

The Watermark

The Newsletter From

Automated Water & Effluent Ltd

Winter 2025/26

New IP65 pH/Redox Controller.



The model P6587.103 is a new multi-input instrument designed to measure and control pH, mV, and conductivity. It is housed in a custom-moulded IP65 enclosure for mounting on a flat

vertical surface, eliminating the need for a separate control panel ideal when installing an instrument close to the process. The P6587.103 can be configured to measure and display pH,

redox millivolts, and conductivity, with user selectable ranges of 0–200 μ S, 0–2000 μ S, 0–20.00 mS, and 0–200.0 mS when used with a suitable $k = 1.0$ conductivity cell.

The related model P7687.103 can be user-configured for pH measurement using either a standard glass electrode or an antimony electrode, allowing accurate measurement of solutions containing hydrofluoric acid over a range of 1.00 to 10.00 pH.

The instrument includes four relay outputs, two logic inputs, and two isolated current outputs (0–20 mA or 4–20 mA), all of which can be assigned to any measured parameter. Control relays can be programmed for On/Off control, PFM control for proportional operation of electronic metering or dosing pumps, or PWM control for time-proportional operation of solenoid valves or small pumps.

Overall, the P6587.103 is designed to deliver cost-effective, reliable, and accurate measurement and control for a wide range of industrial processes.

New pH/Redox Electrodes

To complement our P7687 panel mounting and P6587 IP65 surface mounting pH and redox controllers, we are expanding our range with new pH electrodes equipped with built-in temperature sensors. These sensors provide both automatic temperature compensation and real time solution temperature readout.

This enhancement is particularly valuable because both the P7687 and P6587 controllers can be user programmed to configure one of their two isolated 0–20 mA / 4–20 mA outputs as a temperature signal. This feature is extremely useful when connecting to our online data logger, the CMC99 or CMC141 paperless recorder/data loggers, or to a PLC with multiple analogue inputs.



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After over 27+ years of producing our popular printed full colour catalogue this is now available to download digitally on our website at awe-ltd.co.uk/catalogue This will allow us to add new and upgraded items to the catalogue throughout the year. Keep an eye out for our new 2026 catalogue releasing early next year.



Technical Tips

Winter Is Here Again

With the sudden return of winter, sub-zero temperatures and strong winds have pushed wind chill levels well into the double negatives. As a result, we have received several calls regarding dosing pumps struggling to operate when dosing caustic. In most cases, the issue is traced to customers attempting to dose 47% caustic using pumps installed outdoors without any trace heating.

Some purchasing departments choose the strongest caustic available, assuming it is more cost-effective because they are “not paying for water” or for transporting it. However, we do not recommend this approach. Controlling the pH of a lightly buffered solution using a highly concentrated reagent like sodium hydroxide is inherently difficult due to the logarithmic nature of the pH titration curve. In addition, stronger

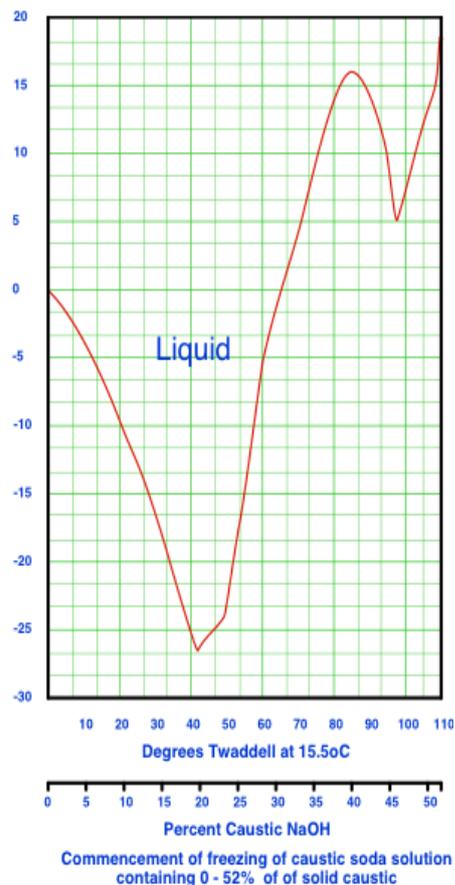
caustic solutions freeze at temperatures higher than water, which means pumps and dosing lines require insulation and trace heating to prevent solidification.

Our recommendation is to purchase caustic at a concentration that provides adequate freeze resistance while offering better process control and reducing the risk of overdosing.

The graph to the right shows caustic strength versus freezing point to help you identify a suitable concentration for your application.

If you need a full sized copy of the caustic Vs freezing point graph then please contact us by telephone by calling **01785 254597**, or e-mail vyoung@awe-ltd.co.uk and we will email you an A4 sized copy in a pdf format

Graph Showing the Freezing Point of Caustic



Liquid level Control



We are often asked by customers during site visits whether we can provide a simple level-measuring system, one that displays the level or volume of a remote tank or vessel without requiring them to leave their office or laboratory.

To meet this need, we offer a straightforward solution consisting of a radar level transmitter paired with an IP65 digital display, fully calibrated to their specific tank or vessel. We even include a corrosion resistant polypropylene wall mount for added durability.

The transmitter can be installed up to 100 metres from the indicator with no signal loss. An optional output is also available for triggering an alarm.

Remember, you heard it through the AWE grapevine.

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