

Prosonic S - reliable Ultrasonic Measurement in Liquids & Bulk Solids

As the world's largest manufacturer of ultrasonic sensors, with over 35 years of development and application experience, Endress+Hauser are delighted to launch their new **Prosonic S** series.

With separate transmitters and sensors Prosonic S provides distinct advantages, especially in Water / Wastewater and Bulk Solids environments.

The separate transmitter is suitable for up to 2 sensors and is equipped with HART as standard and E+H ToF Tool operating software (both free).

Prosonic S offers non-contact, maintenance-free measurement and is unaffected by product properties such as changing density and dielectric constant.



*Typical Prosonic S applications:
Open Channel Flow Measurement and
Screen Monitoring / Control*

Sensors

A choice of 6 sensors are available, each with different characteristics to suit varied applications. Features include:

- seal free fully welded liquid sensors
- a stainless steel sensor with tri-clamp
- short blocking distance (most models)
- low sensitivity to condensation due to strong self cleaning affect
- measuring ranges:
 - liquids - up to 25 metres
 - bulk solids - up to 70 metres
- gas as well as dust Ex approvals

More information?

Circle Enquiry No: 0201
Contact: Howard Berry or Chris Gailer



Endress+Hauser The Leader in Ultrasonics



Transmitters

Two transmitter options are available: a top-hat rail version for control cabinet installation or a robust, IP66 field housing. The transmitter has automatic sensor type recognition, a backlit display and plug-in electrical connections.

Outputs include up to 2 x 4-20mA (HART) and 1 relay with the option of 3 or 6 relays. Profibus DP is also optional. Power supplies include 90-253Vac or 10.5-32Vdc so battery operation is possible.

As well as user-friendly commissioning and operation the transmitter features easy step-by-step calibration instructions (filling or emptying is not required).



*Typical Prosonic S applications:
Crusher Monitoring*

Typical Prosonic S applications

- Specifically adapted to the Water / Wastewater Industries with many programmable software features.
E.g: 77 pre-programmed flow curves, screen and pump control, storm water basin monitoring with level and flow (2 x 4-20mA) in the same instrument and with one sensor.
- Level measurement in storage and buffer tanks or in agitated tanks
- Level measurement in silos, bunkers and stockpiles
- Flow measurement in open channels and weirs
- Control of pumps, lift stations and screens
- Monitoring of crushers, conveyor belts and belt load
- Monitoring of up to 6 level limits in silos or tanks

Thermal Mass Flow Measurement of Gases with integrated 'Gas Engine'

Thermal mass flowmeters have gained wide industry acceptance due to their ability to measure an ever-increasing range of gases.

Whenever low flow rates, high turndown or low pressure losses are important in gas-metering applications, thermal mass flowmeters offer a real alternative to many other flowmeters.

With a measuring turndown up to 100:1, E+H's new **Proline t-mass 65** accurately measures the mass flowrate of a wide range of gas types, including minute flowrates and off line leakage, e.g:

- Compressed air
- Natural gas flow to boilers / dryers
- Carbon Dioxide flow in breweries
- WWTP biogas and aeration air
- Gas production eg. Ar, N₂, CO₂, He, O₂

As well as direct mass flow measurement it also provides a temperature or process density output. The sensors offer negligible pressure drop/loss and pressure or temperature compensation is not required.

Integrated 'Gas Engine'

Proline t-mass 65 pushes the technology boundary with its integrated Gas Selection Database 'Gas Engine'.

This allows users to select from 15 gases and also up to 8 component gas mixtures from an expanded list of 23 gases.

Gas type and properties can be changed in the field without recalibration.

Pre-set device parameters can speed commissioning. E.g. gas type/mixture, analogue and pulse values, operating pressure and temperature, gas density, pipe diameter or duct dimensions.

Proline Advantage

The Proline modular concept is now a feature of most E+H Flowmeters. It offers distinct advantages and standardised set-up, operation and troubleshooting tools.

The Proline t-mass 65 system consists of a transmitter and an insertion or flanged sensor. Two versions are available:

Compact version: transmitter and sensor form a single mechanical unit

Remote version: transmitter and sensor are separate from one another

Time-saving 'Quick Setup' operating menus and 'Quick Check' diagnostics provide cost-saving commissioning and troubleshooting.

E+H Applicator software enables optimum, application-specific selection of flowmeters while Fieldtool and FieldCare provide easy parameterisation.

The E+H Fieldcheck simulation and verification tool allows easy commissioning and maintenance.



Compact and Remote Versions with Flanged and Insertion Sensors

Typical features

- rugged, reliable and sensitive - especially at low gas pressures
- 2-line, backlit display with push-button user interface
- analogue and relay outputs
- flow rate: up to 12,000 kg/h
- nominal diameters:
flange: DN15 - 100
insertion: for DN80 - 1500
- sensors and electronics are field replaceable. S-DAT and T-DAT store sensor calibration & parameterising data for easy exchange
- each device individually calibrated (with traceable certificate). Insitu-Calibration is possible with a reference meter input
- connection to all common process control systems: HART, PROFIBUS DP, MODBUS RS485
- world-wide accepted Ex-approvals include ATEX, FM, CSA

Proline t-mass 65 with its many features offers a maintenance friendly and time-saving direct gas mass flow measurement. Check it out!

More information?

Circle Enquiry No: 0202

Contact: Chris Gailer or Howard Berry

Customer-Specific Factory Calibration

Endress+Hauser have impressive calibration rigs for all their flowmeters.

Characteristics of the Thermal Mass Flowmeter calibration rig are:

- Calibration with air
- Repeatable / stable ambient conditions
- Controlled temperature and humidity
- Undisturbed, fully developed flow profile
- Automated positioning of the Device Under Test (DUT)
- Revolvers for Flange versions
- Straight pipe section for insertion type
- Master meters: turbines, rotary pistons
- Measurement uncertainty $\pm 0.5\%$
- DIN17025 accredited



Endress+Hauser calibration rig for thermal flow measuring devices

Free E+H Catalogue on CD-ROM

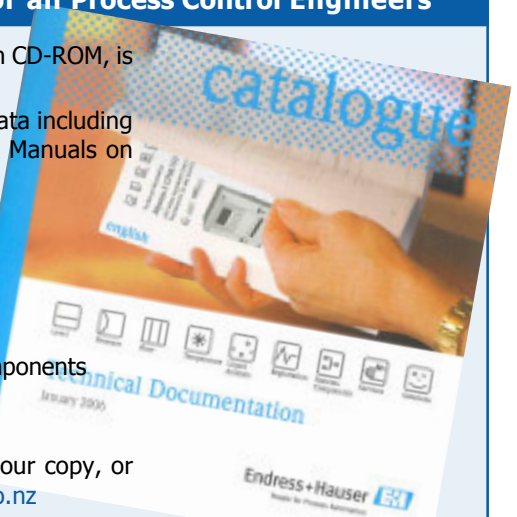
An indispensable tool for all Process Control Engineers

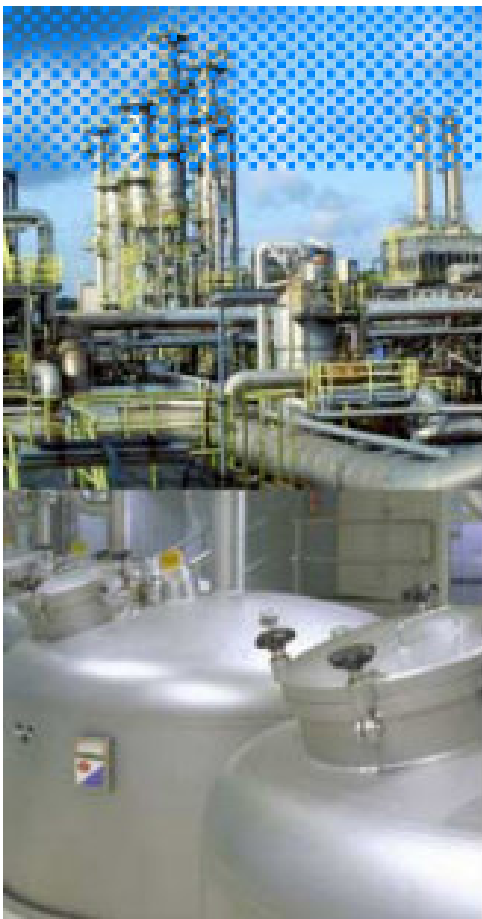
Endress+Hauser's 2006 Catalogue, on CD-ROM, is now available free from EMC.

The Catalogue contains a wealth of data including Technical Information and Operating Manuals on all E+H's product groups:

- Level Measurement
- Pressure Measurement
- Flow Measurement
- Temperature Measurement
- Analysis Instrumentation
- Samplers, Recorders, System Components
- Process Communication
- Systems and Gauging

Circle Enquiry No. **0203** to obtain your copy, or request a copy online at www.emc.co.nz





Endress+Hauser No. 1 in Level Worldwide

Liquicap M

Pre-calibrated Capacitive Level Measurement System for Liquids

Endress+Hauser's **Liquicap M** Capacitive compact transmitter and probe is used for the continuous level measurement of liquids.

Capacitive instrumentation, with a short measured value reaction time, and no blocking distance, is ideal for applications in small tanks, where rapid level changes are expected and the measuring range must cover the whole content of the tank.

Thanks to its robust construction and proven self-sealing cone feature, the Liquicap M probe can be used both in vacuums and pressure up to 100 bar. The sealing and insulation materials used allow operating temperatures of -80°C to +200°C.

Liquicap M is suitable for interface measurement applications in the chemical and petrochemical industries and is also suitable for very viscous media and is unaffected by concentration fluctuations.

No Calibration

Customer calibration is not required for conductive liquids >100µS/cm as measurement is independent of the dielectric constant. Accordingly a variety of liquids can be measured without recalibration.

Factory preset to the ordered length (0 to 100%) Liquicap M can measure from the tip of the probe to the process connection.

Safe functioning is not affected by tank geometry, baffles and material (plastics, stainless steel, concrete, etc).

Used in conjunction with E+H Fieldgate, Liquicap M provides an ideal solution for inventory control and optimising logistics.

Features and Benefits

- No calibration for media with conductivity >100µS/cm. Probes are factory calibrated 0% to 100% of the length for easy and rapid commissioning
- No blocking distance
- Menu-guided operation and measured value display via plain text display
- Designed for use in systems requiring functional safety to SIL2
- Compact version and separate electronics version for tight spaces
- Corrosion and temperature resistant material in contact with the process. FDA-listed materials for wetted parts
- 2-stage overvoltage protection against electrostatic discharge
- Measurement can be changed over for build-up compensation
- Inactive length for installation in nozzles prevents condensate entry
- Gas-tight process seal for protection against toxic and aggressive media
- Measured value reaction time: 0.3sec
- Easy exchange of electronics without recalibration (DATparameter storage)
- Auto self monitoring of electronics
- Monitors damage to insulation and rod breaking or rope tearing
- EHEDG approval - suitable for hygiene applications (food industry)
- Suitable for (CIP/SIP)
- Wide range of certificates / approvals: ATEX, CSA, FM, WHG, EHEDG

Technical Data

- Active probe length: 0.1 to 4m rod version
0.4 to 10m rope version
- Inactive length: 0.1 to 2m
- Probe material: rod 316L with PTFE, PFA insulation
rope 316L with FEP, PFA insulation
- Rope dia. 4mm (0.75mm insulation)
- Rod diameters (Insulation): 10mm (1mm) - for buffer tanks
16mm (2mm) - extreme processes
22mm (2mm) - aggressive liquids
- Process pressure: max. 100 bar
- Process temperature: -80 to +200°C
- Environmental temp: -50 to +70°C
- Measured value reproducibility: 0.1%
- Output: 2-wire 4-20mA HART, PFM
- Supply voltage: 12-36Vdc



More information?

Circle Enquiry No: 0204
Contact: Howard Berry or Chris Gailer

Huge savings on Excell Scales

Now is the time to buy with this exclusive Newsletter offer

We have purchased some Excell Scales at exceptional prices and are giving you the opportunity to make big savings with an exclusive EMC News offer.

Order any of the Excell AWH 6kg or H2O Scales featured below before the end of March 2006, mention this special offer,

and you will receive a huge discount from the standard list price.

Don't miss this opportunity - the offer is limited to models presently held in stock by EMC so be quick to secure your scale. For more information on the full range of Excell Scales available from EMC, includ-

ing Parcel, Counting, Bench, Floor and Crane Scales, please visit our web site.

More information?

AWH Series - Circle Enquiry No: 0205

H2O Series - Circle Enquiry No: 0206

Contact: Steve Watkins

AWH Series Weighing/Counting/Checking

Used in applications requiring high accuracy, the robust 6kg capacity AWH Scale offered here has a resolution of 0.2g and a large platter size of 280 x 230mm.

In addition to Weighing, the AWH incorporates Counting and Checking functions to provide a truly versatile scale - ideal for high accuracy weighing requirements as well as stocktaking of small components.

Normally selling for \$740.00 we have 10 AWH 6kg scales available at a huge 50% discount.

With the discount, these versatile scales are now available for only **\$370.00** + GST, so place your order today.

Features include

- Weighing/counting/checking functions (with buzzer)
- Battery or AC adaptor
- Preset tare and Auto calibration
- External resolution: 30,000 divs
- Internal resolution: 600,000 divs
- Low battery indicator
- Totalising function



H2O Series Waterproof Weighing Scales

The H2O Series of Waterproof Weighing Scales provide many features and are normally priced at \$550.00.

Capacities of 3, 6 and 15kg are available with a huge 35% discount and can be yours for only **\$357.50** + GST.

3kg x 1g resolution (qty 5)

6kg x 2g resolution (qty 5)

15kg x 5g resolution (qty 2)

Suitable for operation in wet areas and rated to IP66, the H2O has a patented waterproof design, including a constant pressure structure, and a stainless steel platter size of 225 x 192mm.



Features include

- Auto Zero tracking
- Auto calibration
- LCD display with backlight
- Functions include: counting, percentage, net/gross hold, check weighing
- Adjustable gravity value
- Mains (AC adaptor included) or battery
- Low battery indication
- Auto power off

New Linear Potentiometer from Celesco

Ideal for Industrial Automation and Robotic Applications

The Celesco CLWG Linear Potentiometer has been specifically designed for a wide range of demanding applications including industrial automation and robotics.

This rugged and highly reliable position transducer is available for linear measurements from 75 to 750mm and provides unrivaled performance in terms of accuracy, repeatability (<0.01mm) and life expectancy.

The twin-bearing actuating rod, backlash-free pivot heads, and superior wiper system assure operational precision by preventing dirt and grit from entering the housing and compromising performance.

The CLWG is rated IP65 and, for ease of installation and maintenance, it features a 4-pin M12 plug-in connection.

Reliable, consistent, and near-frictionless measurement is the result of a 3-pronged,



claw-type wiper that performs flawlessly even in high-vibration applications.

The wiper literally pushes away any fine-grained particles as it moves along the sensitive, conductive surface of the track.

Contrast this to roller-type wipers which are not only vulnerable to vibration, but actually press particles into the surface of the track and degrade the mechanism and performance over time.

More information?

Circle Enquiry No: 0207

Contact: Russell Mason



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