

Force sensor washer, type 0120

For measuring the force at connecting elements

BROSA force sensor washers offer critical advantages thanks to their patented three-point design: The forces flow optimally through the measuring points, thus allowing for a high measuring accuracy. Customer requirements can be adapted in a flexible, individual and easy way. Compared to closed washer supports the acceptance of the surrounding steel structure is many times better while the production is more cost-effective. Thanks to the compact and robust design, the force sensor washers can be used under extreme environmental conditions.

Applications

- Twistlock
- Rope endpoint
- Connecting elements
- Load sensing equipment
- Machine construction

Features

- Customer-specific design
- Integrated amplifier
- High overload capacity
- Designed for endurance strength
- Temperature compensated
- High EMC resistance



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Technical data

Accuracy	≤ 0.5 % FS
Measurement range	30 kN to 3000 kN
Maximum 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
Protection class	IP 67, optional IP 69K, 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
Climate tests	DIN EN 60068-2
Vibration resistance	DIN EN 60068-2
Electrical connections	M12x1, 4-pins
Electrical protection classes	Reverse polarity protection, overvoltage protection and short-circuit protection
Material	Stainless steel

Options

Safety classification acc. to DIN EN ISO 13849-1	PL c, PL d (PL e)
Explosion protection	ATEX Ex i
Passive design	Output ~ 1 mV / V



ISO 9001:2008
ISO 14001:2004



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