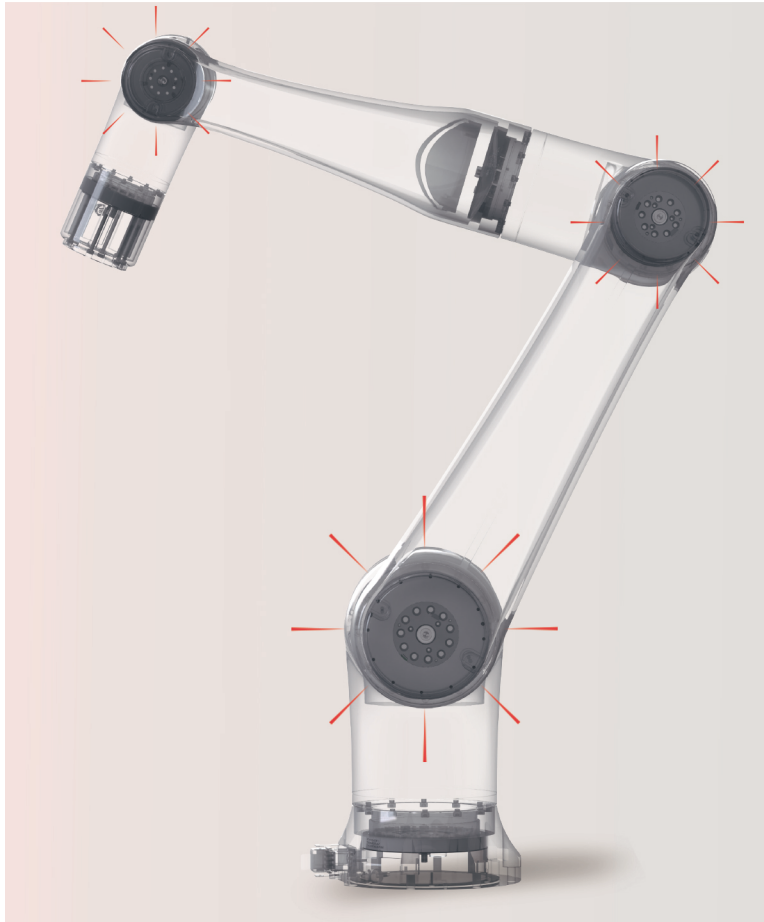


# High-Stiffness, Ultra-Thin Design Joint Torque Sensor



## Ultra-thin Joint Torque Sensor (ATSB)

- ✓ Specialized design for **robotic joint actuators**
- ✓ Performs critical functions for **sensitive collision detection and torque control**
- ✓ **Exceptional adaptability** to temperature and environmental changes
- ✓ **Multi-axis sensing** with high environmental resistance for **precise torque measurement**

## APPLICATION

- ✓ Collaborative robot (ex. Rainbow Robotics, Neuromeka, etc)
- ✓ Wearable robot
- ✓ Medical device
- ✓ Multi-function rehabilitation robot

Index	Unit	ATSB50	ATSB100	ATSB200	ATSB400
Dimensions	mm	D84 * H14	D100 * H16	D100 * H18	D120 * H20
Nominal torque range ( $T_N$ )	Nm	50	100	200	400
Overload (related $T_N$ )	%	300	300	300	300
Resolution	Nm	0.01	0.015	0.025	0.05
Sample rate	Hz	1,000	1,000	1,000	1,000
Interfaces		CAN (2.0 A/B)			

# Why AIDIN's F/T Sensor?

AIDIN ROBOTICS' F/T sensors measure multi-axis forces and torques, adapting to various environments and temperatures for maximum convenience and efficiency



High-sensitivity & precision



Durability & long-term stability



Miniaturization



Competitive price



All In One

No additional equipment

.01

1st Gen

.02

2nd Gen

.03

3rd Gen

#### Basic capacitance measurement

- ▼ Weakness for external noise
- ▼ Structure complex for F/T measurement
- ▼ Vulnerable to temperature changes
- ▼ Mass production challenges

#### Overcoming capacitance limits

- ▼ External noise immunity secured
- ▼ Next-gen fringe effect boosts sensitivity 10x
- ▼ Temperature compensation
- ▼ Production capability ensured

#### 3rd gen tech upgrade

- ▼ **80% higher sensitivity** than Gen 2
- ▼ AI calibration enhances **accuracy, repeatability, and linearity**
- ▼ **Improved mass production capability**
- ▼ **Better stability against temperature & humidity**



Solution  
Introduction



Homepage



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