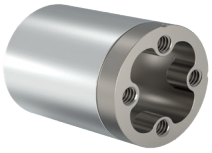
HEX8 High Force

6-Axis F/T Sensor Kit

Resense
A Sense of Touch

Resense 6-axis force torque sensors measure forces and torques in the 3 spatial directions (6 degrees of freedom) using silicon strain gauges. The main advantages are their **compact size** and the **hollow shaft option**, which are enabled by the sensor's multi-part deformation body. The sensors feature active compensation for zero-level shifts caused by internal and external temperature influences.

The sensor kit includes the **F/T sensor**, the **electronics box** and an **application software** to visualize the measurement values.



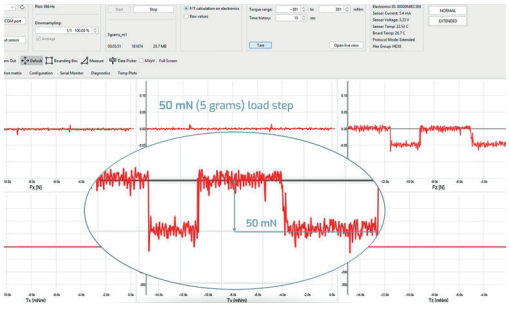
HEX8 High Force

Dimensions	
Diameter [a]	8.8 mm
Height	11 mm
Weight	0.9 g
Nominal measurement range	
F_x, F_y	± 70 N
F_z	± 250 N
M_x, M_y	± 0.5 Nm
M_z	± 0.4 Nm
Technical specifications	
Accuracy [b]	1 %
Crosstalk [c]	3 %
Overload capacity	300 %
Peak-to-peak noise[d]	Characterization of measurements in progress
Product features	
Material	Titanium grade 5
Protection class	IP20
Temperature range	0 - 50 °C
Temperature compensation	Active compensation
Technology	Silicon strain gauges, fullbridge
Cable	Flex cable with AXT connector

Miniature Electronics Box

Product features	
Dimensions	54 x 25 x 12.6 mm
Supply voltage	5 V
Interface	USB, UART
Sample rate	100 Hz, 500 Hz, 1 kHz
Resolution (ADC)	24 bit

F/T Explorer Application Software



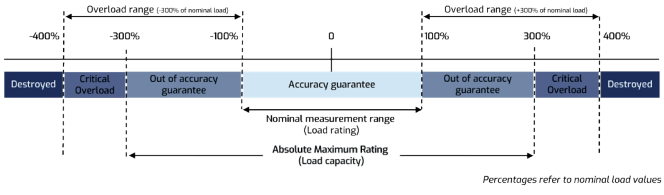


Figure 1. Load Range and Mechanical Limit of Resense HEX8 High Force

0 – 100%	Accuracy guaranteed
100 – 300%	Accuracy not guaranteed
300 – 400%	Permanent deformation risk
>400%	Irreversible damage – Sensor structure breaks

a) The diameter refers to the outer diameter and excludes any connector or cable features.
b) The accuracy is the difference between the applied and the actually measured load. The maximum measurement accuracy in percent refers to the full scale value of the sensor.
c) Crosstalk is the undesired influence of a load applied in one axis on the measured output of another axis.
d) Peak-to-peak noise is the difference between the highest and lowest output signal measured under constant load.

13.10.2026

Version 1.02

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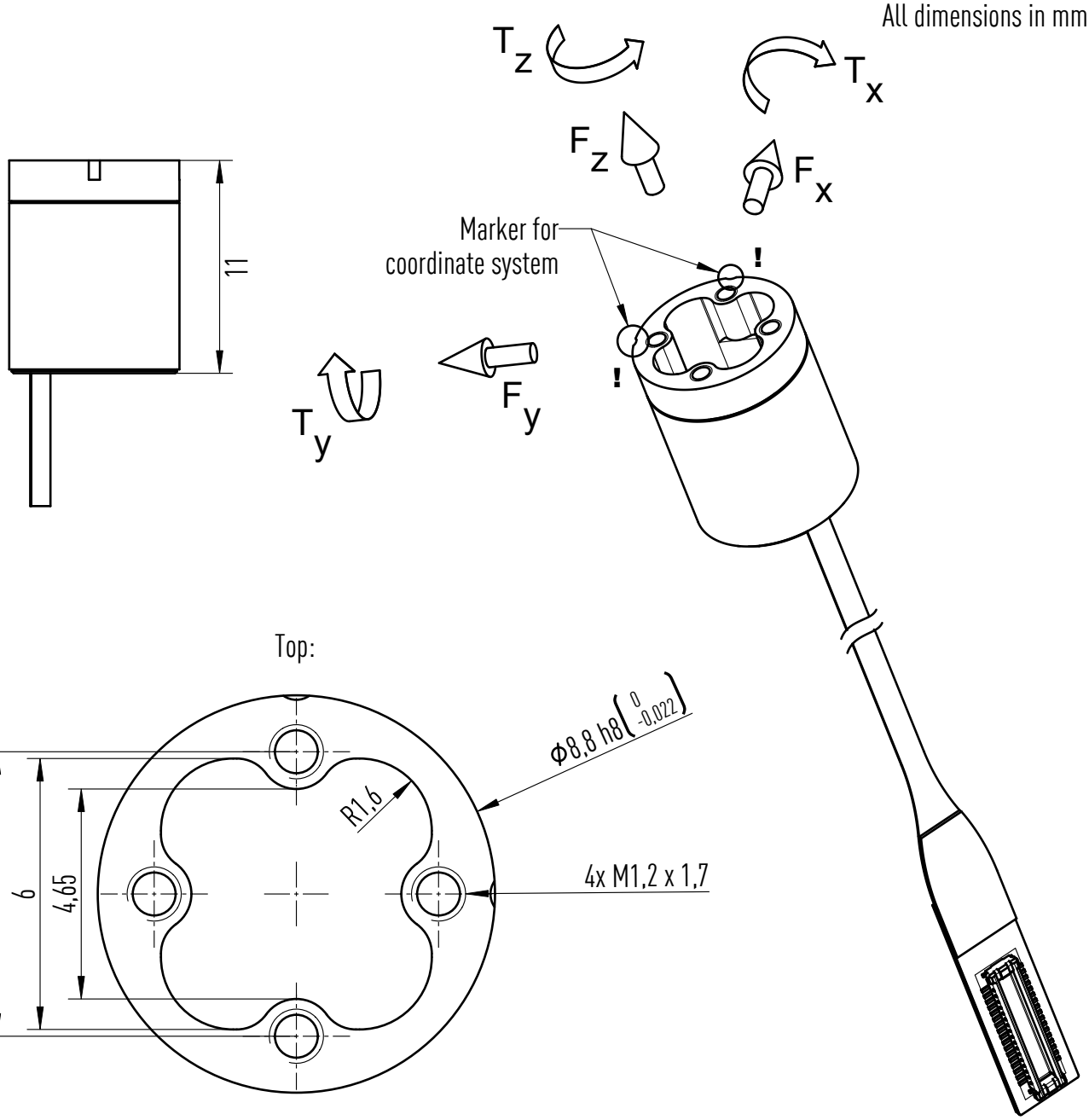
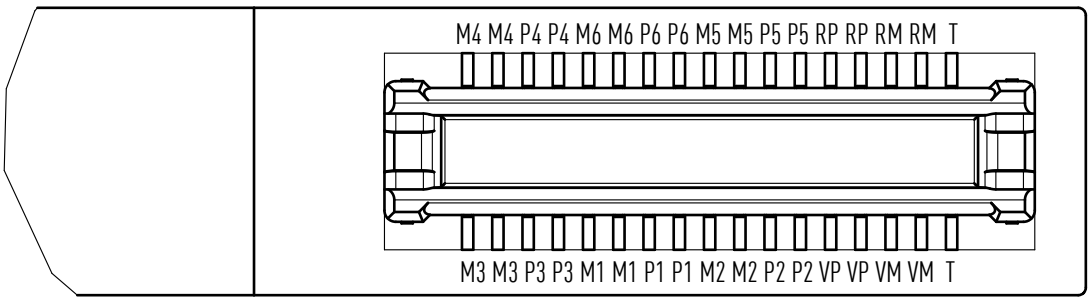
All dimensions in mm



Top:

Panasonic AXT634124



Warning: do not supply the sensor with more than 10V ! For pin description and wiring diagramm, see manual

Workflow working-85

REVISION	
01	

first created DILLYA 25.09.2026

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material	scale	modified	30.09.26	DILLYA	reference
Titanium Grade V	1:1	released			DR 85 / sheets 1 / 1
raw part / nominal size					comments

Surface texture						Tol. ISO 2768 - mK			
ISO 21920						0,5 ...6	>6 ...30	>30 ...120	>120 ...400
Rz in µm	-	63	16	4	1	±0,1	±0,2	±0,3	±0,5

Check indicator

language GER/ENG

SIZE ISO 14405 (GG)

ISO 8015

units mm [inch]

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