Resense is a Joint Venture of Two German Family Companies

Resense
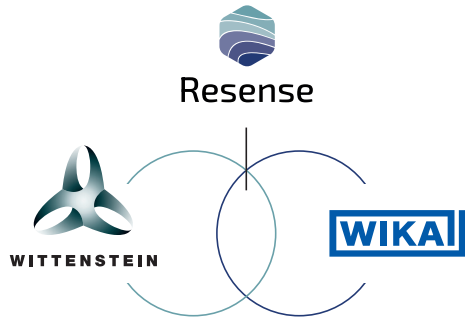
WITTENSTEIN   WIKA

Market Leader in Industrial Drive Technology	**Market Leader in Measurement Technology**
2,800 employees and > 500 million EUR revenue	11,000 employees and > 1 billion EUR revenue
Innovation partner: pre-development started at WITTENSTEIN	Manufacturing partner: > 45 million sensors sold per year

Resense
A Sense of Touch

Christina Kraus
Business Development

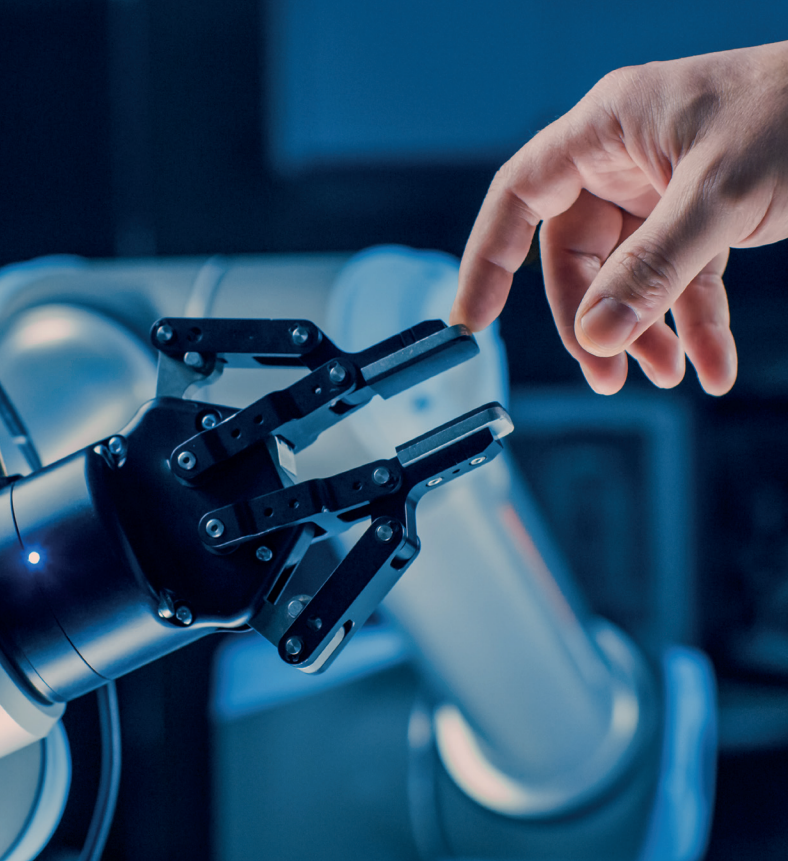christina.kraus@resense.io
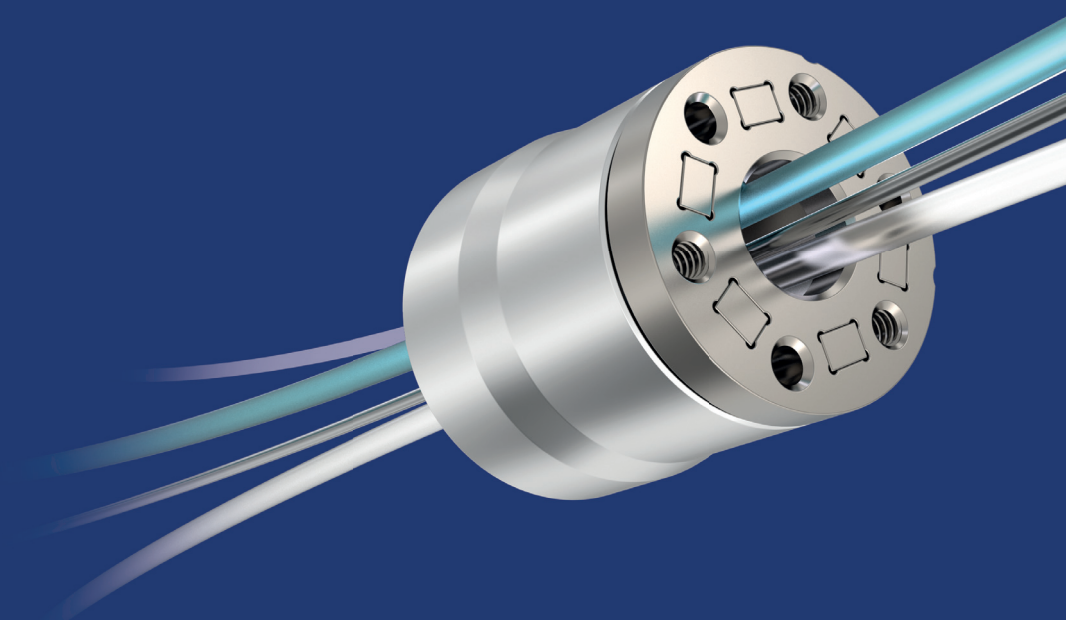
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Advancing the Future Market of Haptic Sensors

Get to Know our Plug-and-Measure Sensor Kit

HEX 8 / 10 / 12 / 21 / 32
Main USPs at a Glance

- Small size of up to Ø 8 mm
- Hollow shaft option
- Redundant measurement (safety)
- Custom drill hole pattern
- Titanium deformation body
- Cable options (flex and round cable)

Miniature Electronics Box
Small Enough for Onboard Integration

- 6-channel force/torque and temperature
- Matrix calculation and compensation
- Embedded signal and filtering options
- Up to 1 kHz sampling rate
- UART and USB interface

Technical Data

	HEX8	HEX10	HEX12	HEX21	HEX32
Dimension	New Q4/2024				
Diameter in mm	8.4	10.0	12.5	21.0	32.0
Height in mm	10.9	10.9	10.9	10.9	10.9
Weight in g	1.4	2.0	3.3	9.9	50.0
Nominal measurement range					
Fx, Fy, Fz in N	± 25	± 25	± 25	± 50	± 125
Mx, My, Mz in Nm	± 0.100	± 0.125	± 0.125	± 0.500	± 2.250
Technical specifications					
Resolution	± 10 bit (true), 3 σ				
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		

Technical Data

New Q2/2024

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

Force/Torque Explorer
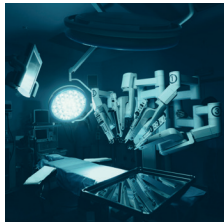Application Software and Packages

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

We Empower Your Application

In Haptics and Robotics

Medical Technology

- Surgical robots
- Haptic devices
- Prothetics and exoskeletons

Humanoid Robots and Grasping

- Humanoid robots
- Dexterous hands
- Finger force research

Industrial Gripping and Handling

- Collaborative robots
- Parallel grippers
- Industrial handling solutions