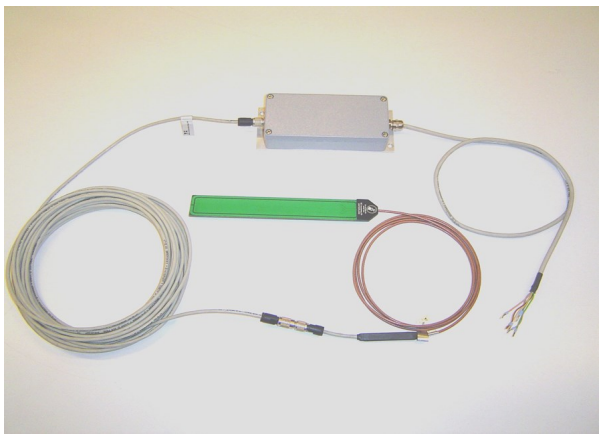
Air Gap Transducer
AGT-530

FEATURES

- Air gap monitoring between 5 to 30 (0.2” to 1.2”)
- 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 extension cable 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 extension cable

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 consists of an integral flexible triaxial cable of 2 meters terminated by an adapter and a four pins connector. A three core shielded extension cable allows the signal transmission to the AGC conditioning unit over a length up to 12, 16, 19, 22 or 28 meters.

[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	0.32V/mm	0.64mA/mm	0.32V/mm
Loop resistance (current output)	n/a	Max. 500Ω	n/a
Output resistance (voltage outputs)	100Ω ±1%	n/a	100Ω ±1%
Linearity	< 5% of full scale; < 2% from 10 to 25mm		
Temperature coefficient	< 300ppm/°C at 15mm		
Typical frequency response (-3dB)	DC to 1kHz		
Output noise	< 50mVrms		
Interchangeability tolerance	< 5% of full scale		
Linear measuring range	5 to 30mm (0.2 to 1.2 in.)		
Power			
Voltage	+24VDC nominal ±10% / Warm up time 10 minutes		
Current consumption	125mA typical		

ENVIRONMENTAL			
Temperature range - part :	**Sensor**	**Conditioner**	**Adapter case**
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	221 x 32 x 3.5 LxWxH
Adapter case dimensions (included with sensor)	71 x 11 x 8 LxWxH
Conditioner module dimensions	170 x 63 x 40 LxWxH

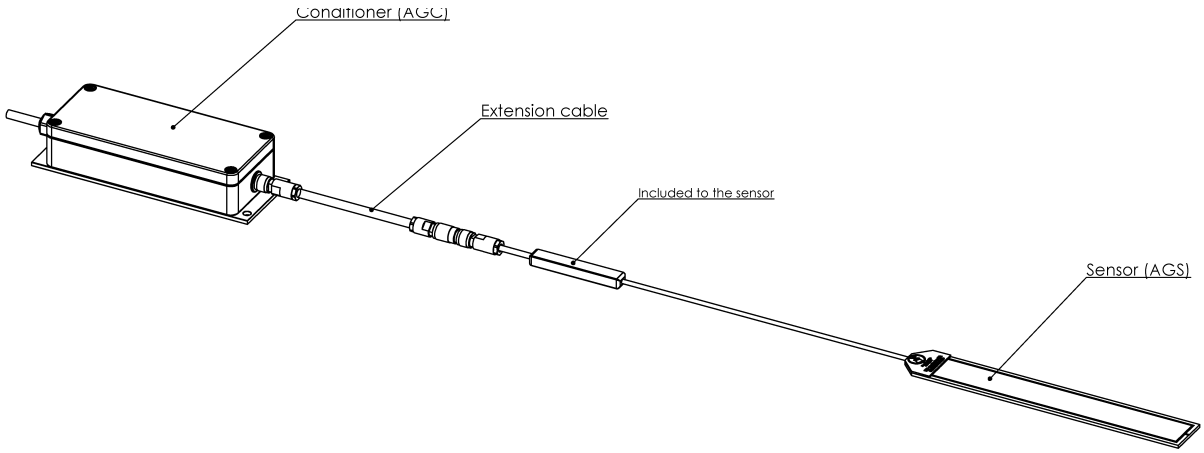
ORDERING INFORMATION

Part type	Sensor
Ordering code	04.530.100 M2
Description	Triaxial cable of approx. 2 m terminated by an impedance adapter and a three core shielded cable of 80 mm with 4 pole male connector.

Part type	Conditioner
Ordering code	04.530.200 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	Extension cable			
Ordering code	04.530.300 M1			
Description	12 m three core shielded cable ø4 mm with 2 x 4 pole female and male connector. Cable is compensated and cannot be cut.			
Ordering code	04.530.300 M3	04.530.300 M4	04.530.300 M5	04.530.300 M6
available extension cables	16 m	19 m	22 m	28 m

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

MC-monitoring Quality certifications

LOCAL REPRESENTATIVE

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