

## Temperature sensors that give cheaper and better measurement

**One of Pentronic's most manufactured sensors has a built-in transmitter. It's called the PAT1101 and offers better measurement performance at a lower cost.**

In the last issue of Pentronic News we presented smart measurement systems. We now continue with more information about one of them – the analogue version PAT1101 with a 4-20mA output signal which is compatible with existing measurement systems.

The resistor is a Pt100 type connected to a high-performance built-in signal converter. The complete sensor is plugged in via a M12 connector and supplies a 4-20 mA analogue measurement signal to a superior system, PLCs or display.

"One of the ingenious features of Pentronic's product is that each individual sensor is calibrated and adjusted before delivery," explains

Sales Manager Dan Augustini.

The combination of calibration and adjustment means that all the units have the same output signal at the same temperature. This means the sensors are fully interchangeable. Instead of stopping a process for several hours in order to adjust the measurement system to suit the new sensor, the replacement process goes much faster.

"The goal has been to increase measurement accuracy and also reduce the time required for installation and maintenance," Dan adds. "Time is money so these sensors save money."

"The alternative is a signal transmitter mounted in a DIN rail or a terminal head," Rikard Larsson explains. "This product cannot always replace that solution but it can be an interesting

alternative in specific applications."

The sensor's design permits many possible customisation options. The probe tip and fittings can be made to customer order. The transmitter can also be moved out by using an intermediate cable in order to distance the electronics from high temperatures. Whatever their construction design, the units meet ingress protection rating IP 69, which means they can withstand being cleaned with high pressure and hot water. While it is undergoing calibration and adjustment, the PAT1101 can also be programmed with the desired measuring range, for example from 0 to 160 °C or from -40 to 200 °C. The measuring range is determined by the customer's application temperature and required increments. With a Pt100 in the tip, the maximum temperature is approx. 600 °C. Pentronic programmes the built-in transmitter before delivery.

In conclusion, the PAT 1101 provides better temperature measurement at a lower total cost.



PAT1101.



The PAT1101 with a cable.



Various probe tips.