.5W
- Voltage Range = 100 to 500 vAC
- Comes with 3 Rogowski Coils (choice of 500 amps, 1,000 amps or 3,000 amps)

Rogowski Coil with Integrator

- Single phase
- Measure Amps only
- 4-20mA or Modbus output
- Power Supply = 24 vDC
- Choice of 500 amps, 1,000 amps or 3,000 amps





Power Meter versus Current Clamp

	Din Rail with no display	Din Rail with display	Panel Mount	Current Clamp / Rogowski Coil			
Туре	Multi-fun	ction three (3) phase pov	ver meter	Single phase current			
Mounting	Din Rail	Din Rail	Panel Mount	Cable tie			
Display	×	✓	√	×			
Display Size	×	2" touch screen	3.5" touch screen	×			
Inputs / Coils	Rogowski coil - 500 Amps, 1,000 Amps or 3,000 Amps						
Outputs	Vi Pow Kilowatt ho	oltage, Amps and Kilowat er factor, kVa, total Kilow ours and electrical system	ts atts, harmonics	Amps for 1 phase			
Measured Voltage			NA				
Frequency		NA					
Power Supply	24 vDC, 3.5W	85 to 265 vAC/DC, 3W	85 to 265 vAC/DC, 3.5W	24 vDC			
Alarm	×	\checkmark	\checkmark	×			
Permanent Installation	✓	 Image: A second s	1	×			
Temporary Installation	×	×	×	√			

3 Phase Din Rail Power Meter – No display

For connecting to a remote display or into your data acquisition system



This single or three phase multi-function power meter with Modbus/RTU output is simple to install and easy to configure. Connect the power meter to a remote display or your data acquisition system. It can measure voltage, amps, kilowatts, power factor, kilowatt hours, kilovolt amps and harmonics. The power meter can be installed on the mains supply or can be used for sub-metering individual equipment or sub loads.

The power meter comes with 3 Rogowski coils (500 amps, 1,000 amps or 3,000 amps).

HighlightsImage: Stress Stress

Key Features

- Multi-function power meter
- Measure single or three phase power with the same meter
- DIN rail mounting

- Modbus/RTU output
- Easy to install Rogowski coil current transducers
- Can be installed on the mains supply
- Can be used for sub-metering individual equipment or sub load

Specifications

Power Meter - Din Rail without Display

Туре	Multi-function power meter suitable for power analysis and energy metering			
Mounting	Din Rail			
Pole Description	3PH4W 3PH3W 1PH2W (L-N) 1PH2W (L-L) 1PH3W (L-L-N)			
Display	No			
Input type	Rogowski coil - 500 Amps, 1,000 Amps o 3,000 Amps			
Output Signals	Voltage, Amps and Kilowatts Power factor, kVa, total Kilowatts, Kilowat hours and electrical system harmonics			
Harmonic	52nd max			
Sampling Rate	8,000 samples per second			
Voltage Range	100 to 500 vAC			
Frequency	50/60Hz			
Accuracy ¹	Voltage: ±0.2% (from 100to 500 vAC) Current: ±0.5% (accuracy not ensured when current <10A) Power Factor: ±0.005 from 10% to 120%			

Output	RS485 Modbus / RTU
Power Supply	24 vDC, 3.5W
Electrical Connection	Screw Terminal
Communication Protocol	RS485 Modbus RTU
IP Rating	IP20
Ambient Temperature	-25°C to +55°C -13°F to +131°F
Weight	152 grams
Dimensions	122 mm L x 87 mm W x 23 mm D 4.8" L x 3.4" W x 0.9" D
Installation Type	Permanent installation
Warranty Period	12 Months

¹ Accuracy of the power meter is affected by installation location and on-site conditions.

Rogowski Coils

	Rating	500 Amps	1,000 Amps	3,000 Amps	Rogowski coil specification	
	Colline of	500A	1,000A	3,000A	Lead Length	
Coll Length	200 mm 7.87"	350 mm 13.78″	510 mm 20.08″	Ambient Temperature		
	11/1	500 A	1,000A	3,000A	Read Accuracy	
Window size	50 mm 1.97"	100 mm 3.94"	150 mm 5.91"	Warranty Period		

Rogowski coil specification	85mV/kA@50Hz±0.5%
Lead Length	5 meters
Ambient Temperature	-30°C to +80°C -22°F to +176°F
Read Accuracy	< ±0.5% (central position, 25°C)
Warranty Period	12 Months



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3 Phase Din Rail Power Meter – With display

For measuring power, quality and energy of single or three phase equipment





This three-phase power meter with Modbus/RTU output is simple to install and easy to configure directly through the built-in display. It can be connected to your data acquisition system for long term monitoring.

The power meter can be installed on the mains supply and can be used for sub-metering individual equipment or sub loads.

Key Features

- Multi-function three phase power meter
- Built in display for easy reading and configuration
- DIN rail mounting
- Modbus/RTU output
- Easy to install Rogowski coil current transducers
- Measures Voltage, Amps, Kilowatts, Power factor, Kilowatt hours, Kilovolt Amps and harmonics
- 3 Rogowski coil current rating options (500 amps, 1,000 amps or 3,000 amps)
- Can be installed on the mains supply
- Can be used for sub-metering individual equipment or sub loads

Specifications



Power Meter - Din Rail with Display

Туре	Multi-function power meter suitable for power analysis and tariff meter		
Mounting	Din Rail		
	3PH4W		
	3PH3W		
Pole Description	1PH2W (L-N)		
	1PH2W (L-L)		
	1PH3W (L-L-N)		
Display	2-inch colour screen		
Input type	Rogowski coil - 500 Amps, 1,000 Amps of 3,000 Amps		
Output Signals	Voltage, Amps and Kilowatts Power factor, kVa, total Kilowatts, Kilowat hours and electrical system harmonics		
Harmonic	52nd max		
Sampling Rate	8,000 samples per second		
Voltage Range	100 to 500 vAC		
Frequency	50/60Hz		
Accuracy ¹	Voltage: ±0.2% (from 100 to 500 vAC) Current: ±0.5% (accuracy not ensured when current <10A) Power Factor: ±0.005 from 10% to 1209		

Output	RS485 Modbus / RTU		
Power Supply	85 to 265 vAC/DC, 3W		
Electrical Connection	Screw Terminal		
Alarm	Buzzer or Relay Voltage and current (each phase)		
Communication Protocol	RS485 Modbus RTU		
IP Rating	IP20		
Ambient Temperature	-25°C to +55°C -13°F to +131°F		
Weight	212 grams		
Dimensions	76 mm L x 95 mm W x 71 mm D 3.0" L x 3.7" W x 2.8" D		
Installation Type	Permanent installation		
Warranty Period	12 Months		

¹ Accuracy of the power meter is affected by installation location and on-site conditions.

Rogowski Coils

Rating	500 Amps	1,000 Amps	3,000 Amps
Coil Length	500A	1,000A	3,000A
	200 mm 7.87″	350 mm 13.78"	510 mm 20.08"
Window size	500 A	1,000A	3,000A
	50 mm 1.97"	100 mm 3.94"	150 mm 5.91"

Rogowski specificati	coil on	85mV/kA@50Hz±0.5%		
Lead Leng	th	5 meters		
Ambient Temperati	ıre	-30°C to +80°C -22°F to +176°F		
Read Accu	racy	< ±0.5% (central position, 25°C)		
Warranty	Period	12 Months		



Product Code



70

3 Phase Panel Mount Power Meter - With display

For panel mount installations where instantaneous readings are required



Highlights



In-Built Display 3.5 Inch TFT screen display



Phases 3 phase, multifunction

85 to 265V vAC/DC, 3.5W



Power

Panel Mount

This single or three (3) phase panel mounted power meter is ideal for installation on main or sub-distribution boards where readings need to be accessed without opening the panel. The Modbus RTU output can be connected to your data acquisition system for easy access to data remotely.

The power meter can be installed on the mains supply and can be used for sub-metering individual equipment or sub loads.

Key Features

- Multi-function power meter
- Measure single or three phase power
- Panel mount
- Built in display for easy reading and configuration
- Modbus/RTU output
- Easy to install Rogowski coil current transducers
- Measures voltage, amps, frequency, power factor, real power, reactive power, apparent power and harmonics
- 3 Rogowski coil current rating options (500 amps, 1,000 amps or 3,000 amps)
- Can be installed on the mains supply
- Can be used for sub-metering individual equipment or sub load

Specifications

Power Meter - Panel Mount with Display

Туре	Multi-function power meter suitable for power analysis and energy meter		
Mounting	Panel Mount		
Poles Description	3PH4W 3PH3W 1PH2W (L-N) 1PH2W (L-L) 1PH3W (L-L-N)		
Display	3.5 Inch TFT screen display		
Input type	Rogowski coil - 500 Amps, 1,000 Amps or 3,000 Amps		
Output Signals	Each Phase: Voltage, Amps and Kilowatts Calculated: power factor, kVa, total Kilowatts, Kilowatt hours and electrical system harmonics		
Harmonic	52nd max		
Sampling Rate	8,000 samples per second		
Measured Voltage	100 to 500 vAC		
Frequency	50/60Hz		

curacy ¹	Voltage: ±0.2% (from 100 to 500 vAC) Current: ±0.5% (accuracy not ensured when current <10A) Power Factor: ±0.005 from 10% to 120%
itput	RS485 Modbus / RTU
wer Supply	85 to 265 vAC/DC, 3.5W
ectrical nnection	Screw Terminal
	Relay
arm	Voltage and current (each phase)
mmunication otocol	RS485 Modbus RTU
Rating	IP20
nbient	-25°C to +55°C
mperature	-13°F to +131°F
eight	350 grams
	96 mm L x 96 mm W x 99 mm D
mensions	3.8" L x 3.8" W x 3.9" D
tallation Type	Permanent installation
arranty Period	12 Months

Accuracy of the power meter is affected by installation location and on-site conditions.

Rogowski Coils

Rating	500 Amps	1,000 Amps	3,000 Amps	Rogowski coil specification
Coll I an ath	500A	1,000A	3,000A	Lead Length
Coll Length	200 mm 7.87"	350 mm 13.78″	510 mm 20.08″	Ambient Temperature
Window size	500 A	1,000A	3,000A	Read Accuracy
	50 mm 1.97"	100 mm 3.94"	150 mm 5.91"	Warranty Period

gowski coil ecification	85mV/kA@50Hz±0.5%
ad Length	5 meters
nbient mperature	-30°C to +80°C -22°F to +176°F
ad Accuracy	< ±0.5% (central position, 25°C)
arranty Period	12 Months

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Rogowski Coil – With Integrator

For single phase permanent or temporary measurements



With a large flexible coil, this Rogowski Coil is an excellent solution compared to traditional cumbersome spilt coil CTs. The coil is shielded against the influence of external magnetic fields and is suitable for high power load analysis, impulsive current monitoring, and DC ripple measurements. The inline integrator amplifies and converts the coil's output to either 4-20mA or Modbus for a simple connection to your display or data acquisition system.

Rogowski Coils can be fastened by cable ties for permanent installs.



- Power: 24vDC
- Two output options:
 - 4-20mA or
 - Modbus
- Three rated options: 500, 1,000 or 3,000 Amp
- 8 mm flexible coil for easy install
- Can be fastened by cable ties for permanent installs
- High linearity
- Wide dynamic range
- Low power consumption
- Non-intrusive and draw no power from the main circuit
- 5m cable included
- Cable position adjustment to accuracy ±1%



Rogowski Coil with Integrator

Mounting	Cabl	e Tie
Display	Νο	
Display Type	NA - configure directly into a remote dis	play or into your data acquisition system
Rogowski Coil Ratings	500Amps, 1,000 A	Amps, 3,000 Amps
Output	An	nps
Response Time	Default: 100 n	ns (adjustable)
Bandwidth	4-20mA: 30 Modbus: 30	0Hz to 1kHz 0Hz to 5kHz
Minimum Current Measurement	1 A	mp
Accuracy ¹	1% typical at 1%(≥10A) to 200% of rated Current @25C	
Phase Error	≤0.5°	
Output Signal	4-20mA (Analogue) Output or RS485 (Modbus) RTU Output	
Power Supply	24vDC	
Power Consumption	0.5W	
IP Rating	IP20	
Operating temperature	-20°C to +70°C	-4°F to +158°F
Installation Type	Permanent installation or temporary installation	
Warranty	12 months	

¹ Accuracy of the power meter is affected by installation location and on-site conditions.



Product Code





Pressure Sensors



Introduction

Virtually every gas system has some form of low pressure warning. When the warning is triggered, it's usually too late to prevent the machine shutting down, resulting in lost production time. If this happens often enough, the supply is often set to a higher pressure value to alleviate the problem. This increases the overall running cost of the system through artificial demand loading.

There are several potential problems that can cause low pressure warnings to trigger, from equipment reaction time, high peak demands or simply restrictions in the filters and supply lines. Continuously monitoring pressure can highlight the exact cause, helping you target activities to resolve that issue.

How many pressure sensors do I need for compressed air?

You will need at least:

- one (1) pressure sensor on the **supply side** of the system to monitor the output and
- one (1) on the **demand side** of the system to measure the supplied pressure.

You could use differential pressure transducers across filters, dryers and other pressure loss systems, or you can mount additional pressure transmitters to calculate the difference. The choice is yours but either way, you will have a much clearer picture of what is going on in your system.

Where should pressure transducers be located?

Apart from the supply and demand sides of the main equipment, it usually pays to have pressure transducers near any high consumers and at the far ends of the system. This will assist you in identifying issues occurring downstream of your supply.

Easy to connect

Pressure Transmitters and Differential Pressure Transducers are simple 4-20mA or Modbus output sensors that easily connect to any monitoring system.

Benefits of monitoring pressure

- Monitor system pressures in real time
- Improve system efficiency
- Avoid financial losses from downtime and critical equipment stoppage
- Plan maintenance and rectification activities in advance and prevent expensive failures



Dynamic v Static Pressure

Static and dynamic pressure will give different readings. It is important to know which pressure you want to measure as this will affect where you install the sensor. For most applications, you will measure static pressure.

To measure Static pressure - install the sensor adjacent/perpendicular to the flow.

To measure **Dynamic pressure** - install the sensor inline with the direction of flow.



Product Range

Compressed Air Alliance offers two pressure sensors



Pressure Range: 0 – 16 bar

- Pressure range of 0 16 bar (0 232 psi)
- Modbus output (RS485) and Analogue output (4-20mA)
- Accuracy = ±1%



Pressure Range: 0 – 50 bar

- Pressure range of 0 50 bar (0 725 psi)
- Analogue output (4-20mA)
- Accuracy = ±1%

Product Selector

	0-16 Bar	0-50 Bar
		No. 2014 No.
Technology	Ceramic core, resistant to moisture	
Pressure	0 to 16 bar (232psi)	0 to 50 bar (725psi)
Output	Analogue: 4-20mA Modbus (RS485)	Analogue: 4-20mA
Output Signal	Press	sure
Dimensions	100 mm L x 33 mm W 3.9" L x 1.3" W	68 mm L x 22 mm W 2.7" L x 0.9" W
IP Rating	IP65	IP65
Permanent Installation	\checkmark	\checkmark
Temporary Installation	\checkmark	\checkmark

Pressure Transmitter – **16 bar**

For pressure measurement in compressed air and gas systems



	Highlights
	Pressure Range 0 to 16 bar 0 to 232 psi
∞°	Outputs 4-20mA and Modbus
G	Power 24vDC

This easy to install pressure sensor is perfectly suited for installation on liquid or gas systems.

The sensor can be installed on both wet and dry gases up to 16 bar (232 psi). The sensor has two output options – 4-20mA and Modbus.

- Pressure range: 0-16 bar (232 psi)
- Easy to install and wire
- Stainless Steel Casing
- Two output options:
 - 4 20mA loop powered output
 - Modbus Output

- 24vDC powered
- IP65 rated
- Operating range between -30°C to +80°C
- M12 Connector with 5m Cable option
- 12 month warranty

Pressure Sensor - 16 Bar (232 psi)

Technology	Ceramic core, resistant to moisture	
Pressure	0-16 bar	0-232 psi
Accuracy ¹	±1%	
Ambient temperature	-30°C to +80°C	-22°F to +176°F
Output	Analogue: 4 to 20mA (2 wire)	
Output Signal	Pressure	
Power Supply	≤10mA, 24V DC	
Electrical Connection	5 pin M12, female	
Casing	Stainless Steel	
IP Rating	IP65	
Process Connection	ISO G1/4" thread	
Dimensions	100 mm L x 33 mm W	3.9" L x 1.3" W
Installation Type	Permanent or temporary installation	
Calibration Frequency ²	Every 2 years	
Warranty Period	12 m	onths

¹The accuracy of the sensor is affected by on-site conditions. Contaminants such as oil, high humidity or other impurities can affect the calibration and accuracy of the sensor.

² Pressure transmitters require calibration every 2 years (provided the sensor is not exposed to relative humidity above 85%). Compressed Air Alliance can arrange calibration for you.



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Pressure Transmitter – **50 bar**

For pressure measurement in liquid and gas systems



	Highlights
	Pressure Range 0 to 50 bar 0 to 725 psi Outputs
(Q)	4-20mA Power 24vDC

This easy to install two wire, 4-20mA pressure transmitter is perfectly suited for installation in liquid and gas systems.

The sensor can be installed in liquids and gases up to 50bar(g).

- Pressure range: 0-50 bar (725 psi)
- Easy to install and wire
- Stainless Steel Casing
- 4 20mA loop powered output
- 24vDC powered

- IP65 rated
- Operating range between -30°C to +80°C
- M12 Connector with 5m Cable option
- 12 month warranty



Pressure Sensor - 50 Bar (725 psi)

Technology	Ceramic core, resistant to moisture	
Pressure	0-50 bar	0-725 psi
Accuracy ¹	±1%	
Ambient temperature	-30°C to +80°C	-22°F to +176°F
Output	4-20mA (2 wire)	
Output Signal	Pressure	
Power Supply	≤10mA, 24V DC	
Electrical Connection	4 pin M12, female	
Casing	Stainless Steel	
IP Rating	IP65	
Process Connection	ISO G1/4" thread	
Dimensions	68 mm L x 29 mm W	2.7" L x 0.9" W
Installation Type	Permanent or temporary installation	
Calibration Frequency ²	Every 2 years	
Warranty Period	12 months	

¹ The accuracy of the sensor is affected by on-site conditions. Contaminants such as oil, high humidity or other impurities can affect the calibration and accuracy of the sensor.

² Pressure transmitters require calibration every 2 years (provided the sensor is not exposed to relative humidity above 85%). Compressed Air Alliance can arrange calibration for you.



Product Code

Order Online





Temperature Probes



Introduction

Temperature probes are used to measure the temperature of liquids, gases (including ambient air), compressed air, and other mediums.

Almost every piece of equipment comes with recommended operating conditions for optimal performance; including a temperature range for any input or cooling mediums such as fluids, ambient conditions or environmental considerations.

Understanding the temperature your equipment operates at can help to prevent issues with equipment failures, diagnose problems, improve performance, and optimise efficiency. Temperature sensors can be used in conjunction with other control equipment to trigger processes such as when a specific temperature is reached or switch on cooling equipment when systems are starting to overheat.

About the Sensor

Compressed Air Alliance's temperature probes are easy to install. The probes can be suspended in the ambient environment, or the probe can be inserted directly into the medium being measured, such as gases or liquids flowing in pipework or ducting.

Product Range

Compressed Air Alliance offers two types of temperature probes



Temperature Probe - Analogue

For measuring temperature in gas and liquid systems or ambient conditions



Compressed Air Alliance's 4-20mA sensor is easy to install and requires no additional configuration. The probe can be suspended in the ambient environment, or inserted directly into the medium being measured, such as gases or liquids flowing in pipes.

Highlights



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



Dimensions

Probe Length = 150 mm (6.0'')Probe Diameter = 8 mm (5/16")



24 vDC

Output

4-20mA, 2 wire

- Pt100 sensor
- Wide measurement range: -50°C to +200°C (-58°F to +392°F)
- M12 connector (4 pin)
- 4-20mA output signal
- Probe length = 150 mm (6.0")
- Probe Diameter = 8 mm (5/16")

- Power = 24vDC
- High Accuracy
- IP65
 - Shockproof
 - Stable for a long time
 - High mechanical strength
 - Good pressure resistance, ≤ 300 bar (4,351 psi)

Temperature Probe - Analogue output

Measuring principle	Pt1	00
Measuring range	-50°C to +200°C	58°F to +392°F
Accuracy ¹	±0.25	5%FS
Output	4-20mA	
Power Supply	24 vDC	
Material	Stainless Steel	
IP Rating	IP65	
Process Connection	ISO G1/4" thread	
Electrical Connection	4 pin M12, female	
Pressure resistance	≤ 300 Bar (4,351 psi)	
Probe Length	150 mm	6.0"
Probe Diameter	8 mm	5/16"
Dimensions	222 mm L x 30 mm W	8.74" L x 1.18" W
Installation Type	Permanent or temporary installation	
Calibration Frequency ²	Every 2 years	
Warranty Period	12 months	

¹ The accuracy of the sensor is affected by on-site conditions. Contaminants such as oil, high humidity or other impurities can affect the calibration and accuracy of the sensor.

² Temperature sensors require calibration every 2 years. Compressed Air Alliance can arrange calibration.



Order Online



Temperature Probe – Modbus

For measuring temperature in compressed air and gas systems



Compressed Air Alliance's Modbus temperature probe is easy to install and configure. The probe can be suspended in the ambient environment, or inserted directly into the medium being measured, such as gases or liquids flowing in pipes.



- Pt100 sensor
- Wide measurement range: -50°C to +200°C (-58°F to +392°F)
- M12 connector (5 pin)
- Modbus (RS485) output signal
- Probe length = 150 mm (6.0")
- Probe Diameter = 8 mm (5/16")

- Power = 24vDC
- High Accuracy
- IP65
 - Shock proof
 - Stable for a long time
 - High mechanical strength
 - Good pressure resistance, ≤300 bar (4,351 psi)



Temperature Probe - Modbus output

Measuring principle	Pt100	
Measuring range	-50°C to +200°C	58°F to +392°F
Accuracy ¹	±0.25%FS	
Output	Modbus RS485	
Power Supply	24V DC	
Material	Stainless Steel	
IP Rating	IP65	
Process Connection	ISO G1/4" thread	
Electrical Connection	5 pin M12, female	
Pressure resistance	≤ 300 Bar (4,351 psi)	
Probe Length	150 mm	6.0″
Probe Diameter	8 mm	5/16"
Dimensions	310 mm L x 30 mm W	12.2" L x 1.18" W
Installation Type	Permanent or temporary installation	
Calibration Frequency ²	Every 2 years	
Warranty Period	12 months	

¹ The accuracy of the sensor is affected by on-site conditions. Contaminants such as oil, high humidity or other impurities can affect the calibration and accuracy of the sensor.

² Temperature sensors require calibration every 2 years. Compressed Air Alliance can arrange calibration.



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Condensate Drains



Introduction

Anyone that owns and operates a compressed air system knows they generate vast amounts of condensate. Managing this moisture load is critical to the long term reliability and operation of the entire system and all its related equipment. Failure to do so results in downstream moisture events that can contaminate products, cause significant damage, and creates long term reliability issues through corrosion and contamination.

It is common to see timed drains used to remove condensate at critical points on the supply side of the system. As these operate on a set timer, they are adjusted for the worst case scenario and never looked at again unless there is a moisture event downstream. Valuable compressed air is dumped every time these types of drains operate, resulting in increased operating costs and losses in system efficiency.

Zero loss drains are far more effective at removing condensate from compressed air systems while maintaining system efficiency. The level sensing ability of these drains means they automatically adjust to the amount of condensate being generated at any point in time. The alarm functionality alerts the appropriate personnel to a potential failure before the system becomes overwhelmed with condensate.

Where to install a drain?

Condensate drains are possibly the least glamorous and most ignored but most critical component of a compressed air system. No matter how much money you spend on that fancy new system, spending little effort with your drain choice could cause you no end of headaches and increased operating costs for years to come.

The most critical of these are:

- Compressors Depending on the model, your compressor can have anywhere from zero to four condensate drains.
- Refrigerant Dryers These are often the most neglected of drains; a typical refrigerant dryer will have up to three condensate drains
- Receivers One of the most important locations is the wet receiver. Most receivers only have a single condensate drain. Its failure can cause catastrophic downstream issues.
- Filters Like receivers, filters only have a single condensate drain. Flooding a wet side filter will cause

premature failure. Most dry side filters have a very small if any liquid loading capability so its important to keep them dry.

• Drip Legs – These are often the last line of defence before condensate reaches your equipment. As these are only operated when there has been a failure upstream, they are often neglected until it is too late.

Zero loss condensate drains

Compressed Air Alliance's electronic zero loss condensate drains automatically detect the level of condensate in the system and open /close accordingly. The drains are robust and designed for long life heavy duty applications. Maintaining the drains is low cost and easy to perform on site without any special tooling or equipment. The alarm contact allows the connection of an indicator light or siren to immediately alert personnel of a condensate drain failure.

Our condensate drains can be applied in both oil lubricated and oil free compressor applications.

Benefits of installing electronic zero loss condensate drains

- Zero air loss draining solution saves air, energy and money
- Rapid pay-back period
- No need to rely on staff to manually open or close drains
- Drain automatically operates based on the level of condensate generated
- No sizing charts required
- Reliable, easy to install and maintain

Key Features electronic zero loss condensate drains

- Alarm function (N/O or N/C)
- LED illuminated sight-port/level indicator shows you the condensate level inside the reservoir, enabling you to monitor the drains operation, even in poorly lit places.
- Successful draining of all types of condensates
- Easy installation and visual display of operating status
- Integrated mesh strainer
- Direct acting valve assembly, ensuring reliable discharge operation
- Robust corrosion resistant aluminium housing
- Easy and quick to service

Product Range

Compressed Air Alliance offers two types of condensate drains

	Compact Drain Standard Drain	
Technology	Electronic zero air loss drain with alarm function	
Compressed air system capacity	up to 10 m³/min (350 CFM)	up to 100 m³/min (3500 CFM)
Max Drainage capacity	45 litres condensate per hour (at 16 bar)	665 litres condensate per hour (at 16 bar)
System Pressure	0 to 16 bar (232psi)	
Alarm	✓	✓
Supply Voltage	230VAC or 24VDC or 24vAC	
Inlet Connection	1/2" BSP	1/2" BSP
Outlet Connection	1/4" BSP with brass hose barb	
Dimensions	123 mm x 92 mm x 74 mm 4.8" x 3.6" x 2.9"	179 mm x 114 mm x 87 mm 7.0" x 4.5" x 3.4"
Permanent Installation	\checkmark	\checkmark

Compact Condensate Drain

For compressed air system capacity up to 10 m³/min (350 CFM)



The Jorc Kaptiv-MD-A is an exceptionally versatile and compact condensate drain. This electronic zero air loss drain is suitable for pressure ranges between 0 to 16 bar (232 psi) and is available in 24vAC, 24vDC or 240vAC. The drain can be applied in oil lubricated as well as oil-free applications.

The maximum compressor capacity of this drain is 10 m3 / min (350 CFM). Typical draining applications include fridge dryers and filters – mainly due to its incredibly compact size and weight. The drain comes with a normally open (N/O) or normally closed (N/C) alarm feature (potential free relay).

With features such as a test button, LED power indication, and automatic blockage detection, this energy saving electronic drain is the optimum choice for reliable condensate removal when space is limited (overall height only 74 mm).

Highlights



- Extremely compact and lightweight unit
- True zero air loss solution
- One model covers all compressor capacities up to 10 m³/min
- No sizing chart required
- Suitable for both oil lubricated and oil-free applications
- Easy to maintain and service
- Visual alarm (LED indication)

- Alarm feature (potential free relay)
- Easy to install
- Long service life
- Direct acting valve with FPM seal
- Robust corrosion resistant aluminium housing
- A large integrated mesh strainer



Compact Condensate Drain

Maximum	10 m³/min.
Capacity	350 CFM
Maximum Drainage Capacity	45 litres condensate per hour at 16 bar
System Pressure	0 - 16 bar 0 - 232 psi
Ambient Temperature	+1 to +50 °C +34 to +122 °F
Supply Voltage	230vAC or 24vDC or 24vAC
Electrical Connector (Power & Alarm)	Din 43650-B
Inlet Connection	1/2" BSP
Inlet Height	74 mm 2.9"
Outlet Connection	1/4" BSP, with brass hose barb adapter
Valve Type	2/2 way, direct acting
Valve Orifice	2 mm 0.08″
Valve Seals	FPM

Serviceable Valve	Yes
Visual Alarm	Yes, LED indicator
Alarm Feature	Normally Open or Closed
IP Rating	IP65
Integrated Mesh Stainer	Yes
Test Feature	Yes
Dimensions	123 mm x 92 mm x 74 mm 4.8" x 3.6" x 2.9"
Housing	Corrosion resistant aluminium, EP coating
Installation Type	Permanent installation
Warranty Period	12 months



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Standard Condensate Drain

For large compressed air system capacity up to 100 m³/min. (3500 CFM)



The Jorc Kaptiv-CS condensate drain is designed for larger compressed air applications up to 100 m3/min (3500 CFM). The drain is suitable for pressure ranges between 0 to 16 bar (232 psi) and is available in 24vAC, 24vDC or 230vAC. The Kaptiv-CS can be applied in oil lubricated as well as oil-free applications.

This electronic zero air loss drain with an alarm offers a rapid pay-back period. The robust industrial housing, direct acting valve with a large orifice, alarm feature and the integrated mesh strainer make the Standard Condensate Drain a highly reliable draining solution.

Equipped with a digital, LED illuminated, sight-port/ level indicator showing you the condensate level inside the reservoir which enables you to monitor the drain's operation, even in poorly lit places.

Highlights



Compressed Air System up to 100 m3/min (3500 CFM)

Power Options 24vDC, 24vAC, 230vAC

Pressure

Features Alarm Output Digital Level Indicator Zero Loss Electronic Drain

0 to 16 bar (232 psi)

- True zero air loss solution save air, energy and money
- One model covers all compressor capacities up to 100 m³/min
- No sizing chart required
- Suitable for both oil lubricated and oil-free applications
- Suitable for installation on compressors, dryers, filters, receivers, and drip legs
- Successful draining of all types of condensate due to large orifice

- Easy to install and maintain
- Visual alarm (LED indication)
- Alarm feature (potential free relay) incorporated
- Direct acting valve assembly ensuring reliable discharge operation
- Robust corrosion resistant aluminium housing
- Integrated mesh strainer

Standard Condensate Drain

Maximum	100 m³/min.
Capacity	3,500 CFM
Maximum Drainage Capacity	665 litres condensate per hour at 16 bar
System Pressure	0 - 16 bar 0 - 232 psi
Ambient Temperature	+1 to +50 °C +34 to +122 °F
Supply Voltage	230VAC or 24VDC or 24vAC
Electrical Connector (Power & Alarm)	Din 43650-B
Inlet Connection	1/2" BSP
Inlat Usiaht	Top: 110 mm 4.3"
iniet Height	Side: 75 mm and 15 mm 3.0" and 0.6"
Outlet Connection	1/4" BSP, with brass hose barb adapter
Valve Type	2/2 way, direct acting
Valve Orifice	4 mm 0.16"

Valve Seals	FPM
Serviceable Valve	Yes
Visual Alarm	Yes, LED indicator
Alarm Feature	Normally Open or Closed
IP Rating	IP65
Integrated Mesh Stainer	Yes
Test Feature	Yes
Dimensions	179 mm x 114 mm x 87 mm
	7.0" x 4.5" x 3.4"
Housing	Corrosion resistant aluminium, EP coating
Installation Type	Permanent installation
Warranty Period	12 months



Order Online



Dust Collector Controllers



Introduction



Dust Collectors and Bag Houses are typically sized to meet the peak demands of a sites production requirements. Cleaning of the bags/filters is left to a simple on/off timer that needs to be set to match the worst case scenario otherwise the collector will block and fail. That means during lower production periods the collector is still working just as hard and consuming excessive amounts of compressed air with every pulse.

The Compressed Air Alliance dust collector controller can be retrofitted to any collector with solenoid-controlled pulse valves. Our controller uses differential sensor control technology to sense the dust load on the collector by measuring the level of blockage in the filters and only pulses them when required, thus automatically adjusting to the dust load.

The unique tube cleaning function ensures the dust level sensing is maintained under all conditions ensuring your collector is always pulsing at the optimum rate. You can save up to 50% of the compressed air being used by the collector and extend filter life by more than 30% simply because the pulsing is reduced to meet the demand.

Easy to install

The controller can be retrofitted to any existing dust collector in a very short time and the savings start as soon as the controller is powered up.

Installing dust collector controllers is not difficult but should be done by suitably qualified and experienced technicians.

Selecting the right controller

When selecting the correct dust collector controller, match the:

- available input power type and voltage (240VAC or 24VDC for example),
- number of pulse valves, and
- ratings of the solenoid valves (240VAC or 24VDC for example).

Selecting the wrong controller or solenoid valves could result in damage to the equipment or solenoid valves.

Optimising your dust collector

Optimising your dust collector will:

- improve dust collector performance
- result in fewer cleaning cycles
- reduce maintenance hours
- use up to 50% less compressed air
- extend filter life
- reduce energy costs
- reduce carbon emissions



Dust Collector Controller



The demand based dust collector controller is suitable for industrial dust collectors or bag houses. It will reduce dust collector compressed air use between 10-50%

The differential pressure sensor optimises the pulse cleaning cycle to match the dust load. The tube clearing cycle ensures the differential pressure is always accurately monitored for long term dust collector performance. Alarm functionality helps identify failed or misfiring valves.



- Reduce dust collector compressed air use between 10-50%
- Metal Enclosure
- The basic unit has 10 valves with extensions available for up to 60 valves
- Adjustable pressure levels
- Adjustable pulse duration

- Maintenance mode for pulse valve fault diagnosis
- Two voltage options 24vDC or 100-240vAC
- Data Output
- Alarms Solenoid Failure, Differential Pressure, Low pressure and Broken bag detection (with optional dust sensor)



Applications	Dust collectors or bag houses with solenoid control pulse valves
Display	LCD Display
Valve sequencing	Sequential or Arbitrary Series or Parallel
Modes of operation	On Demand or Timed
Fault Diagnostics	Maintenance mode (ability to pulse valves and determine fault status)
	Solenoid valve electrical short and open circuit detection
	Diaphragm valve mechanical fault detection (requires pressure switch)
	Broken bag detection (requires dust probe)
Power supply	100 to 240 VAC or 24 VDC Others by request
Voltages	AC In / DC Out In: 100VAC to 240VAC Out: 24VDC
	DC In / DC Out In: 24VDC Out: 24VDC
	AC In / AC Out In: 100VAC to 240VAC Out: Same as input voltage
Number of valves	Up to 60 valves
ON Time	50 – 999 milliseconds (ms)
OFF Time 1	1 – 999 seconds (s)
OFF Time 2 (fast)	1 – 999 seconds (s)
Pulsing mode	Sequential or Arbitrary (user defined)
Clean after shut-	1 - 255 cycles

Autocycle Forced Pulsing	1 - 24 hours (adjustable)
Differential Pressure	KPa, mm H2O or inWG
Jltra low level	Unit in Standby
ow DP level	Pulsing stops
High DP level 1	Pulsing starts
High DP level 2	Pulses faster
Alarm level	Local and remote, General and Critical
Tube Cleaner	Duration (sec) and interval (mins)
nput Sensor Types	Dust Probe, pressure sensor, pressure switch, level probe
Solenoid valves	100 to 240 VAC or 24 VDC
System active relay	Dry contact (NO/NC)
Differential pressure	4-20mA
Output relays	4 output relays. System active, general alarm, critical alarm, faulty coils
Fransmission mode	RS485 port
RS485 link	2 wire (master and slave comms)
Coms protocol	MODBUS RTU
Casing	Metal Enclosure
nstallation Гуре	Permanent installation
Warranty Period	12 months



Leak Detection


Introduction

Conducting compressed air leakage projects is essential for facilities to reduce costs, increase efficiency, improve safety, and reduce their carbon footprint. Left unchecked leakage in compressed air systems will continue to progress until the system can no longer maintain pressure. The typical reaction to this is to install additional compressor capacity to keep up with demand. This is often the quickest, easiest solution but reduces the competitiveness of the facility by increasing it's energy usage and reducing profitability.

Identifying and Fixing Compressed Air Leaks

At a minimum, compressed air leakage projects require:

- budget to identify and fix leaks
- available personnel to identify and fix leaks
- equipment to detect, tag and record the leak
- identification of parts required to fix the leak
- estimate of leak size and cost

Compressed air leakage projects require skilled personnel, specialised equipment and software along with good management to identify and repair leaks.

Leak detection equipment saves time and money by allowing the operator to identify leaks quickly and accurately, enabling prompt repairs that can lead to improved efficiency, cost savings, increased safety and reliability.

If the facility doesn't have the necessary resources or time, the project will not be completed efficiently, which can result in sub-standard repairs, delays and disruptions to facility operations, further leaks and inefficiencies.

Most compressed air leakage projects fail because of a lack of planning, lack of budget, inadequate resources, poor implementation, and a lack of follow up.

Regular Leak Surveys

Compressed air leakage projects require ongoing monitoring and maintenance to ensure that the system remains leak-free. Failure to follow up and maintain the system can lead to the recurrence of leaks and negate the benefits of the project.

Compressed Air Alliance's Leak Management Program

Compressed Air Alliance's leakage management program helps to avoid common pitfalls of leak surveys and repairs. The extensively tested leakage identification and recording tools allow you to adequately plan resources, provide effective implementation, order, and organise parts to ensure your leakage project is successfully implemented. Ongoing maintenance and monitoring ensure a comprehensive approach to compressed air leakage and a successful outcome with long-term benefits for the facility.

Ultrasonic Leak Detector

Find leaks in compressed air, gas and steam systems



Highlights

෯	Modes of Operation		
Ø	Power 9v Alkaline Battery		
	Mediums Compressed air Gas Steam		

Ultrasonic leak detectors are an effective method for detecting compressed air leakage. The detector works by converting ultrasonic sound waves created by the leak into an audible signal that can be heard by the operator. Ultrasonic leak detectors are highly sensitive and can detect leaks that are not heard without the detector, especially in noisy environments.

This leak detector is non-intrusive, allowing the operator to locate a leak without shutting down the system or disrupting the production process. The ultrasonic leak detector kit comes with:

- Leak detector
- Headphones
- Rubber focusing probes
- Soft carry case

Key Features

- Easy to use
- Simple operation don't get distracted watching screen - less chance of accidents occurring
- LED bar graph each bar represents approximately 3 dB
- 8 position sensitivity selection
- Scanning module

- Use to find leaks in:
- pipes and tanks
- pressure and vacuum systems
- valve seats
- exhaust systems
- heat exchangers, boilers, condensers
- and more

Specifications

Leak Detector Type	Hand-held ABS pistol type ultrasonic processor, stainless steel sensor enclosures
Circuitry	SMD/Solid State hybrid heterodyne receiver
Frequency Response	Peak response: 36-44kHz
Indicator	10 segment LED Bar Graph (red)
Sensitivity Selection	8 position precision attenuation
Power	9 Volt Alkaline Battery
Low Battery Voltage Indicator	LED

Rubber Focusing Probe	Shields stray ultrasonic signals and focuses detected signals
Transmitter	Patented warble tone transmission
Response time	Response time: 300msec
Ambient	0 to +50°C
Temperature	+32°F to +120°F
Dimensions	133 x 50 x 203 mm 5.25″x2″x8″
Weight	Handset: 0.3 kg (11 oz)
Warranty Period	12 months

Product Code



Leakage App

Record leaks and repair parts. Download reports



Highlights



Modes of Operation

Leakage app for smart phones

Features

Record company information Record leak information Record parts needed to repair leaks Create Reports



Leak Detector

Use with any ultrasonic leak detector

The Compressed Air Alliance leakage app can make compressed air leakage projects easier and more effective by providing a comprehensive and organised approach to documenting, grading and repairing leaks.

The app works on most mobile devices and when used in conjunction with an ultrasonic leak detector allows the technician to record all the necessary information to ensure the repair project can be implemented quickly and effectively.

Use the app to record and store information about the leak such as: location, severity, pressure of each leak, parts required to repair the leak and close-up and distance photos of the leak. Additionally, reports and analytics can be generated to track the progress of the project and provide insights for future improvements.

Using the Compressed Air Alliance leak recording app will save time, reduce errors, and increase the success of compressed air leakage projects by providing a streamlined and data-driven approach to leak detection and repair.

Key Features

- Easy to use
- Record all the data you need to fix leaks
- Record inappropriate uses of compressed air
- Works with any leak detector

- Create reports
- Generate parts lists
- Track and manage the progress of leak repairs

Process







Accessories

10



Hot Tap Kit

For hand drilling connection points on pressurised pipes



 Highlights

 Pressure

 Can be operated under pressure up to:

 20 bar | 290 psi

 Drilling Depth

 200 mm | 7.87 "

 Image: A lnterchangeable drill bits

 8.5 & 14.5 & 19.5 & 24.5 mm

 1/4" & 1/2" & 3/4" & 1"

 Corresponding Ball Valves:

1/4" & 1/2" & 3/4" & 1"

A hot tap drill is a universal tool that allows you to manually install a connection point on pressurized or unpressurised pipes.

A typical hot tap requires:

- the hot tapping drill kit
- tapping saddle / clamp,
- ball valve.

Hot tapping takes approximately 30-60 minutes, depending on the size of the hole and the pipe material.

Note: Hot tapping can be dangerous and should be performed by experienced technicians only.

Compressed Air Alliance's hot tap drill is designed to prevent contamination from the drilling process entering the pipework when used on pressurised pipework. As the drill bit starts to pierce the pipe, air pressure forces loose particles back through an exhaust chamber in the drill's body, where they are captured. This process ensures no contamination enters the pipework.



Hot Tap Kit (Cont)



Hot Tap Drill Kit

Product Code	Description	
HTD000001	Drill, carry case and drill bit size - Φ14.5mm for 1/2" ball valve	
HTD000002	Drill, carry case and drill bit size - Φ19.5mm for 3/4" ball valve	
HTD000003	Drill, carry case and drill bit size - Φ24.5mm for 1" ball valve	
HTD000004	Drill, carry case and drill bit sizes - Φ14.5mm & Φ19.5mm for 1/2" and 3/4" ball valves	
HTD000005	Drill, carry case and drill bit sizes - Φ14.5mm & Φ24.5mm for 1/2" and 1" ball valves	
HTD000006	Drill, carry case and drill bit sizes - Φ19.5mm & Φ24.5mm for 3/4" and 1" ball valves	
HTD000007	Drill, carry case and drill bit sizes - Φ8mm & Φ14.5mm & Φ19.5mm & Φ24.5mm for 1/2", 3/4" and 1" ball valves	

Clamps for 1/2" valves

Product Code	Description
HTC100001	Hot Tap Clamp, Pipe OD 45-51 mm, 1/2" valve
HTC200001	Hot Tap Clamp, Pipe OD 59-67 mm, 1/2" valve
HTC300001	Hot Tap Clamp, Pipe OD 67-76 mm, 1/2" valve
HTC400001	Hot Tap Clamp, Pipe OD 75-90 mm, 1/2" valve
HTC500001	Hot Tap Clamp, Pipe OD 88-104 mm, 1/2" valve
HTC600001	Hot Tap Clamp, Pipe OD 100-135 mm, 1/2" valve
HTC700001	Hot Tap Clamp, Pipe OD 135-160 mm, 1/2" valve
HTC800001	Hot Tap Clamp, Pipe OD 160-190 mm, 1/2" valve
HTC900001	Hot Tap Clamp, Pipe OD 190-220 mm, 1/2" valve
HTC000001	Hot Tap Clamp, Pipe OD 210-240 mm, 1/2" valve



Hot Tap Kit (Cont)

Clamps for 3/4" valves				
	Product Code	Description		
	HTC100002	Hot Tap Clamp, Pipe OD 45-51 mm, 3/4" valve		
	HTC200002	Hot Tap Clamp, Pipe OD 45-51 mm, 3/4" valve		
	HTC300002	Hot Tap Clamp, Pipe OD 67-76 mm, 3/4" valve		
	HTC400002	Hot Tap Clamp, Pipe OD 75-90 mm, 3/4" valve		
	HTC500002	Hot Tap Clamp, Pipe OD 88-104 mm, 3/4" valve		
	HTC600002	Hot Tap Clamp, Pipe OD 100-135 mm, 3/4" valve		
CB1 = 0538 - 06	HTC700002	Hot Tap Clamp, Pipe OD 135-160 mm, 3/4" valve		
συτι	HTC800002	Hot Tap Clamp, Pipe OD 160-190 mm, 3/4" valve		
	HTC900002	Hot Tap Clamp, Pipe OD 190-220 mm, 3/4" valve		
	HTC000002	Hot Tap Clamp, Pipe OD 210-240 mm, 3/4" valve		



Accessories

The most common accessories used for products in this catalogue are listed below. Please contact Compressed Air Alliance or your dealer if you require a different accessory.

Cables			
	Product Code	Description	
	5 meter cable: ACC120001 10 meter cable: ACC120002	 Data cable, 5 wire, IP67. 5 pin M12 female connector on one end, bare wires on the other end Suitable for: A, K, & Q dew point sensors all flow meters all pressure sensors all temperature probes 	
	5 meter cable: ACC130001 10 meter cable: ACC130002	 Data cable, 5 wire, IP67. 5 pin M12 male connector on one end, bare wires on the other end Suitable for: A, K, & Q dew point sensors all flow meters all pressure sensors all temperature probes 	
	5 meter cable: ACC122001 10 meter cable: ACC122002	 Data cable, 5 wire, IP67. 5 pin M12 female connector on both ends Suitable for: A, K, & Q dew point sensors all flow meters all pressure sensors all temperature probes 	
	5 meter cable: ACC133001 10 meter cable: ACC133002	Data cable, 5 wire, IP67. 5 pin M12 male connector on both ends Suitable for: • A, K, & Q dew point sensors • all flow meters • all pressure sensors • all temperature probes	

Cables				
	Product Code	Description		
	5 meter cable: ACC123001 10 meter cable: ACC123002	 Data cable, 5 wire, IP67. 5 pin M12 female connector on one end, M12 male connector on the other end Suitable for: A, K, & Q dew point sensors all flow meters all pressure sensors all temperature probes 		
	5 meter cable: ACC110001 10 meter cable: ACC110002	Data cable, 5 wire, IP67. 5 pin M8 female connector on one end, bare ends on the other end Suitable for: • Mini Dew Point Sensors		





Electrical Connections				
	Product Code	Description		
	ACC000201	 M12 straight type female connector, Plastic, IP67 Suitable for: A, K, & Q dew point sensors all flow meters all pressure sensors all temperature probes 		
	ACC000202	M12 straight type male connector, Plastic, IP67 Suitable for connecting sensor cables simultaneously via RS485 (daisy chain)		
	ACC000203	Y-type M12 connector, Plastic, IP67 Suitable for connecting multiple sensor cables simultaneously via RS485 (daisy chain)		
	ACC000207	M12 Tee connector , Plastic, IP67 Suitable for connecting multiple sensor cables simultaneously via RS485 (daisy chain)		

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Power Supply			
	Product Code	Description	
	ACC000601	Din Rail mounted Power Supply for use in cabinets • 24vDC output • 85-260vDC input • 60W • 2.5 Amp	
	ACC000602	Power adaptor with M12 connector for use with dew point, flow, pressure and temperature sensors • Interchangeable plugs - Australia, UK, Europe and USA • 24vDC output • 100-240vDC input • 50W • 2.1 Amp	

Flow Meter Protection			
	Product Code	Description	
	ACC000501	 Clear Plastic Protective Housing to protect flow meter head from rain and sun. Suitable for: Thermal Mass flow meters Pitot Tube Flow Meters 	



Mechanical Connections			
	Product Code	Description	
	ACC000304	NPT to BSP adaptor. Suitable for converting: • 1/2" BSP female thread to 1/2" NPT male thread on flow meters	
	ACC000305	 316 Stainless Steel fittings Suitable for: mounting a dew point sensor or pressure sensor on the same connection point as a flow meter Make it yourself with a: 1/2" nipple 1/2" female tee 1/2" to 1/4" reducing nipple 1/4" female elbow 1/4" nipple 	



Displays		
	Product Code	Description
Example Transmission Transmi	DIS000301	 Modbus Colour Touch Screen Display 7" colour touch screen display Panel mount Modbus input signal Connect 2 x RS485 and 1 x RS252 sensors Data logging and data download No alarm relay 24vDC power
	DIS000200	 Analogue Display 6.7" display Wall mount Analogue (4-20mA) input Connect one sensor No data logging or data download 2 x alarm relays 100-240vAC powered

Data Logger Cabinet			
	Product Code	Description	
	DAM200000	Metal cabinet with built-in data acquisition module, 24 vDC power supply, circuit breaker and terminals	





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