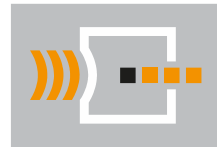


Technical Data Sheet



mg · sensor
PURE PRECISION

F3B3K10A



Load Cell, 3-axial

Location: Steering Column

Force direction

F_x, F_y, F_z

Application

Measurement of forces in the steering column

Equivalent types

Customized versions

Measurement specification

Resistive

Strain gauges

Options

Polarity according to customer specifications

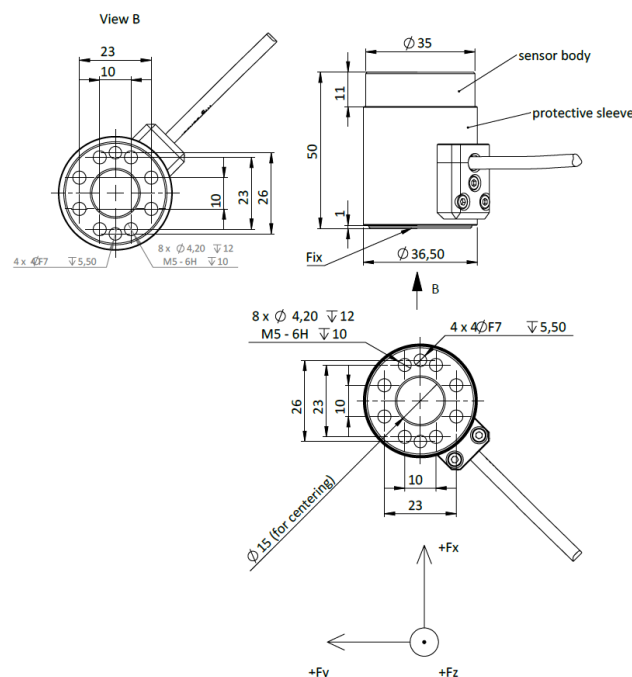


Technical description

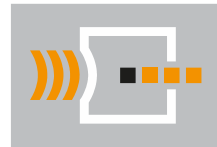
The applied force causes compression or strain of the base body. The deformation is measured using strain gauges. The wiring of multiple strain gauges for a full bridge circuit compensates for the temperature influence on the zero signal and the cross-influence from other force and torque application.



Dimensions



Technical Data Sheet



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Technical specification

	Unit	Value		
		F _x	F _y	F _z
Measuring range	kN	20	20	20
Sensitivity ¹⁾	μV/V/kN	120	120	55
Output signal ^{1), 2)}	mV/V	2.4	2.4	1.1
Bridge resistance	Ω	350	350	700
Zero signal ¹⁾	mV/V	≤ 0.05		
Amplitude non-linearity ³⁾	%	≤ 1.0		
Hysteresis ³⁾	%	≤ 2.0		
Channel crosstalk ³⁾	%	≤ 5.0		
Supply voltage	V	2–15		
Ultimate load	%	150		
Insulation resistance	MΩ	> 100		
Temperature range	°C	-30...+70		
Weight (approximate)	g	180		

All values measured at 10 V sensor supply voltage and at 23 °C.

¹⁾ Typical value

²⁾ At nominal load

³⁾ Relative nominal range