Normal force sensor, type 0250

For the precise measurement of normal forces at bearing points

BROSA normal force sensors are used at bearing points to measure the reaction forces at these points in a defined direction. Thanks to this simple solution the measurement of the bearing forces can be effortlessly integrated into the existing design. This is possible because the force sensor – as in the case of all BROSA force sensors – can be customised for installation. A calibration for the respective installation also ensures a high measurement accuracy.

Applications

- Bearing loads
- Plant engineering
- Mechanical engineering

Features

- Customer-specific design
- Integrated amplifier
- High overload capacity
- Durable design (verification on request)
- Compact design
- Temperature compensated
- High EMC resistance

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Technical data

Accuracy	≤ 1.0 % FS
Measurement range	20 kN to 1000 kN
Maximum load	150 %
Breaking load	300 %
Linearity error	≤ 0.5 % FS
Hysteresis	≤ 0.5 % FS
Reproducibility	≤ 0.1 % FS
Temperature range	-40 to +80 °C
Temperature coefficient	≤ 0.0035 % / K
Supply voltage	9 to 36 VDC
Output signal	4 to 20 mA, optional redundant CANopen, optional safety PROFINET, optional PROFIsafe IO-Link optional redundant PL c
Protection class	IP 66 / IP 67, optional IP 69, nach DIN EN 60529
Interference immunity	Up to 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637
Emission	DIN EN 55025
Climatic tests	DIN EN 60068-2
Vibration resistance	DIN EN 60068-2
Electrical connections	M12 × 1, 5-pins
Electrical protection classes	Reverse polarity protection, overvoltage protection and short-circuit protection
Material	Fine grained steel

Options

Safety classification according to DIN EN ISO 13849-1	PL c, PL d (Pl e)*
Passive design	Output ~ 1 mV / V

* Used in parent systems according to DIN EN ISO 13849-1

ISO 9001
ISO 14001

94/9/EG

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