# Technical Data Sheet

## N6BCI11A

## Load Cell, 6-axial

### Location: Seat

Force direction
$F_x$, $F_y$, $F_z$, $M_x$, $M_y$, $M_z$

Application
General purpose

Equivalent types
Customized version

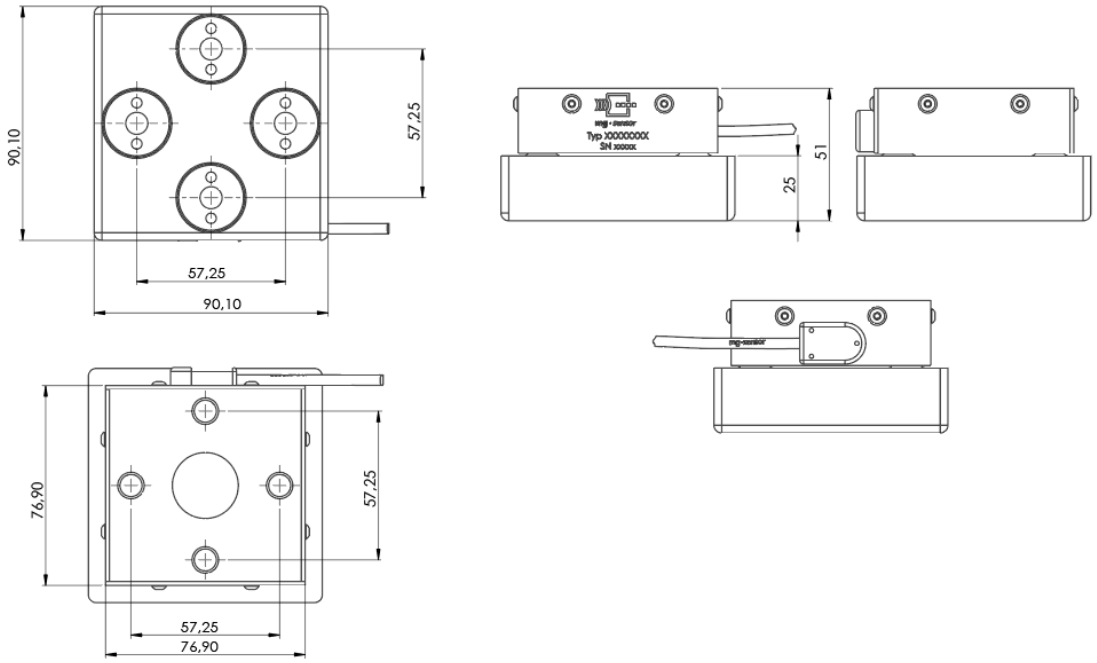
Measurement specification
Resistive
Strain gauges

Options
ID-Module integrated in sensor
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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### Technical specification

| | Unit | Value | | | | | |
|---|---|---|---|---|---|---|---|
| | | $F_x$ | $F_y$ | $F_z$ | $M_x$ | $M_y$ | $M_z$ |
| Measuring range | kN<br>Nm | 55 | 55 | 55 | <br>3000 | <br>3000 | <br>1000 |
| Sensitivity[1)] | µV/V/kN<br>µV/V/Nm | 58 | 58 | 14.5 | <br>0.8 | <br>0.8 | <br>1.1 |
| Output signal[1), 2)] | mV/V | 3.2 | 3.2 | 0.8 | 2.5 | 2.5 | 1.1 |
| Bridge resistance | Ω | 350 | 350 | 1400 | 700 | 700 | 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 | 2100 | | | | | |

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

[1)] Typical value

[2)] At nominal load

[3)] Relative nominal range




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