

6 Axis F/T Sensor

Cutting-Edge Field Sensing Technology



Miniature 6-axis F/T sensor (AFT-MINI)

- ✓ The **world's smallest** force/torque sensor
- ✓ **All-in-one** type sensor without any external amplifier
- ✓ **Capable** of being mounted on a **narrow space** (Gripper, Robot hand's fingertip, etc)

APPLICATION

- ✓ Gripper, Robot hand, small-sized automation assembly
- ✓ haptic equipment, medical device, VR equipment



Index	Unit	Value (AFT20)	Value (AFT50)	Value (AFT100)
Dimension	mm	D15 * H10.5	D15 * H10.5	D20 * H13
Force Range	N	20	50	100
Torque Range	Nm	0.1	0.25	0.75
Weight	g	3.2	3.2	8.1
Maximum sample rate	Hz	100	100	100
Digital Communication		CAN	CAN	CAN/CAN-FD



Smart 6-axis F/T sensor (AFT200)

- ✓ A force torque sensor with **fringe effect** technology based on capacitance measurement
- ✓ **High-precision** force measurement with high versatility
- ✓ **High data sampling** rate of 1 kHz
- ✓ Designed to perform **task teaching, force control, and collision detection** in Cobot

APPLICATION

- ✓ Collaborative Robot, Industrial Robot
(Ex, Rainbow Robotics, Neuromeka, UR etc)
- ✓ AGV / AMR
- ✓ Automated equipment or robots requiring force control function such as welding, sanding, and grinding



Index	Unit	Value (AFT200-D80-C/EN/EC/RS)
Dimension	mm	D80 x H21.5
Force Range	N	200
Torque Range	Nm	15
Weight	g	236
Maximum sample rate	Hz	1,000
Digital Communication		CAN, EtherNET, EtherCAT

Why AIDIN's F/T Sensor?

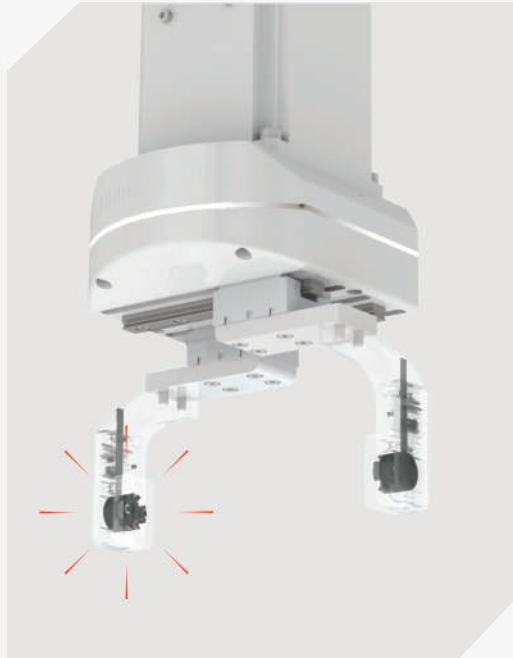
AIDIN ROBOTICS' F/T sensors measure multi-axis forces and torques, adapting to various environments and temperatures for maximum convenience and efficiency



High-sensitivity & precision



Durability & long-term stability



Miniaturization

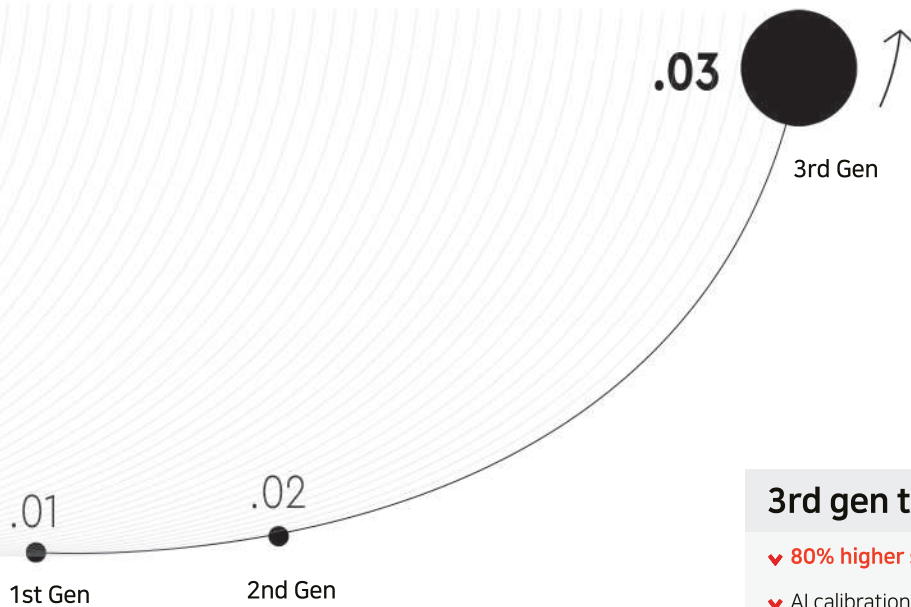


Competitive price



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



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