METPOINT

THE COMPLETE RANGE OF PRECISION CONTROL DEVICES FOR COMPRESSED AIR DEW POINT, FLOW, AND LEAKAGE

METPOINT DPM
DEW POINT MONITORS

Moisture in compressed air can cause severe damage. Malfunctions in a production plant, costly down time, higher reject rates and increased quality control expenditures all have a negative impact on profits.

For this reason, efficient and individually adapted compressed air treatment is absolutely essential. However, to guarantee process reliability, the compressed air humidity also needs to be monitored.

Dew point meters from **BEKO** are a perfect solution because of their precision and superior maintenance-free service life. Online integration with selectable parameters for evaluation and alarm functions in existing process control systems is also possible.

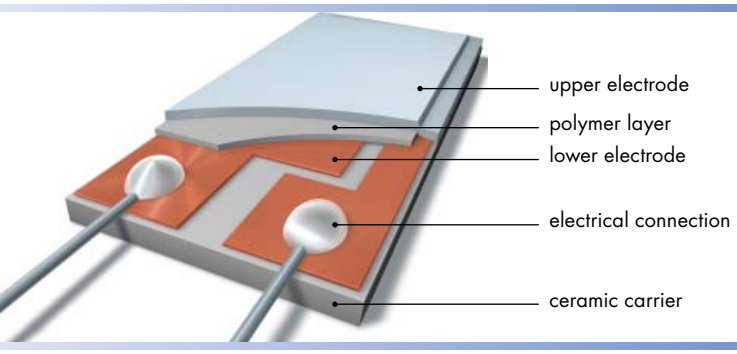
+1: **HIGH MEASUREMENT ACCURACY**
The polymer sensor ensures the most accurate reading of system dew points

+2: **DURABILITY AND RELIABILITY**
The materials used are non-corrodible, dirt and water repellent - no sensitivity to free liquids

+3: **FLOW OPTIMIZED SENSOR GEOMETRY**
Precise and accurate measurement with quick, responsive display of measured values

+4: **OPTIMUM PROCESS RELIABILITY**
Constant monitoring of the compressed air drying level and compressed air humidity

+5: **SUITABLE FOR VARIOUS APPLICATIONS**
Portable and stationary versions offer users maximum flexibility



FUNCTION

Depending on the amount of partial water vapor pressure, more or less water molecules penetrate the porous polymer layer. The capacity of the sensor changes as a result, and this change is converted to a humidity value and then displayed.

TYPICAL FIELDS OF APPLICATION

- Pharmaceutical industry
- Petrochemical industry
- Plastics industry
- Production plants
- Automotive industry
- Semi-conductor industry
- Power stations
- Metal working industry

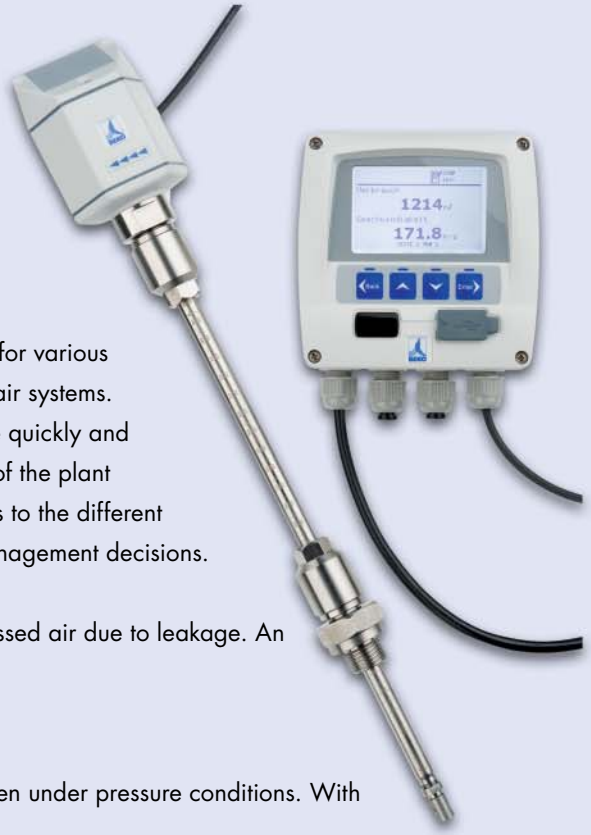
For use with refrigeration dryers, membrane dryers and adsorption dryers

Using optional software, the default values of our stationary models can be adjusted to the parameters desired by the customer.

	METPOINT DPM Stationary Device	METPOINT DPM X2 Stationary Device	METPOINT DPM Portable Device
Measuring Range PDP	-112 to +122 °F	-112 to +122 °F	-112 to +122 °F
Pressue Range	-14.5 to 232 psig	-14.5 to 232 psig	-14.5 to 232 psig
Power Supply	90 to 260 VAC	90 to 260 VAC	rechargeable battery
Accuracy at: PDP -40 °F PDP +15 to +122 °F	 ± 3.5 °F ± 0.9 °F	 ± 3.5 °F ± 0.9 °F	 ± 3.5 °F ± 0.9 °F
Protection Standard	IP 65	IP 65	IP 65
EMC	DIN EN 61326	DIN EN 61326	DIN EN 61326
Sensor Protection	Sinter filter 50 µm	Sinter filter 50 µm	Slotted cap
Pre-alarm at	+46.4 °F	-40.0 °F	
Main Alarm at	+53.6 °F	-31.0 °F	
Display Type	External, Single Value Display (Dew Point Only)	External, Multiple Value Display (Expandable)	Integrated, Hand-held, Single Value Display
Processing Output(s)	4 to 20 mA 2 alarm contacts	4 to 20 mA 2 alarm contacts USB Connection	USB Connection

Optional service software is available.

METPOINT FLM
FLOW SENSING



The precise measurement of the actual flow rate provides the foundation for various analyses, documentations and decisions in connection with compressed air systems. Possible overloading (e.g. excessive air velocities) or malfunctions can be quickly and reliably detected and this permits economically optimized dimensioning of the plant components. Moreover, the exact allocation of consumption percentages to the different stages of production is of great value for making fact-based business management decisions.

And not least, the flow rate measurement will indicate the loss of compressed air due to leakage. An important economic factor considering that every third compressor only runs to compensate for the loss of air!

BEKO METPOINT FLM devices can be simply and quickly installed – even under pressure conditions. With its variety of interfaces it is easy to integrate into existing process control systems.

+1: HIGH MEASUREMENT ACCURACY
± 3% v.M. through thermal mass stainless sensor designed specifically for compressed air

+2: INDEPENDENT RELIABILITY
Reliable measurement that is independent of temperature and pressure

+3: EASY TO USE DISPLAY
Multi-function display is simple to use, easy to read, and offers expansion ports for additional sensors

+4: LEAKAGE & CONSUMPTION MEASURING
Low range measurements are possible for recording leakage and consumption data

+5: SUITABLE FOR VARIOUS APPLICATIONS
Portable and stationary versions offer users maximum flexibility

FUNCTION

Dual sensors are employed, one with a constant temperature difference, while the second detects the gas temperature in real-time. As the flow rate increases, more heat is removed and more power is required to keep the temperature of sensor one constant. The power required at sensor one and the temperature increase at sensor two are transferred into the corresponding flow rate.

TYPICAL FIELDS OF APPLICATION

- Pharmaceutical industry
- Petrochemical industry
- Plastics industry
- Production plants
- Automotive industry
- Semi-conductor industry
- Power stations
- Metal working industry

For use with all types of compressed air or gas stream applications.

Using optional software, the default values of our stationary models can be adjusted to the parameters desired by the customer.

	METPOINT FLM Stationary Device	METPOINT FLM X2 Stationary Device
Integrated Measuring Section	Measuring range scfm	Designed for direct pipe mounting, without the integrated measuring section
½"	0.1 to 50	
¾"	0.2 to 100	Usable from ½" up to 12" pipe sections
1"	0.3 to 170	
1 ½"	0.6 to 320	Standard unit is capable of measuring **from 0.12 to 23,275 scfm**
2"	1.2 to 530	
Sensor Type	2 x silicium cup	2 x silicium cup
Operating Temperature	-22 to 176 °F	-22 to +176 °F (housing) / -22 to +230 °F (probe)
Operating Pressure	up to 232 psig	up to 580 psig
Analog Output	4 to 20 mA	4 to 20 mA
Digital Output	USB Connection via SID Interface	USB Connection via SID Interface
Display Type	Integrated, Single Value Display	External, Multiple Value Display
Measuring Principle	Thermal Mass	Thermal Mass

METPOINT LKD
LEAK DETECTION

YOUR PROFITS EVAPORATE

Is your company making less profit than it should? Of course you can't know because second for second, this profit is vanishing into thin air. Inaudibly, invisibly, unnoticed.

The reason: undetected leaks in the compressed air pipework.

EVER RISING COSTS

Although the chart is shown in Euro and compressor power in kW, the trend is true regardless of the measurement units used, and as you can see the impact on profitability is staggering.

Don't forget to take the conversion factors into consideration!

+1: RELIABLE MEASUREMENT
Easy-to-use, one hand operation with the highest accuracy maximizes cost savings potential

+2: ULTRASONIC TECHNOLOGY
Advanced probe technology with increased sensitivity guarantees locating every leak

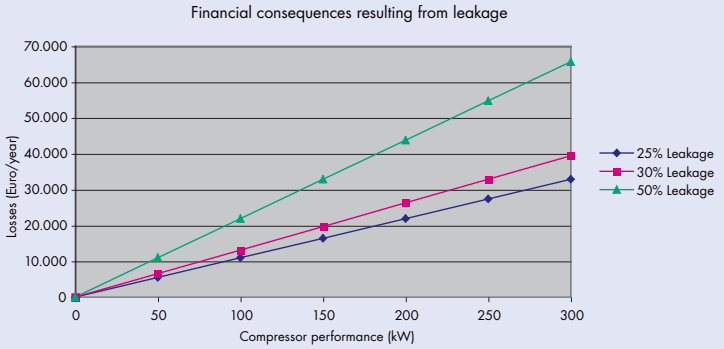
+3: SAVING YOU ENERGY
Quick return on investment, locating and tending to just four small diameter leaks per year saves thousands

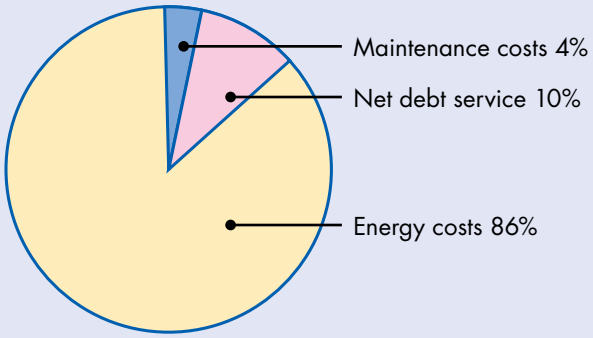
+4: INTEGRATED LASER / FOCUS TUBE
Allow you to hone in on the exact location and detect the leak with pinpoint precision

+5: SUITABLE FOR VARIOUS APPLICATIONS
Extensive range of options and accessories offer users maximum flexibility

FUNCTION

Where compressed air escapes, friction develops between the gas molecules and the pipe wall. This friction produces a high frequency ultrasound inaudible to the human ear. The METPOINT LKD registers the ultrasound, transforms it into an audible sound and indicates it optically. In this respect, only those frequencies are registered which will occur in the case of leakage. Thus, the precise location of the leak is easily identified even where industrial noise is present. Using the METPOINT LKD, the detection of compressed air losses at microcracks, worn-out flange joints, defective sealing rings or loosened connections no longer presents a problem.





THE SOLUTION: THE BEKO METPOINT LKD

Detects each and every leak

- even at long distance (up to 50 ft.)
- also at places which are not easily accessible
- also without visibility

Optimizes your resources

- significantly reduced energy losses
- lower demand for an installed compressor performance
- reduced compressor wear and tear

LOSS-FREE COMPRESSED AIR TRANSPORT IS THE KEY TO GOOD OPERATING PROFIT

Energy costs account for up to 86 % of operating costs.

Operating costs at 7500 hours per year

TECHNICAL DATA

Power supply	9V battery, sufficient for at least 10 hours of operation
Frequency range	Designed to locate leaks
Sensitivity	Location up to a distance of 50 ft.
Connections	Headphones and a seperate probe, unmistakable assignment
Housing	Aluminum
Dimensions	L x W x H = 6.8 x 2.3 x 2.0 in
Weight	0.88 lb

METPOINT PRO
CUSTOMIZABLE SOLUTIONS

Consider dew point, flow, leakage - everything previously mentioned. They all relate to each other, and each parameter when left unchecked can cost thousands of dollars per year in wasted energy. Now consider, measuring all of these parameters and more with one convienient, easy-to-use instrument.

For this reason, we have developed the METPOINT PRO series of complete compressed air monitoring solutions. Each METPOINT PRO is customizable to suit the user's specific needs, and they are available in either stationary or mobile configurations with up to six total sensor connections.

METPOINT PRO from **BEKO** are the perfect solution because of their precision measuring capabilites and superior, maintenance-free service life.

+1:

HIGH MEASUREMENT ACCURACY

The polymer sensor ensures the most accurate reading of system dew points

+2:

DURABILITY AND RELIABILITY

The materials used are non-corrodible and dirt repellent

+3:

SPECIFICALLY FOR COMPRESSED AIR

Precise and accurate measurement with quick, responsive display of measured values

+4:

MODULAR SYSTEM

Fully expandable with up to six sensors per station and up to 256 displays via bus system

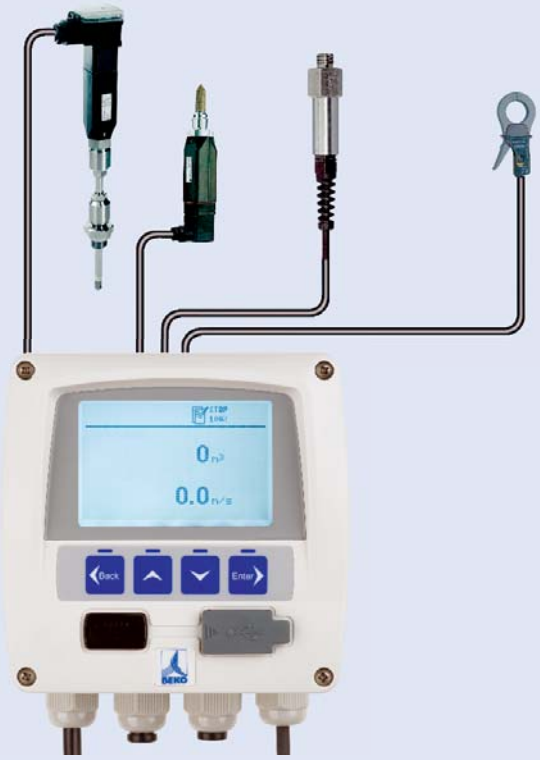
+5:

SUITABLE FOR VARIOUS APPLICATIONS

Portable and stationary versions offer users maximum flexibility

THE METPOINT PRO SERIES
Available in either stationary or mobile configurations to suit every application.

Each unit is truly "all-in-one" utilizing a single, intelligent, multi-function display. Based on this singular display unit, almost endless variations and options are available to fully optimize every last facet of your compressed air or gas line. By measuring the various parameters available to the user, plants can operate with maximum energy efficiency, increased production results, and absolute control over energy consumption and the associated savings.



Measuring capabilities:

- Pressure Dew Point
- Air Flow
- Pressure
- Current
- Temperature

These all inclusive packages also feature, as standard, 4 to 20 mA output signals, two alarm relays, and USB connectivity. Full data logging with 1,000,000 data transmission capacity comes standard, and when used in conjunction with the optional software package, creates the perfect analytical tool down to the finest detail.

In addition to being a completely customizable user solution and all of the standard features, the METPOINT PRO series has several options to ease installation from an engraved depth scale on the flow meter sensor, to special spot drilling collars and drilling jigs.

Every detail has been carefully thought out and considered to guarantee the maximum return on investment in the shortest amount of time possible. The true all-around solution, the METPOINT PRO series from **BEKO**.

OPTIONS AND ACCESORIES FOR THE METPOINT PRO SERIES

The METPOINT PRO comes standard with advanced analog and electronic outputs that offer users complete control over their system.

In addition to the variety of sensor arrays that can be attached to the METPOINT PRO, there are several accessories available providing distinct technological advantages.

Beyond simple lights and buzzers, the METPOINT PRO series allow users full diagnostic control over all active sensors via your PC whether on or off-site.

OPTIONAL RS 485 PORT

By the addition of the optional RS 485 port to the METPOINT PRO S up to 256 stations are connectable, and up to 32 units can be displayed simultaneously on the PC for complete evaluation via the BEKO Software. You can now have a total care package at your fingertips for the entire plant for all relevant compressed air or gas parameters in use.

Furthermore, each METPOINT PRO S is available with an optional ethernet interface, bringing each METPOINT PRO S unit "online."

The METPOINT PRO series far surpasses typical compressed air monitoring tools by providing true 21st century solutions that are future-proof, and expandable to suit ever changing plant requirements. With a low cost initial investment, you have ensured exponential long-term savings that could never be recouped otherwise - only with the METPOINT PRO series.

INSTALLATION UNDER PRESSURE

Spot Drilling Collar

Drilling Jig

By employing the use of the optional spot drilling collar and special drilling jig, probe installation directly into a pressurized pipe is an easy, and painless process without any disruption.

OPTIONAL MEASURING CHAMBERS

High Pressure Chamber
for up to 5,000 psig

Atmospheric Chamber
for atmospheric dew point

Respiratory Air Chamber
for up to 5,000 psig

Granulate Dryer Chamber
for up to 3.6 psig

TECHNICAL DATA OF THE MULTI-FUNCTION DISPLAY

Wall Mount Dimensions (in)	4.65 x 4.53 x 3.66
Cabinet Mount Dimensions (in)	3.62 x 3.62
Housing Protection	IP65
Operating Temperature	+32 to +122 °F
Transport Temperature	-4 to +158 °F
Sensor Inputs	Available with 2 (X2), 4 (X4), or 6 (X6) sensor inputs (2 digital with up to 4 additional analog inputs)
Interface	USB
Keypad	4 keys
Power Supply	100 . . . 240 VAC / 50-60 Hz / 10 VA
Display	Graphic Display, 160 x 100 pixels
Alarm Output	2 relays, 230 VAC, 3 A, volt-free, change over contact
Analog Output	Connection of 4 to 20 mA signals of dew point and consumption sensors (max. burden < 500 Ohm)
Integrated Data Logger	up to 1,000,000 values recording intervals: min. 1 sec. / max. 59 min. 59 sec.

AVAILABLE SENSORS FOR METPOINT PRO (FOR X2, X4, OR X6 MODELS)

Consumption Sensors
Maximum Version 185.0 m/s, 220 mm probe length (standard equipment)
High Speed Version 224.0 m/s
Sensor Length: 120 mm
Sensor Length: 160 mm
Sensor Length: 300 mm
Sensor Length: 400 mm
Dew Point Sensors
Dew Point: -112 °F to +68 °F
Dew Point: -4 °F to +122 °F
Pressure Sensors
Precision Model 0 to 232 psig (± 0.5% accuracy of full scale)
Precision Model 0 to 580 psig (± 0.5% accuracy of full scale)
Standard Model 0 to 232 psig (± 1.0% accuracy of full scale)
Standard Model 0 to 580 psig (± 1.0% accuracy of full scale)
Temperature Sensors
Screw-in Temperature Probe Pt 100, Class A, length 300 mm, Ø 6 mm with measuring transducer
Indoor / Outdoor Temperature Probe Pt 100, Class A
Indoor / Outdoor Temperature Probe Pt 100, Class A with measuring transducer
Ampmeter Sensors
Clamp-on Ampmeter 0...500 A AC including 15 ft. cable

HIGH QUALITY COMPRESSED AIR FROM BEKO

The quality of your compressed air.

RELIABLE

The highest level of operational reliability is guaranteed with every product that BEKO manufactures.

EFFICIENT

Maximum energy efficiency and conservation are guiding principles of every product design.

ECONOMIC

Products that provide the quickest return on investment in the industry with the least amount of risk.

EFFECTIVE

German engineered with no compromises on quality.

EXPERIENCE

More than 25 years of industry leading experience stands behind our entire product offering.

SOLUTIONS

Your single source for a range of performance compressed air products designed to work in synergy.

Compressed air treatment and condensate technology.
The complete program. Worldwide.

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