Force measuring pin, type 0201

For the precise force measurement at bearing points
As type 0203 also in a flameproof Ex version

BROSA force measuring pins are made of high-strength stainless steel and withstand the highest demands. Depending on the application-specific conditions, BROSA force measuring pins are designed and manufactured according to various, in some cases patented, design concepts. By taking into account the exact installation situation from the design to the calibration of the sensors, high measuring accuracy is guaranteed in the long term. A calibration that corresponds to the respective installation situation ensures precise measurement and therefore high measuring accuracy.

Applications

- Mobile cranes
- Fire engines
- Concrete pumps
- Machine construction
- Offshore, ship and harbor cranes
- Chemical industry
- Petrochemistry

Features

- Customer-specific design
- Insensitive to oblique force application
- Integrated amplifier
- High overload capacity
- Durable design (verification on request)
- Temperature compensated
- High EMC resistance

Force measuring pin, type 0201 / 0203

Technical data

Accuracy	≤ 0.5 % FS
Measuring range	10 kN to 10 000 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
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 d
Ex classification Ex i	II 2G Ex ib IIC T4 Gb / IECEx Ex ib IIC T4 Gb
Ex classification Ex d	II 2G Ex db IIC T4 Gb / IECEx Ex db 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