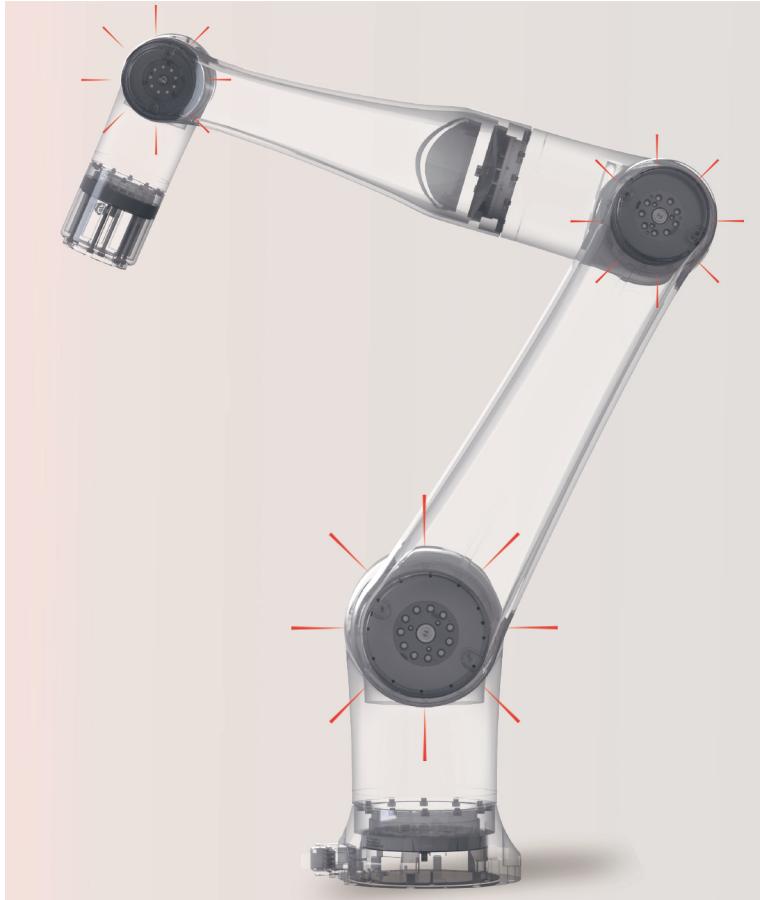


High-Stiffness, Ultra-Thin Design Joint Torque Sensor



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



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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