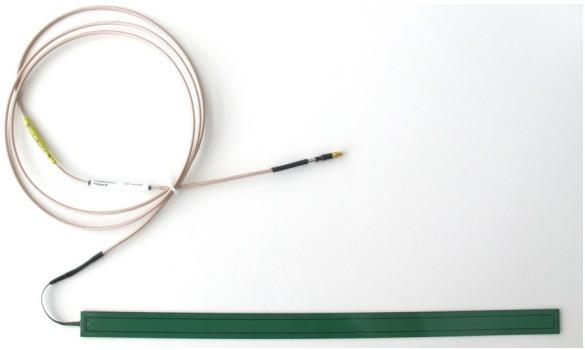
Air Gap Transducer
AGT-520

FEATURES

- Air gap monitoring between 5 to 20 (0.2” to 0.79”)
- Detachable sensor via ø5mm coaxial connector for routing through ventilation holes
- DSP based linearization allowing greater accuracy and stability
- Active temperature compensation
- Resistant to strong magnetic field



Monitoring solution

Air gap monitoring

Typical applications

Hydrogenerators

Gearless millsdrives

DESCRIPTION

Non-contact capacitive Air Gap Transmitter (AGT) for the measurement of the distance between its underlying surface and a metallic target. Each transmitter consists of a Sensor (AGS), an Air Gap Adapter (AGA) and a Conditioner (AGC).

Conditioner

The conditioner provides three signal outputs :

- MinGap[1] voltage (V)
- Pole Profile voltage (V)
- Pole Profile or MinGap[1] current (mA)

All outputs are galvanically isolated and the current output is factory set on Pole Profile. The digital technology combined with active temperature compensation allow linearization adjusted with great accuracy and resolution, with stable and repetitive behaviours. Industrial metal housing enables installation in harsh environments.

Sensor and Adapter

Designed for long life cycles, harsh environments and strong magnetic fields. The sensor shape is suitable for its installation on the stator wall of generators and motors. The sensor is connected to the air gap adapter via a flexible cable and a connector allowing routing through ventilation holes. This cable is protected on its entire length by flexible polyamide tubes. The air gap adapter is connected to the conditioner via a flexible cable and a 4 poles connector. This cable is protected on its entire length by a flexible metal conduit.

[1] *See user manual for detailed description*

GLOBAL SPECIFICATIONS

OPERATION

Outputs	**Voltage Pole Profile**	**Current - Pole profile or MinGap**	**Voltage MinGap**
Value	2 to 10V	4 to 20mA	2 to 10V
Sensitivity to distance	0.533V/mm	1.07mA/mm	0.533V/mm
Loop resistance (current output)	n/a	Max. 500Ω	n/a
Output resistance (voltage outputs)	100Ω ±1%	n/a	100Ω ±1%
Linearity	< 3% of full scale		
Temperature coefficient	< 300ppm/°C at 11mm		
Typical frequency response (-3dB)	DC to 1kHz		
Output noise	< 50mVrms		
Interchangeability tolerance	< 5% of full scale		
Linear measuring range	5 to 20mm (0.2 to 0.79 in.)		
Power			
Voltage	+24VDC nominal ±10% / Warm up time 10 minutes		
Current consumption	125mA typical		

ENVIRONMENTAL

Temperature range - part :	**Sensor**	**Conditioner**	**Adapter**
Operation	-15° to +125°C	-15° to +85°C	-15° to +85°C
Non-destructive	-40° to +150°C	-20° to +100°C	-20° to +100°C
Humidity (non-condensing)	resistant to 95% RH		
Shock	IEC 68 2.27 standard, 15g peak, 11ms		
Vibration	IEC 68 2.27 standard 5g peak, 10Hz to 150Hz		
EMC	EN 61326-2-3 / Sensor withstands 1.5 Tesla in a 50 or 60Hz magnetic field		
Fluid compatibility	withstands contact with water, oil, solvents, acids without degradation of material		
Conditioner case protection class	IP66, EN60529		

PHYSICAL [mm]

Sensor surface	385 x 20 x 0.75 LxWxH with 75mm of flex part
Adapter module dimensions	120 L x ø25
Conditioner module dimensions	170 x 63 x 40 LxWxH

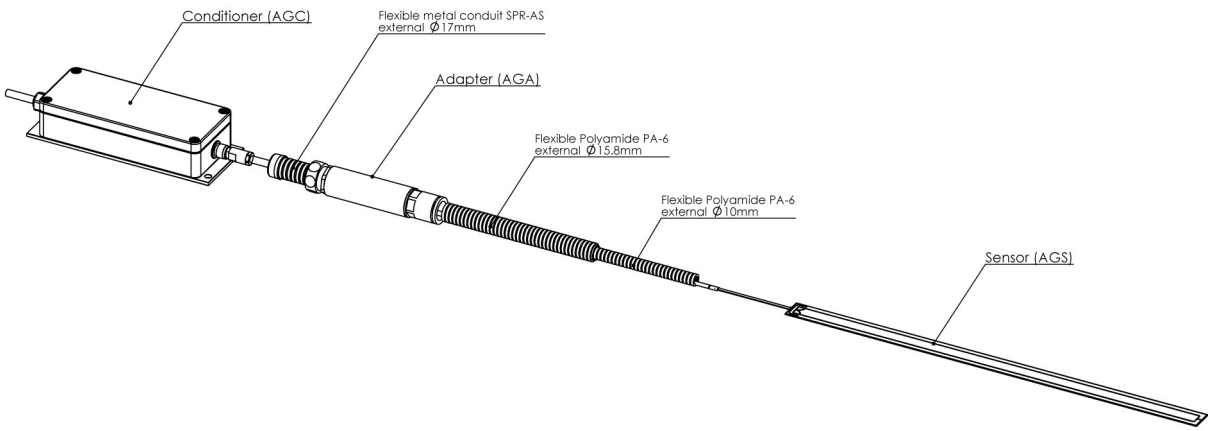
ORDERING INFORMATION

Part type	Sensor
Ordering code	04.520.100 M1
Description	Triaxial cable of approx. 2m terminated by a ø5mm coaxial connector to plug to adapter module. Delivered with polyamide flexible conduit.

Part type	Conditioner
Ordering code	04.520.200 M1
Description	Aluminium case AlSi12 with 3 mm mounting plate, stuffing gland and 4 poles input connector socket. Silver painted, colour RAL 7001.

Part type	Adapter
Ordering code	04.520.300 M2
Description	Sensor input via coaxial connector and output via shielded three core cable of 8 m terminated with 4 pole connector ø11.5mm. Delivered with 8 meters metal flexible conduit.

TRANSDUCER OVERVIEW



Conditioner must be grounded! *See user manual for installation details*

Due to the continual development of our products we reserve the right to modify the specifications without notification

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