



Emission Monitoring Systems

DESCRIPTION

LKD

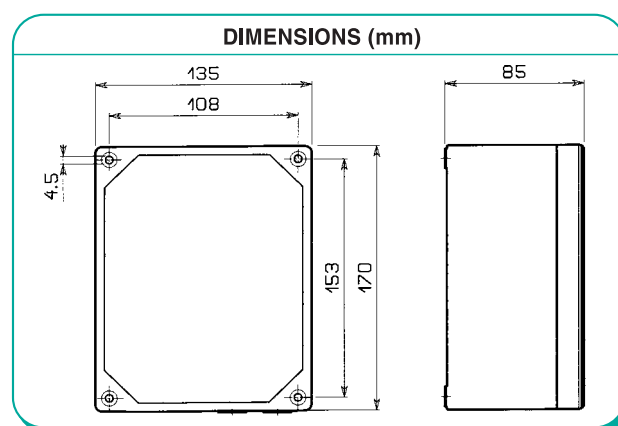
The “leak detector” is an electronic unit able to detect and signal minute abnormalities in the emission patterns of a gas flow from pulse-jet filters. A photoelectric infrared ray is generated by a «transmitter» and received by a «receiver», both assembled on the emission duct. The presence of particulate matter within the airflow results in a percentage of the light contacting the particulate. The light absorbed as a result of these contacts, diminishes the photoelectric signal generated by the photocell. Variations in the electronic signal are processed providing standard output signals of 4-20 mA. This allows the unit to relay information to any of a number of recording devices as to the status of the particulate matter in the ducts. The LKD is made up of the central LD 1003 unit, with the electronic circuitry, and two probes (AP1T and AP1R), complete with installation accessories. The high sensitivity of the LKD photoelectric sensor makes it



possible to detect minute quantities of particulate within the system. A particulate presence as small as 1 milligram per cubic foot is detectable. The high sensitivity is complemented by the system ability to remain on line and fully functional despite heavy lens soiling. This is accomplished by the electric circuit which automatically recalibrates the threshold level of the detector in the event of lens soiling. The central LD 1003 unit is equipped with a Bar Graph display which allows an approximate measurement of the level of the particulate emissions and a simple and safe regulation of the detector sensitivity. In the event that the lens becomes soiled, the fault alarm will be triggered. This alarm also serves as a watchdog for any type of mechanical or electrical malfunction which may occur. The unit also has a “TEST” function which provides a visual indication of the present level of calibration.

MAIN FEATURES

- High sensitivity that makes it possible to detect minute quantities of particulate.
- High stability that allows the unit to remain on line and fully functional despite heavy lens soiling.
- Alarm of total soiling of the probes.
- Alarm for any type of mechanical or electrical malfunction.
- Bar-Graph display.
- “TEST” function for indication of the present level of calibration.
- 4-20 mA output for transmission and monitoring of the signal.
- Automatic lens cleaner via compressor air line connection.



TECHNICAL CHARACTERISTICS

Power supply	Standard: 110/220 V AC (±15%), 50/60 Hz	Optional: 24/48 V AC (±10%)	Probes temperature	Sonde AP1T / AP1R 120°C (standard conditions) 350°C (with compressed air stopping)
Absorbed power	5 VA		Sensitivity	Adjustable with potentiometer
Detecting medium	Photoelectric		Max sensitivity	Dust concentration down to 3g/m ³
Photoelectric wavelength	920 nanometers (infrared)		Weight	Central unit: 1 Kg. - Probes: 3 Kg. - Stub pipe: 1,2 Kg.
Probe length	Max 360 mm. (with stub pipes)		Central unit dimensions	135 x 85 x 170 mm.
Central unit temperature	Stockage: -20°C / +80°C Central LD 1003: -10°C / +50°C		Output signal	Alarm relay terminal - 4÷20 mA (max load 200 Ohm)

INSTALLATION OF PROBES

The photoelectric probe is made up of two sections:

AP1T: infrared light transmitter,

AP1R: infrared light receiver.

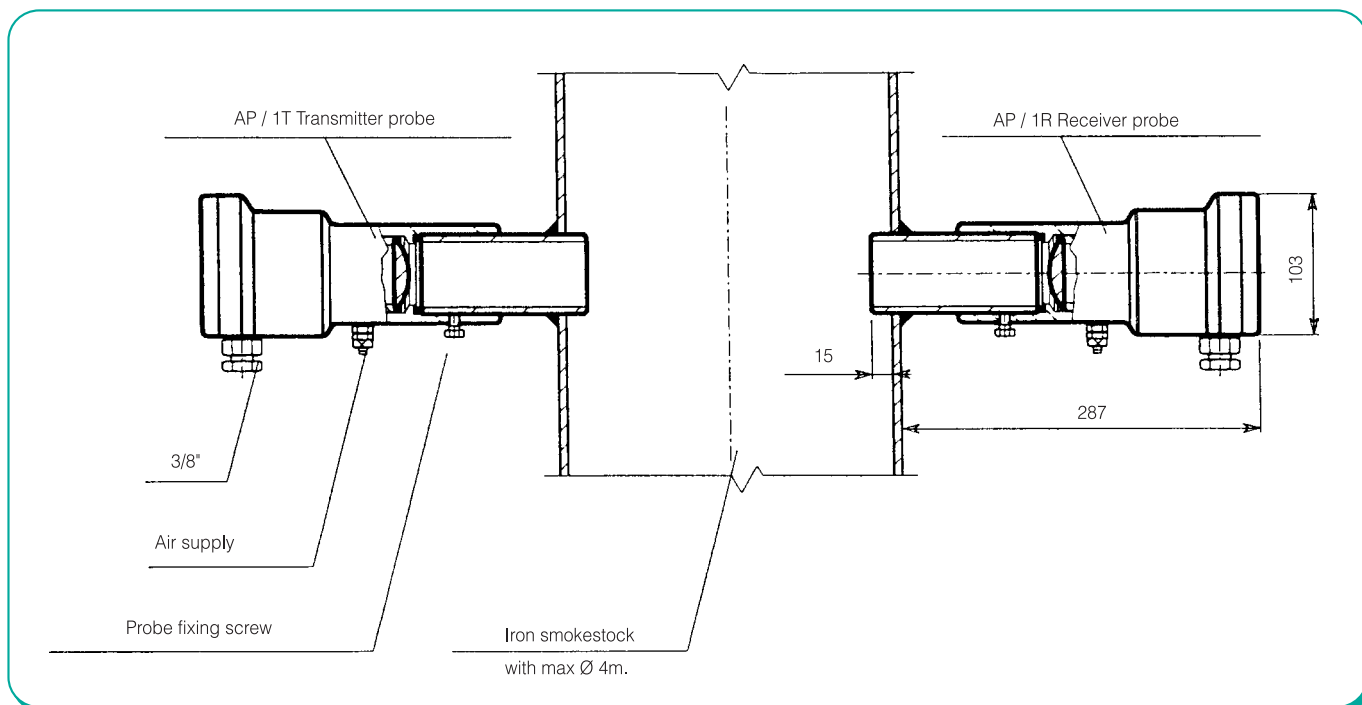
For the installation of the probes:

- 1 Choose the location for the installation of the two piece probe.
- 2 Cut one hole in the duct large enough to allow a 1 1/2" pipe to be inserted, then cut a second hole on the other side of the duct so that the pipe can be slid out of the duct via the second hole.

Note: the 1 1/2" pipe should be centered in such a way that it intercepts the maximum flow area.

- 3 Using the 1 1/2" pipe as a guide, weld the two 2 stub pipes provided with the probes to the duct.
- 4 Remove the 1 1/2" guide pipe when the welding is complete.
- 5 Secure the probes to the welded pipes by way of the stainless steel bolts provided.
- 6 Connect the conductor cables to the AP/1T and AP/1R probes as shown in the drawings.
- 7 Run the shielded cable to the LD1003 base and install as shown in the drawings.

ASSEMBLY DIAGRAM AP1T and AP1R PROBES



WHAT IT DOES

- BBD is a broken bag detector.
- Continuously monitors for filter media leakage.
- Indicates relative condition of bags.
- Acts as a preventative maintenance tool.

BBD5



PRODUCT DESCRIPTION

The BBD5 utilises AC Coupled Triboelectric technology. As particles travel through the process they develop a charge. This charge is transferred as the particle passes or impacts the sensing element. The resulting current is amplified, filtered, rectified and further filtered looking only at the AC component, giving a linear representation of the concentration or mass flow rate of the particles in the gas stream.

The reason for measuring the AC component is that, compared to the DC component, the electronics are more sensitive.

The AC signal is substantially less affected by influences such as amplifier noise and process parameters, which includes the build-up of process dust on the sensing rod.

The BBD5 remote sensing head totally filters out any 50Hz or 60Hz frequencies related to mains supply. The amplified signal is then sent via data cable to the control unit for further processing and display.

OPERATIONAL RANGE

- Suitable for a wide range of dust collection and stack emissions.
- Applicable for all types of outlet stack geometrical arrangements.
- Insertion temperatures up to 80°C or 200°C (176°F or 392°F), higher if required.
- Applicable to most particulate types.
- For duct sizes from 50mm (2") to outlets over 10m (33ft).
- Dust concentrations from 0.01mg/m³ (4x10⁻⁶gr/ft³).
- Suitable for most stack material eg. steel, brick etc.
- Optional intrinsically safe barrier.

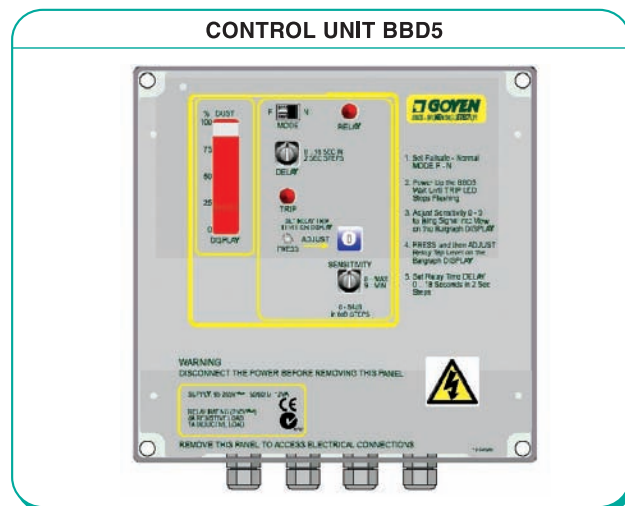
BENEFITS

- Detects most particles regardless of composition.
- Very sensitive due to AC coupled technology.
- Can monitor extremely small particles eg. galvanising fume (20.1µm).
- Can be used over a wide range of particulate densities.
- Can assist in dramatically reducing plant down time through filter failures.

FEATURES

BBD5

- Proven AC Triboelectric technology.
- Relay time delay feature.
- Sensitivity adjustment.
- Air purge port.
- Potted construction for reliability and operational stability.
- Simple Installation.
- Alarm level adjustment



Two Models are available with relative probes

BBD5 with tribo probe 80°: voltage 18-32 V c.c. Mod. BBD5-3180

BBD5 with tribo probe 80° voltage 100-240 V c.a. Mod. BBD5-4180

BBD5 with tribo probe 200°: voltage 18-32 V c.c. Mod. BBD5-3200

BBD5 with tribo probe 200° voltage 100-240 V c.a. Mod. BBD5-4200

Electrical connections between the main controller and tribo electric probe is performed using a multicore shielded cable P2 45300.

MODES OF OPERATION

The BBD5 indicates instantaneous levels of particulate emissions stream. The instrument is usually in an uncalibrated indicative mode in which levels are displayed in a relative scale (0-100%), however this may be calibrated by the user. The BBD5 also has 2 relay modes – Normal and Failsafe.

Normal

- The alarm relay is de-energised when the BBD5 is powered up.

Failsafe

- The alarm relay is energised when the BBD5 is powered up.
- The alarm relay is de-energised when the BBD5 is in the alarm state.
- Is used so that both power failure and high emissions are alarmed.

TECHNICAL SPECIFICATION
BBD5
FUNCTIONS

Bar graph	Visual indication of emission density
Alarm time delay	0-18 seconds in 2 second steps to prevent false alarms due to pulsing
Sensitivity	Adjustable sensitivity (10 position switch)

OUTPUTS

Name	Alarm Relay
Specification	8A Resistive - 1A Inductive
Function	Emission Alarm

CONTROL UNIT

Enclosure Rating	IP66/Nema 4
Enclosure Size	180 mm x 180 mm x 90 mm (7 1/8" x 7 1/8" x 3 1/2")
Enclosure Material	Plastic Composite
Power Supply	100-240VAC or 18-32VDC
Bargraph Display	20 step LED
Temperature Range	-20°C to 60°C (-4°F to 140°F)
Active Head	One

SENSING HEAD

Insertion Temp Range	P2-45210: -20°C to 80°C (-4°F to 176°F) - P2-45220: -20°C to 200°C (-4°F to 392°F)
Connection required on duct	1" BSPT socket
Temperature Range Enclosure	-20°C to 60°C (-4°F to 140°F)
Enclosure Rating	IP66/NEMA4
Enclosure Material	Aluminium
Sensing Element Material	316 Stainless Steel
Sensing Element Options	Solid rod, tubular, teflon coated, multiple supports, cable type, different lengths available

AIR PURGE REQUIREMENTS

Connection:	1/8" gas thread on side of unit
Air Pressure:	400kPa (60psi) max
Air Consumption:	1.7 -17m3/hr (1-10cfm) pulsed
Electrical Specification between Sensing Head and Control Unit	4 core screened data cables: Beldon 9534 (or equivalent) max 200m (660ft)

WHAT IT DOES

EMP5

- A total process data acquisition system.
- Continuously quantitatively and instantaneously records and reports process conditions.
- Continuously monitors and records particulate as well as any analogue signal such as temperature, pressure, associated with a process.

PRODUCT DESCRIPTION

The EMP5 utilises AC Coupled Triboelectric technology. As particles travel through the process they develop a charge. This charge is transferred as the particle passes or impacts the sensing element. The resulting current is amplified, filtered, rectified and further filtered looking only at the AC component, to give a linear representation of the concentration or mass flow rate of the particles in the gas stream. The reason for measuring the AC component is that compared to the DC component the electronics are more sensitive. The AC signal is substantially less affected by influences such as amplifier noise and process parameters, which includes the build-up of process dust on the sensing rod. The EMP5 remote sensing head totally filters out any 50Hz or 60Hz frequencies related to mains supply. The amplified signal is then sent via data cable to control unit for further processing and display.



OPERATIONAL RANGE

- Suitable for a wide range of dust collection, gas cleaning and stack emissions.
- Applicable for all types of outlet stack geometrical arrangements.
- Insertion temperatures up to 80°C or 200°C (176°F or 392°F), higher if required.
- Applicable to most particulate types.
- For duct sizes from 50mm (2") to outlets over 10m (33ft).
- Dust concentrations from 0.01mg/m³ (4 x 10⁻⁶gr/ft³).
- Suitable for most stack material. eg. steel, brick etc.
- Optional intrinsically safe barrier.

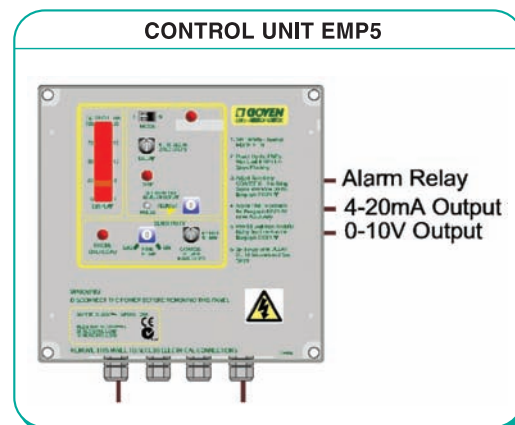
BENEFITS

- Detects most particles regardless of composition.
- Very sensitive due to AC coupled technology.
- Can monitor extremely small particles eg. galvanising fume (~0.1µm).
- Can be calibrated for large range of concentrations or mass flow rates 0.01mg/m³ to 800mg/m³ (4 x 10⁻⁶gr/ft³ to 0.35gr/ft³).
- A seamless interface with industry standard PLC, data logger or SCADA.
- Can dramatically reduce plant downtimes when interfaced into existing plant monitoring equipment.

FEATURES

- Proven AC Triboelectric technology.
- Relay time delay feature.
- Sensitivity adjustment.
- Air purge port.
- Potted construction for reliability and operational stability.
- Simple installation.
- Alarm level adjustment.

EMP5



Two Models are available with relative probes

EMP5 with tribo probe 80°: voltage 18-32 V c.c. Mod. EMP5-3180

EMP5 with tribo probe 80° voltage 100-240 V c.a. Mod. EMP5-4180

EMP5 with tribo probe 200°: voltage 18-32 V c.c. Mod. EMP5-3200

EMP5 with tribo probe 200° voltage 100-240 V c.a. Mod. EMP5-4200

Electrical connections between the main controller and tribo electric probe is performed using a multicore shielded cable P2 45300.

MODES OF OPERATION

The EMP5 is a continuous monitoring device for particulate emissions in a gas stream. The instrument is applied in an uncalibrated indicative mode in which levels are displayed and recorded in a relative scale (0-100%) or as a 4-20mA scale which ensures that the signal output to PLC, SCADA system or data logger has the same value as that at the controller. The EMP5 gives a linear representation of either mg/m³ or mg/s (gr/ft³ or gr/s), when calibrated to gravimetric standards.

The EMP5 also has 2 relay modes - Normal and Failsafe.

Normal

- The alarm relay is de-energised when the EMP5 is powered up.

Failsafe

- The alarm relay is energised when the EMP5 is powered up.
- The alarm relay is de-energised when the EMP5 is in the alarm state.
- This mode is used to operate external alarm, indicating power failure.

HISTORICAL LOGGING OF DATA

For improved preventative maintenance and compliance with some permit agreements, it may be necessary to have all historical information charted for future reference. By interfacing the EMP5 with other Goyen hardware, software or third party industry standard equipment/software, continuous particulate level accuracy can be monitored and reported.

TECHNICAL SPECIFICATIONS

EMP5

FUNCTIONS

Bar graph	Visual indication of emission density.
Alarm time delay	0-18 seconds in 2 second steps to prevent false alarms due to pulsing.
Sensitivity	Coarse: Adjustable sensitivity (10 position switch). Fine: Allows fine tuning in between coarse steps.

OUTPUTS PARTICULATE CONCENTRATION OR MASS FLOW

Specification	4÷20 mA (470 max) or 0÷10 V (10 K min.).
Function	Full range of particulate level.

ALARM RELAY

Name	Alarm relay.
Specification	8A resistive - 1A inductive.
Function	High level alarm.

CONTROL UNIT

Enclosure rating	IP66/NEMA 4
Enclosure size	180 mm x 180 mm x 90 mm. (7 1/8" x 7 1/8" x 3 1/2")
Enclosure material	Plastic composite.
Power supply	100-240 V c.a. or 18-32 V c.c.
Bargraph display	20 step LED.
Temperature range	-20°C to 60°C. (-4°F to 140°F)
Sensing head	One per control unit.

SENSING HEAD

Insertion temp range	P2-45210: from -20°C to 80°C - P2-45220: from -20°C to 200°C
Connection required on duct	1" BSPT socket.
Enclosure temperature range	-20°C to 60°C. (-4°F to 140°F)
Enclosure rating	IP66/NEMA4
Enclosure material	Aluminium.
Sensing element material	Stainless Steel.
Sensing element options	Solid rod, tubular, teflon coated, multiple supports, cable type, different lengths available.

AIR PURGE REQUIREMENTS

Connection	1/8" gas thread on side of unit.
Air pressure	400kPa (60psi)
Max air consumption	1,7-17m³/hr (1-10cfm) pulsed.
Electrical specification between sensing head and control unit	4 core screened data cables: Beldon 9534 (or equivalent) max 200m (660ft)

WHAT IT DOES

EMS6

- Continuously monitors particulate flow, primarily emissions from process plants.
- Capable of being a part of total process monitoring system.
- Measures the movement of particulate past the stationary emission monitor.
- Output can be interfaced into PLC, SCADA or Connect Network System enabling data to be logged in plant operating system.
- Output signal is RS485 Modbus RTU protocol.
- Linear representation of mg/m³ (gr/ft³) or mg/s (gr/s).
Iso-kinetic sample required for initial calibration.



PRODUCT DESCRIPTION

The EMS6 utilises AC Coupled Triboelectric technology. As particles travel through the process they develop a charge. This charge is transferred as the particle passes or impacts the sensing element. The resulting current is amplified, filtered, rectified and further filtered and converted to digital form looking only at the AC component. This gives a linear representation of the concentration or mass flow rate of the particles in the gas stream, depending on the chosen scale for calibration. The reason for measuring the AC component is that, compared to the DC component, the electronics are more sensitive. The AC signal is substantially less affected by influences such as amplifier noise and process parameters which includes the build-up of process dust on the sensing rod.

The EMS6 totally filters out any 50Hz or 60Hz frequencies related to mains supply. The digital signal is then sent via a data cable to PLC, SCADA or a Connect Network System.

The EMS6 linear representation of concentration or mass flow has been validated by independent laboratories. The EMS6 along with ANJ1, ANP1 and Connect software has been tested and certified for monitoring dust emissions according to the "MCERTS standard.

OPERATIONAL RANGE

- Suitable for a wide range of dust collection, gas cleaning and outlet stack applications.
- Applicable for all types of outlet stack geometrical arrangements.
- Insertion temperatures up to 80°C or 200°C (176°F or 392°F), higher if required.
- Applicable to most particulate types.
- For duct sizes from 50mm (2") to outlets over 10m (33ft).
- Dust concentrations from 0.01mg/m³ (4x10⁻⁶gr/ft³)
- Suitable for most stack material eg. steel, brick etc.

BENEFITS

- Detects all particles regardless of composition.
- Very sensitive due to AC coupled technology.
- Can be a linear representation of either concentration or mass flow rate.
- Can monitor extremely small particles like galvanising fume ($\sim 0.1\mu\text{m}$).
- Can be calibrated for large range of concentrations or mass flow rates.
- A seamless interface to industry standard PLC, SCADA or Connect Network System.
- Easy installation.
- Immunity to bridging providing reliable continuous operation.

FEATURES

- Proven AC Triboelectric technology.
- Air purge port.
- Three settable ranges under both hardware and software control.
- Network ID settable under both hardware and software control.
- RS485 Modbus RTU communications protocol.
- Simple installation.

ACCESSORIES

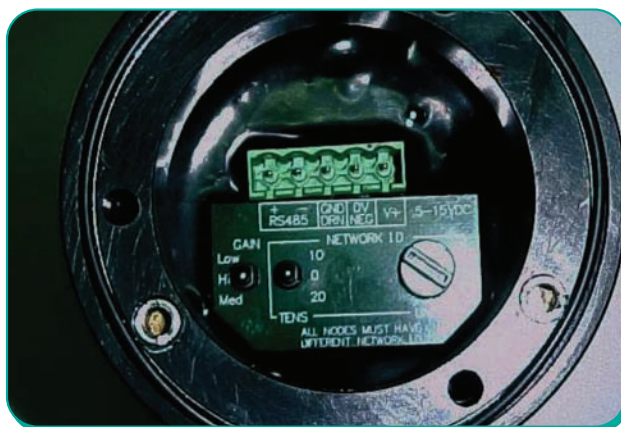
EMS6

Two models are available relative to the main controller and relative sensor heads.

The following photo identifies the particulars on the circuit board inserted internally within the tribo-electric probe with options relating to sensibility.

Digital sensor for temp. up to 80°C - Model EMS6-3180.

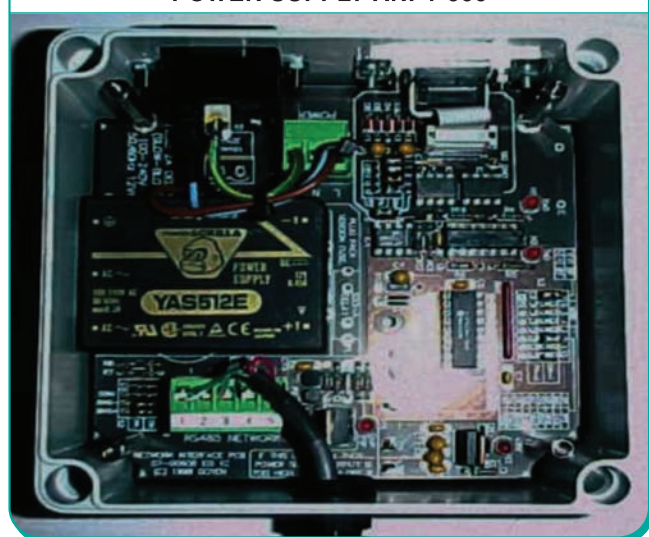
Digital sensor for temp. up to 200°C - Model EMS6-3200.



Data acquisition and conversion from RS485 to RS232.

Grouping/networking probes into ANJ1-000 Junction Box.

POWER SUPPLY ANP1-000



CONNECTION ENCLOSURE ANJ1-000



TECHNICAL SPECIFICATIONS
EMS6
FUNCTIONS

Diagnostics	Automatic self check and calibration signal on start-up
Gain	High: (0-20 mg/m ³) - Med: (0-150 mg/m ³) - Low: (0-1000 mg/m ³)

OPERATIONAL EQUIPMENT

	ANJ1 Junction Box	ANP1 Power supply	AYK1 Relay card
Enclosure rating	IP66/NEMA4	IP66/NEMA4	IP66/NEMA4
Enclosure size	94 mm x 180 mm x 57 mm	130 mm x 130 mm x 75 mm	130 mm x 94 mm x 57 mm
Enclosure material	Plastic composite.	Plastic composite.	Plastic composite.
Power supply	12V DC or 24V DC	100-240V AC	12V DC nominal.
Temperature range	From -20°C to 60°C.	From -20°C to 60°C.	From -20°C to 60°C.

REMOTE SENSING HEAD

Insertion temp range	EMS6-3180: from -20°C to 80°C - EMS6-3200: from -20°C to 200°C High temperatures are achievable >650°C (1200°F) with additional hardware.
Sensor lengths	From 50 mm to 10 m using appropriate probe options (Consult with supplier for larger options).
Connection required on duct	1" BSPT Socket.
Enclosure temperature range	From -20°C to 60°C.
Enclosure rating	IP66/NEMA4
Enclosure material	Aluminium.
Sensing element material	AISI 316L stainless steel.
Sensing element Options	Solid rod, tubular, teflon coated, multiple supports, cable type.

AIR PURGE REQUIREMENTS

Connections	1/8" gas thread on side of unit
Air pressure	400kPa (60psi) max.
Max air consumption	1,7-17m ³ /hr (1-10cfm) pulsed.
Electrical specification between sensing head and control unit	4 core screened data cable: Beldon 9534 (or equivalent) max 1000m
Resolution	0,001 mg/m ³

WHAT IT DOES**EMP7**

- EMP7 is a simple self contained 2-wire, particulate monitor with 4-20mA output designed to feed a PLC, display device such as AUD1 or Connect Network via Connect Access Card or Numeric Display, AUD1.
- Continuously monitors particulate flow, primarily emissions from process plants.
- Indicates condition and efficiency of cleaning system.
- Maintains absolute calibration.
- Models available for mg/m³ (gr/ft³) or mg/s (gr/s) following calibration to Iso-kinetic sample.
- Self Test Diagnostics including Statistical History, Run Time, Power Up and Optional Remote Diagnostics Reporting.

**PRODUCT DESCRIPTION**

The EMP7 utilises ISE technology. Each particle travelling through the process develops an electrical charge. As the particle passes or impacts with the sensing element, a current is induced which is processed in EMP7 by a method called Impulse Signature Extraction ("ISE"). ISE technology extracts the basic characteristics (the "signature") of the impulsive signals induced by individual particles in the gas stream. Since these characteristics are related to such things as the particle velocity, EMP7 is able to compute velocity as a parameter, and therefore to calculate the emission level as either mass flow rate or mass density as required. In addition, although ISE technology processes the entire signal from the sensing element, its algorithm effectively negates the potentially erroneous effects of the DC component of the signal, so ISE technology shares all the advantages of existing AC Triboelectric technology.

Made a reality by recent advances in low power digital signal processing, ISE technology is as significant a step forward now as the introduction of AC Triboelectric technology was in 1992.

OPERATIONAL RANGE

- Suitable for a wide range of dust collection and materials handling operations and gas cleaning plants.
- Dust concentrations from 0.01mg/m³ (4x10⁻⁶gr/ft³).
- Accurate for most particle and particle characteristics.
- Insertion temperatures from -20°C to over 650°C (-4°F to over 1200°F) with additional hardware.
- Duct sizes from 50mm (2") to outlets over 10m (33ft).
- Suitable for most stack material. eg. brick, steel etc.

BENEFITS

- Detects all particles regardless of composition.
- Very sensitive due to ISE Technology Monitoring.
- No range switching or other adjustments.
- Calibration is constant.
- Extremely wide range of concentration and mass flow.
- Tolerates extremely high leakage of signal due to insulator bridging.
- Seamless interface into industrial controls systems, such as PLC.

FEATURES

- Extremely wide, adjustment free range (0.01mg/m³ to 1kg/m³ or 4 x 10⁻⁶gr/ft³ to 400gr/ft³).
- Simple 4-20mA, 2-wire output connection.
- Output is true mass density (mg/m³) (gr/ft³) or true mass flow rate (mg/s) (gr/s) depending on model selected.
- Full internal electrical isolation to prevent potential corruption due to ground potential differences.
- Resolution of 0.001mg/m³ (4 x 10⁻⁷gr/ft³).
- Logarithmic output for wide range displays, but also easily converted to linear.

TECHNICAL SPECIFICATIONS

EMP7

FUNCTIONS

Monitoring units calibrated	mg/m ³ (gr/ft ³) user defined automatic or mg/s (gr/s)
Diagnostics	Statistical history. Run time diagnostics. Power-up diagnostics and optional reporting.

OUTPUTS EMISSION

Emission specification	4÷20 mA
Function	Log (concentration/mass flow)

INSTRUMENT SPECIFICATIONS

Enclosure rating	IP66/NEMA 4.
Enclosure size	Ø 88 x 125mm high (ø3 1/2" x 5") not including sensor length
Power supply	10-32 VDC
Insertion temp range	Da -20°C a 200°C (see supplier for higher temperature options).
Connection required on duct	1" BSPT socket.
Sensing element material	316 Stainless steel (5mmOD x 300mm (standard cable length) 3/16" x 12")
Sensing element options	Solid rod, tubular, teflon coated, multiple supports, cable type, other lengths available

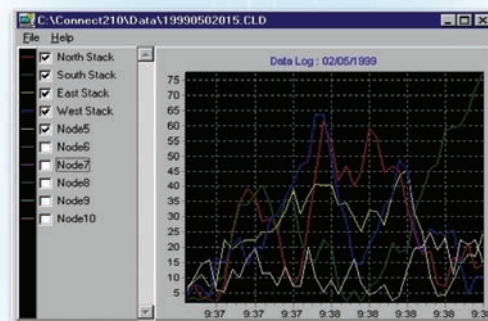
AIR PURGE REQUIREMENTS

Connection	1/8" gas thread on side of unit
Air pressure	400kPa (60psi) max.
Max air consumption	1,7-17 m ³ /hr (1-10cfm) pulsed
Electrical specification between sensing head and electrical input	2 core screened data cable: max 5000 m (16,400 ft)
Resolution	0.001mg/m ³ (0.4x10 ⁻⁷ gr/ft ³)
Range Stability	±1% 4-20 mA signal

WHAT IT DOES

- A total process data acquisition system.
- Continuously quantitatively and instantaneously records and reports process conditions.
- Continuously monitors and records particulate as well as any analogue signal such as temperature, pressure, associated with a process.
- Can have up to eight different traces in each of eight different trends on screen at any one time showing different parameters eg. concentration, mass flow, pressure, velocity, temperature.
- Extensive internal function library including: alarms, DDE (Dynamic Data Exchange), historical logging, trend charting, averaging.

Connect Network System



PRODUCT DESCRIPTION

The Connect Network System utilises RS485, Modbus RTU for long haul data transmission. Connect is a multi-threaded application, written under Microsoft Visual C++ Studio, following all Microsoft recommendations. Thus Connect is capable of running simultaneously with other standard Windows applications. Signals from various nodes are sent through junction boxes where they download to the Connect Network link. Up to 29 nodes can be incorporated into one network which can then be connected through a power supply/converter (ANP1) that converts the RS485 signal to RS232 format. A designated serial port is required for the system.

OPERATION RANGE

- Suitable for Windows 95, 98, 2000, or NT 4.0.
- Processor requirements: Pentium 300 recommended. Free disk storage of 5MB.
Plus 1MB/month per signal (typical).

BENEFITS

- Improved baghouse monitoring for lower maintenance costs.
- Can prevent environmental breaches through proactive data acquisition.
- Cost effective data acquisition system.
- Useful initial set-up tool before configuring EMS6 network system into PLC.

FEATURES

- Ability to monitor entire process conditions.
- Records EPA data for historical reference and displays real time data for process control.
- Can act either as a stand-alone data acquisition and presentation System or as a (front end) to a third party SCADA System, providing dynamic data via a standard "DDE" Interface.
- Up to 29 nodes of various configurations (including those with analogue output) can be connected to the Connect Network ed temperature, pressure, gas analyser.
- Events log for alarm and system reference.
- Network search facility for easy recognition of newly added nodes.

Connect Network System

CONFIGURATION TABLE AND CONNECT SETTINGS

Connect System Configuration

General | Nodes | Trend Charts | Network

Computer Serial Port: COM1 Output Unit Address:

Sampling Period (ms): 1000 Heartbeat Rate: None

Log Data Averaging: 1 Heartbeat Output: None

DDE Data Averaging: 1

Note : Polling of devices stops when the configuration Window is opened.

Apply OK Help

Connect System Configuration

General | Nodes | Trend Charts | Network

Current Node: NODE1 (North Stack) Total Nodes: 5

TagName: North Stack Net Id: 1

Node Type: EMS6 Alarm Delay: 0

Node Serial No.	Alarm	Value	Log	Sound	Output
High High	95.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None	
High	85.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None	
Low	10.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None	
Low Low	5.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None	

Eng. Scale High: 100.00 Eng. Scale Low: 0.00

Add Delete Apply OK

Connect System Configuration

General | Nodes | Trend Charts | Network

Current Trend: TREND1 Trace 1: Color North Stack

TagName: Trend1 Trace 2: Color South Stack

Total Trends: 1 Trace 3: Color East Stack

Trend Averaging: 1 Trace 4: Color West Stack

Vertical Axis Units: Percent Trace 5: Color OFF

Vertical Axis High: 100.00 Trace 6: Color OFF

Vertical Axis Low: 0.00 Trace 7: Color OFF

Trace 8: Color OFF

Add Delete Apply OK

Connect System Configuration

General | Nodes | Trend Charts | Network

Change Nodes Parameters

Search For: ☐ Online Nodes ☐ Offline Nodes ☐ Demo Nodes ☒ Other Nodes

When Node Found: ☐ Set Net Id ☒ Make Net Id = Node # ☐ Add as Offline Node ☐ Continue

Device: EMS6

Network Id:

Gain Range: High

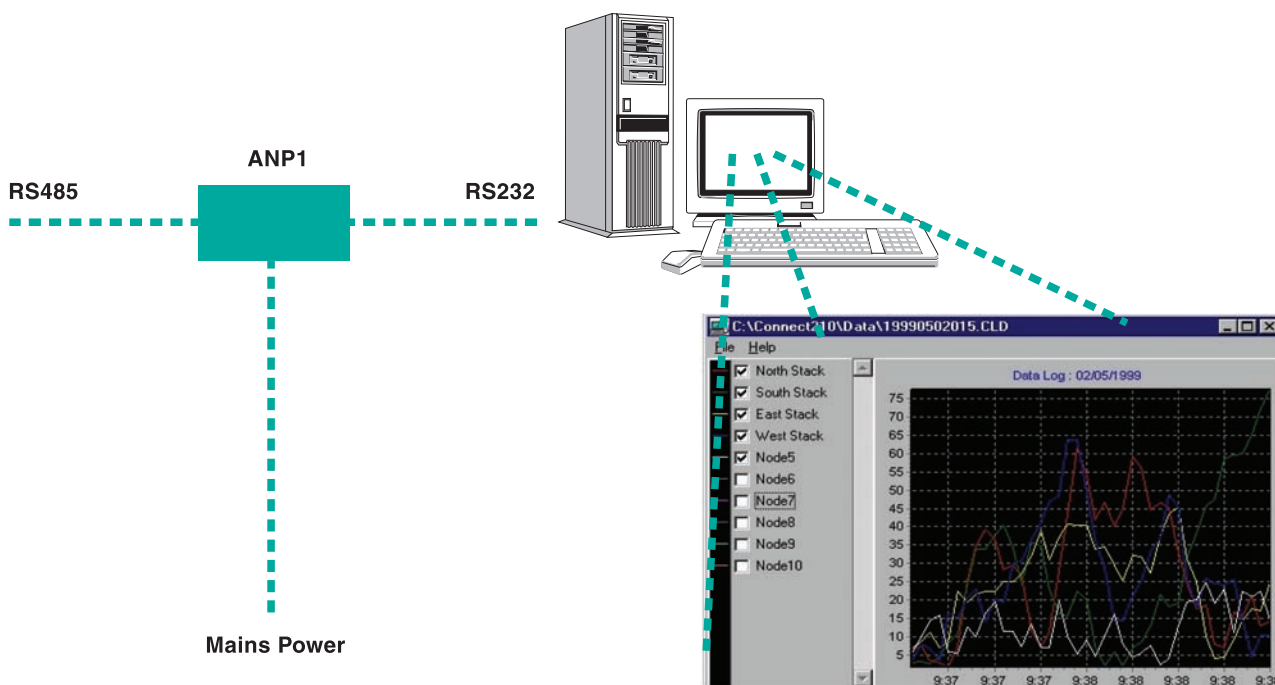
EDS Polls:

Search Network: from Net Id 255 to Net Id 254

Search: Start Continue View List Abort

Apply OK

COMMUNICATION LAY-OUT



FUNCTIONS

Connect Network System

The Connect Network System records both averages that can be used for Enviromental Regulatory Authorities and instantaneous leves for process monitoring.

The system can be calibrated to quantitatively monitor mg/m^3 (gr/ft^3), mg/s (gr/s), temperature, pressure differentials, velocity and other system parameters using various calibration techniques such as isokinetic sampling.

HISTORICAL LOGGING OF DATA

- Calculates and records all process conditions.
- Records all information in table format.
- Averaging option.
- Event log to highlight specific actions such as alarm.
- Diagnostic tool for process improvement.
- View any combination of nodes, from 1-29.
- Displays historical data as trend graph.

TREND CHARTS

- Monitor up to 8 charts indipendently.
- Each chart can be averaged, scaled and labelled.
- Up to 8 traces per chart.

ALARMS

- Up to 4 alarms on any signal.
- Automatic or manual reset.
- Drive relay outputs (AYK1) or event log file and PC sound system.

CALIBRATION

- Iso-kinetic testing function.
- Automatic or manual start/stop.

DDE

- Output of all signals into another exterior platform such as SCADA or Excel.
- Separate averaging.

NETWORK

- Node parameters can be changed through the system configuration.

NETWORK	
Historical Data	Cronological registration of data
Log events	Interval trend
Polling	Configuration
DDE	Network



THE TOTAL SOLUTION PROVIDER

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