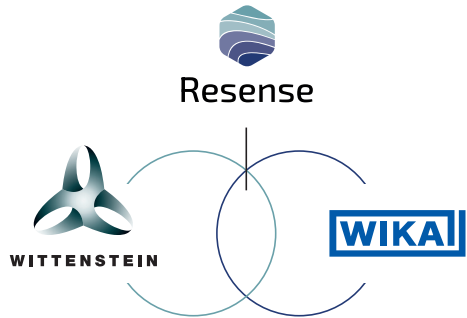


Resense is a Joint Venture of Two German Family Companies



**Market Leader in Industrial Drive Technology**

2,800 employees and  
> 500 million EUR revenue

Innovation partner:  
pre-development started  
at WITTENSTEIN

**Market Leader in Measurement Technology**

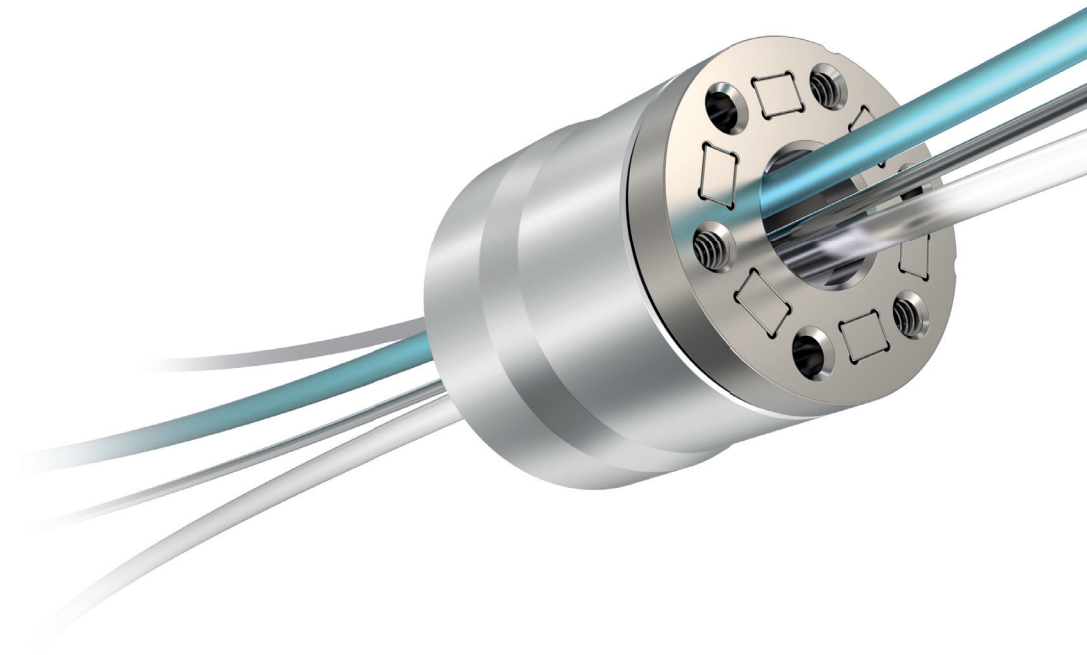
11,000 employees and  
> 1 billion EUR revenue

Manufacturing partner:  
> 45 million sensors  
sold per year



**Timo Markert**  
Managing Director

[timo.markert@resense.io](mailto:timo.markert@resense.io)



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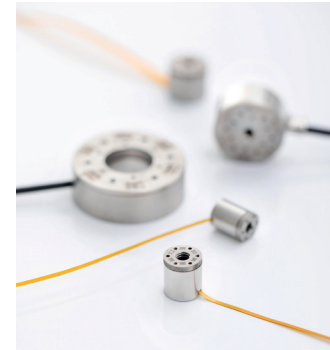
## Our Miniature F/T Sensors

Advancing the Future Market of Haptic Sensors

### HEX 8 / 10 / 12 / 21 / 32

Main USPs at a Glance

- Small size of up to  $\varnothing$  8 mm
- Hollow shaft option
- Redundant measurement (safety)



#### Technical Data

	HEX8	HEX10	HEX12	HEX21	HEX32
<b>Dimensions</b>	<b>NEW</b>				
Diameter in mm	8.4	10.0	12.5	21.0	32.0
Height in mm	10.9	10.9	10.9	10.9	11.1
Weight in g	1.4	2.0	3.3	9.9	50.0

#### Nominal measurement range

Fx, Fy, Fz in N	$\pm 25$	$\pm 25$	$\pm 25$	$\pm 50$	$\pm 125$
Mx, My, Mz in Nm	$\pm 0.100$	$\pm 0.125$	$\pm 0.125$	$\pm 0.500$	$\pm 2.250$

#### Technical specifications

Resolution	$\pm 10$ bit (true), $3\sigma$
Accuracy	1%
Crosstalk	3%
Overload capacity	300%

#### Product features

Material	Titanium grade 5	
Protection class	IP20	
Temperature range	0 - 50 °C	
Technology	Silicon	Foil strain gauges
Cable	Flex cable with axial/radial cable outlet and Sub-D-HD connector	Round cable with radial cable outlet and Sub-D-HD connector

## Come with Electronics and Software

Get to Know our Plug-and-Measure Sensor Kit

### Miniature Electronics Box

Small Enough for Onboard Integration

- 6-channel force/torque and temperature
- Matrix calculation and compensation
- Embedded signal and filtering options

#### Technical Data

Dimensions	54 x 25 x 12.6 mm
Supply voltage	5 V
Interfaces	USB, UART
Sample rate	100 Hz, 500 Hz, 1kHz
Resolution (ADC)	24 bit
Temperature range	0 - 50 °C

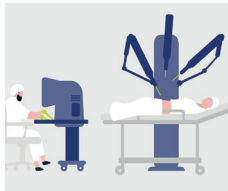
**NEW**



## We Empower Your Application

In Haptics and Robotics

### Medical Robotics



Surgical instruments

Haptic input devices

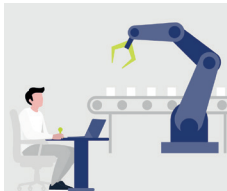
### Service Robotics



Humanoid robot wrist

Robot fingertips

### Industrial Robotics



Industrial grippers

Control interfaces

### Force/Torque Explorer

Application Software and Packages

- View & record real-time sensor data
- Export and import data in multiple formats
- Additional C++/Python utilities available

