WIL-RM-S-SG-R1 - Sensor

1183803

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Sensor for measuring loads on the rotor blade of wind turbine generators. Robust (can be stood on). With magnetic shielding. Cable resistance compensation thanks to 6-wire connection technology.

Product description

WIL-RM-S-SG-R1 is an optimized sensor with integrated strain gauges specifically designed for use in wind turbine generators. The sensor is adhered to the inner side of the rotor blade near the base of the blade. In conjunction with a WIL-BI switchgear and controlgear assembly, loads on the rotor blade can be measured and evaluated. This allows the wind turbine generator to be controlled with load optimization, reducing the load on the rotor blades to a minimum.

The sensor is part of the Blade Intelligence rotor blade monitoring system for wind turbine generators (WTGs). The Blade Intelligence rotor blade monitoring system allows for recording and detailed analysis of typical measured values for lightning currents, temperature, ice thickness, and bending moments on the rotor of a WTG. It consists of the corresponding sensors, preassembled connecting cables, and a WIL-BI switchgear and controlgear assembly (as the evaluation unit).

Your advantages

- Robust sensor for use in the rotor blade of a WTG
- Proactive monitoring of the rotor blade
- Proven technology, optimized for the wind industry

Commercial data

Item number	1183803
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DT02
Product key	DTHABA
GTIN	4063151222420
Weight per piece (including packing)	0.6 kg
Weight per piece (excluding packing)	0.6 kg
Customs tariff number	90303320
Country of origin	DE

Technical data

Product properties

Product type	Sensor

Dimensions

External dimensions

Width / Height / Depth	48 mm / 10 mm / 130 mm

Cable/line

Cable entry

Connection method	M12 connector, 8-pos. (A-coded)

Characteristics

Measuring system

Elongation: Working elongation	max. 800 µm/m (at 10^8 load cycles)
Elongation: Elongation at break	2500 µm/m
Resistance:	350 Ω ±0.3 %
Resistance: Offset	max. ± 3.5 Ω
K-factor:	approx. 2 ... 2.2 (see sensor rating plate)
Coefficient of expansion:	10.8 10^{-6} K^{-1}

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Shock (operation)	30g (in accordance with EN 60068-2-27/IEC 60068-2-27)
Vibration (operation)	5g (in accordance with EN 60068-2-6/IEC 60068-2-6)
Air pressure (operation)	70 kPa ... 106 kPa (up to 3,000 m above mean sea level; at >3,000 m above mean sea level observe derating)

Classifications

ECLASS

ECLASS-13.0	27143137

ETIM

ETIM 9.0	EC000926

UNSPSC

UNSPSC 21.0	43201500

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)

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