Force measuring pin MOP, type 0201

For the precise and robust measurements at bearing points

BROSA force measuring pins with mechanical stop (mechanical overload protection) are made of high-strength stainless steel and withstand the highest loads. The integrated stop is able to effectively absorb very high overload shocks both in the direction of measurement and against the direction of measurement without the sensor being damaged. Compared to a normal force measuring pin, the ratio between nominal load and maximum load is increased by a factor of 3. These characteristics were developed specifically for the material handling. However, thanks to the integration of the force measuring pins into the force flow, they can be used in a number of other applications as well. The consideration of the exact installation situation from the construction to the calibration of the sensors ensures longterm high measurement accuracies.

Applications

- Material handling
- Dynamically highly stressed measurement points

Features

- Customer-specific design
- Integrated amplifier
- High overload capacity
- Temperature compensated
- Durable design (verification on request)
- High EMC resistance
- High mechanical overload protection
- Heavy duty design / robust
- Installation-space neutral

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Technical data

Accuracy	≤ 1 % FS
Measurement range	20 kN to 1000 kN
Maximum load	Up to 500 %
Breaking load	Up to 700 %
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, optionally redundant CANopen, optional safety PROFINET, optional PROFIsafe
Protection class	IP 66 / IP 67, optional IP 69, 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
Emission	DIN EN 55025
Climatic tests	DIN EN 60068-2
Vibration resistance	DIN EN 60068-2
Electrical connections	M12x1, 5-pins
Electrical protection classes	Reverse polarity protection, overvoltage protection and short-circuit protection
Material	Stainless 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