

Force measuring pin MEMS, type 0201

For direct determination of the rope load in the sheaves
As type 0203 also in a flameproof Ex version

BROSA force measuring pins MEMS are a further development of the tried and tested BROSA load pins and enable the line load in slewing crane booms to be determined directly. An integrated MEMS sensor allows the suspended load to be calculated depending on the boom position. The line load is correctly determined and output directly in the sensor at all times, regardless of the boom position. A calibration that corresponds to the respective installation situation ensures precise measurement and therefore high measuring accuracy.

Applications

- Pulley head
- Tip of the boom
- Determination of rope load
- Offshore, ship and harbor cranes
- Chemical industry
- Petrochemistry

Features

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



Force measuring pin MEMS, type 0201 / 0203

Technical data

Accuracy	≤ 3 % FS
Measuring range	10 kN to 10 000 kN
Limit load	150%, optional 300 %
Breaking load	300%, optional 500 %
Linearity error	≤ 1.0 % FS
Hysteresis	≤ 1.0 % 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
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 d
Ex classification	II 2G Ex d IIC T4 Gb / IECEx Ex d IIC T4 Gb

Other requirements can be implemented by agreement.

* When used in higher-level systems according to DIN EN ISO 13849-1



ISO 9001
ISO 14001



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