Tubular load cell, type 0206

For the flexible measurement of radial forces
As type 0205 also in a flameproof Ex version

BROSA tubular load cells measure radial forces on an axle with a constant or variable direction of force application. BROSA tubular load cells can even be used on axles that were previously unsuitable for force measurements due to their dimensions or deflection. It is possible to combine several tubular load cells on one axle. As an option, BROSA tubular load cells can be equipped with an integrated angle sensor that detects the inclination of the sensor. The output signal can be the resulting force or, in the case of rope pulleys, even the line load. A calibration that corresponds to the respective installation situation ensures precise measurement and therefore high measuring accuracy.

Applications

- Pulley head
- Tip of the boom
- Bearing loads
- Offshore, ship and harbor cranes
- Chemical industry
- Petrochemistry

Features

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

Tubular load cell, type 0206 / 0205

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 t
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
Ex classification Ex t	II 2D Ex tb IIIC T200°C Db / IECEx Ex tb IIIC T200°C Db
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