

A0P2 and A0P10 Wired Gap Measurement Probe System

High Accuracy | Up to 1000 samples/sec | 2.5 - 10 mm Range

Bring capacitance accuracy, high-speed response, built-in calibration and temperature stability to your manufacturing floor at a cost effective price point.



Application

Replace out-dated Eddy Current probe systems

- Eliminate drift due to temperature, by replacing eddy current probes with higher temperature stability capacitance probes.
- Gain more insight by networking probes together to measure target geometry.
- Built-in calibration replaces in-situ Eddy Current calibration saving installation and replacement time.
- Immune to magnetic field interference.
- Optimized for machines that have a surface velocity of up to 6000 SFM.
- Capacitance-based technology supports measurement to any type of conductive grounded target.

Suitable for industrial deployment, this pre-calibrated capacitive gap sensor system provides highly accurate measurements to a grounded metal target. Capable of taking continuous or manual samples with analog or digital output for analysis or machine control. The large sample rate allows for insight into probe measurements providing an actionable data advantage. Achieve richer geometrical measurements by networking multiple probes together.

The system can continuously sample automatically with a on power-cycle or in a command mode. A "start sample" command is sent to the selected sensor to begin receiving data at a selected rate. A manual sample sequence command can be executed at any point for single samples. Data can be collected digitally or via the 0-10V / 4-20mA outputs of the control box.

Probe System Specifications

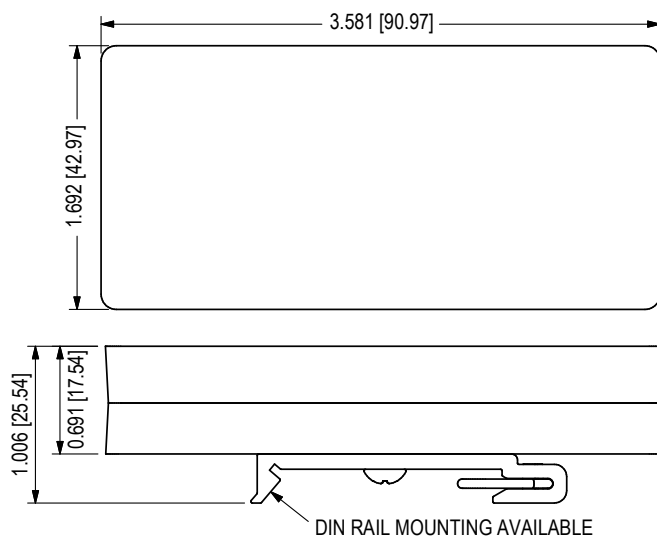
Electrical Data	AP02	AP010
Output Current/Voltage	0-10V or (4-20mA into 250 ohms)	0-10V or (4-20mA into 250 ohms)
Response frequency	1000Hz	1000Hz
Operating voltage	12-24Vdc	12-24Vdc
Sensor head with amplifier	Diameter 8 mm	Diameter 30 mm
Sensing distance	2.5 mm	10 mm
Linearity	$\pm 6 \mu\text{m}$	$\pm 30 \mu\text{m}$
Resolution	2.5 μm	25 μm
Temperature drift	250 ppm/ $^{\circ}\text{C}$	250 ppm/ $^{\circ}\text{C}$

Mechanical Data		
Mounting	M12X1	M30X1
Housing material	Stainless Steel	Stainless Steel
Target type	grounded, less than 10K ohm-cm ³	grounded, less than 10K ohm-cm ³
Product Weight	<150g	<300g
Overall Dimensions	Please see drawings	Please see drawings

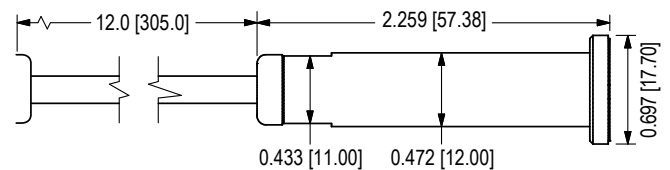
Environmental Data		
Operating Temperature	10-70 $^{\circ}\text{C}$	10-70 $^{\circ}\text{C}$

Communication		
LSB (nm)	1 nm	1 nm
Digital Interface	RS-485 Half-duplex	RS-485 Half-duplex
RS-485 Speed (kbaud)	19.2KBaud	19.2KBaud
Digital Protocol	MODBUS RTU	MODBUS RTU

Controller Box



AP02



AP010

