Bearing force sensor, type 0207

For the flexible measurement of radial forces

BROSA bearing force sensors are used in bearings, in order to record the reaction forces occurring there with constant or variable application of force. By means of this solution, a measurement of all radial forces that act on the bearing can be performed. This is possible, because the force sensor can be optionally designed with 2 measuring directions, (X-Y) and in +/- direction. As with all force measuring sensors from BROSA, the bearing force sensor can also be individually adapted to the respective bearing type and the installation situation. A calibration that corresponds to the respective installation situation ensures for a precise measurement and therefore a high measuring accuracy.

Applications

- Winch
- Transmission
- Bearing forces

Properties

- Customer-specific design
- Optional 2-dimensional measurement (X-Y)
- Integrated amplifier
- High overload capacity
- Durable design
- Temperature-compensated
- High EMC resistance

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Technical specifications

Accuracy	≤ 0.5 % FS
Measurement range	10 kN to 5000 kN
Limit load	≥ 150 %, optional 300 %
Breaking load	≥ 300 %, optional 500 %
Linearity error	≤ 0.5 % FS
Hysteresis	≤ 0.5 % FS
Reproducibility	≤ 0.1 % FS
Temperature range	-40 to +80 °C
Temperature coefficient	≤ 0.0035 % / K
Power supply	9 to 36 VDC
Output signal	4 to 20 mA, optionally redundant CANopen, optional Safety PROFINET, optionally PROFIsafe
Protection type	IP 67, optional IP 69K, according to DIN EN 60529
Interference immunity	up to 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637
Interference emission	DIN EN 55025
Climatic tests	DIN EN 60068-2
Vibration resistance	DIN EN 60068-2
Electrical connections	M12x1, 5-pin
Electrical protection types	Reverse polarity protection, overvoltage protection, short-circuit protection
Material	Stainless steel

Options

Safety classification according to DIN EN ISO 13849-1	PL c, PL d (PL e)
Explosion protection	ATEX Ex i
Passive version	Output ~ 1 mV / V
Measuring direction	2-dimensional X-Y positive and/or negative (+/-)

ISO 9001:2015
ISO 14001:2015

94/9/EC

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