
pma
A CLEARER PICTURE
OF YOUR PROCESS.
Continuous density, solids and liquid concentration.
Independent UK expertise from PMA, established in 1971.

OVER 50 YEARS. ONE CLEAR FOCUS.



MEASUREMENT THAT BEGINS WITH YOUR APPLICATION

EXPERIENCE WITH A PRACTICAL PURPOSE.

Since 1971, PMA has supplied online instrumentation for process control and compliance monitoring. Our role is to connect the measurement you need with a workable instrument, installation and support plan.

Every process has its own conditions. We start with the liquid or slurry, the expected range, temperature and pipework, then discuss what a useful measurement should help your team decide.

01 Define the duty

Stream, range and operating decision.

02 Select the measurement

Technology, configuration and fitment.

03 Plan ongoing support

Commissioning, calibration and service.

CONTINUOUS DENSITY. A CLEARER PROCESS SIGNAL.

SDM ECO

The SDM ECO uses ultrasound to measure slurry density continuously. It brings changing conditions into view without a radioactive source, supporting day-to-day decisions in demanding slurry processes.

A continuous signal adds context between laboratory samples. PMA helps review the application, choose a suitable installation and plan how the measurement will be used by your operators or control system.



Measurement

Ultrasonic density measurement. No moving parts in the measuring principle.

Installation

Wafer, spool-piece, weld-o-let and clamp-in options to discuss with PMA.

Integration

Discuss 4–20 mA outputs and available digital connections for your system.

MATCH THE MEASUREMENT TO THE DUTY.





Mining and minerals

Grinding circuits, classification and tailings. Define the stream and the density range before choosing the measuring point.

Quarry processing

Wet processing and slurry transfer. Review the pipe arrangement, flow conditions and how operators will use the signal.

Dredging duties

Continuous slurry transfer. Relate density to the material, pipework and operational decision, rather than a single grab sample.

Limestone slurry / FGD

Preparation and recirculation streams. Discuss abrasion, scaling, solids range and the purpose of the density measurement.

KNOW THE LIQUID. CONTROL THE PROCESS.

A useful concentration measurement depends on the composition, temperature and working range of the process liquid. PMA helps define those conditions before a measuring configuration is selected.



01 / SINGLE-COMPONENT CONCENTRATION

CHEMICAL CONCENTRATION

Model 8500 shown

Measure one component of a defined solution, such as sodium hydroxide or sulphuric acid. Sound velocity can be related to concentration when the liquid system and temperature behaviour are understood.

Tell PMA: chemical identity, concentration limits and process temperature.



02 / THREE-COMPONENT LIQUIDS

TERNARY LIQUID ANALYSIS

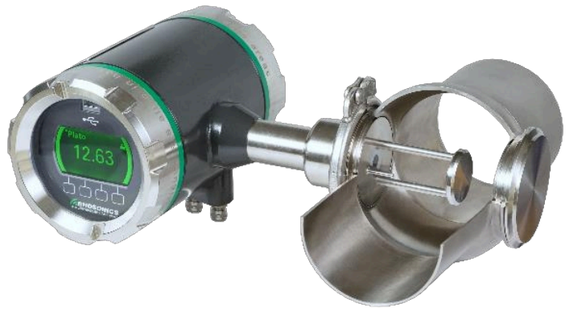
Model B31 shown

For selected ternary liquids, ultrasonic parameters may be combined with conductivity to determine two components. The calibration relationship is specific to the application and the liquid composition.

Tell PMA: all components, likely variations and the decision the signal supports.

FROM THE BREWHOUSE TO TREATMENT.

Online measurements can support both product control and downstream process decisions. Start with the question you need to answer, then define a suitable instrument and operating range with PMA.



03 / BREWING AND SUGAR CONCENTRATION

PLATO AND BRIX

Plato Meter F43 shown

Plato measurement supports control at stages of the brewing process. Brix measurement indicates the sugar content of a defined process liquid. The product composition and measuring duty determine suitability.

Application review: product type, concentration range and installation point.



04 / INDUSTRIAL WASTEWATER

ONLINE COD MEASUREMENT

Model 9585 shown

A continuous chemical oxygen demand signal in wastewater influent can help identify high-load events and inform treatment decisions. Define the wastewater characteristics and the required operating response.

Application review: influent variation, monitoring purpose and plant conditions.

A PROCESS SIGNAL, GROUNDED IN PHYSICS.



Solids measurement

Model 9670 shown

Applications include mineral slurries and selected food processes. The medium, expected solids range and installation requirements determine the measuring approach.

THREE WAYS TO READ ULTRASOUND.

01 Sound velocity

The time an ultrasonic signal takes to travel a known distance can be related to liquid concentration. Temperature is an important part of the application relationship.

02 Attenuation

Solids absorb ultrasonic energy. The loss over a defined path can be used as an indication of solids concentration for a suitable application.

03 Acoustic impedance

Reflection of energy at the sensor–medium interface can be used for density measurement. The selected parameter or combination depends on the process duty.

PMA application review connects the physical measurement to the decision you need to make.



LET'S DEFINE YOUR NEXT MEASUREMENT.

Share your process, the measurement you need and the practical constraints.
PMA will help identify the next useful step.

Speak to PMA

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Visit or write

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PMA management systems

ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

Product configurations shown are illustrative. Confirm model availability and application suitability with PMA.