Force measuring pin MOP, type 0201

For the precise and robust measurements at bearing points

BROSA force measuring pins with mechanical overload protection are made of high-strength stainless steel and can withstand the highest loads. The integrated stop can effectively absorb very high overload shocks both in the direction of measurement and against the direction of measurement without damaging the sensor. Compared to the normal force measuring axis, the ratio between nominal and limit load has been increased by a factor of 3. These properties have been specially developed for cargo handling. However, the simple integration of the force measuring axes into the force flow also makes a wide range of other applications conceivable. The consideration of the exact installation situation from the design to the calibration of the sensors guarantees high measuring accuracy in the long term.

Applications

- Material handling
- Dynamically highly stressed measurement points

Features

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

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Technical data

Accuracy	≤ 1.0 % FS
Measuring range	20 kN to 1000 kN
Limit 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, optional redundant CANopen, optional Safety PROFINET, optional PROFIsafe IO-Link, optional redundant PL c
Degree of protection	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
Interference emission	DIN EN 55025
Climatic tests	DIN EN 60068-2
Vibration resistance	DIN EN 60068-2
Electrical connections	M12x1, 5-pins
Electrical protection	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*)
Explosion protection	ATEX Ex i
Ex classification	II 2G Ex ib IIC T4 Gb / IECEx Ex ib IIC T4 Gb
Passive Design	Output ~ 1 mV / V
Measuring direction	Positive and / or negative (+ / -)

Other requirements can be implemented by agreement.
* When used in higher-level systems according to DIN EN ISO 13849-1

ISO 9001
ISO 14001
2014/34/EU