

Technical Data Sheet



N3B3E10A



Load Cell, 3-axial

Location: Steering Column

Force direction

F_x , M_y , M_z

Application

Measurement of forces and moments in the steering column

Equivalent types

Customized version

Measurement specification

Resistive

Strain gauges

Options

Polarity according to customer specifications

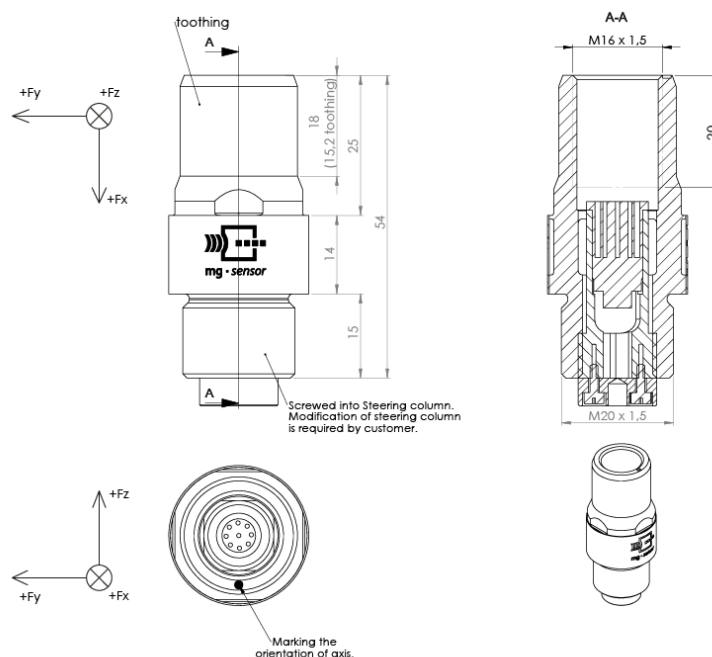


Technical description

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



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mg · sensor
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Technical specification

	Unit	Value		
		F _x	M _y	M _z
Measuring range	kN Nm	20	150	150
Sensitivity ¹⁾	μV/V/kN	90		
	μV/V/Nm		12.5	12.5
Output signal ^{1), 2)}	mV/V	1.8	1.9	1.9
Bridge resistance	Ω	700	350	350
Zero signal ¹⁾	mV/V	≤ 0.05		
Amplitude non-linearity ³⁾	%	≤ 1.0		
Hysteresis ³⁾	%	≤ 1.0		
Channel cross talk ³⁾	%	≤ 5.0		
Supply voltage	V	2–15		
Ultimate load	%	150		
Insulation resistance	MΩ	> 100		
Temperature range	°C	-30...+70		
Weight (approximate)	g	120		

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

¹⁾ Typical value

²⁾ At nominal load

³⁾ Relative nominal range