

Introduction

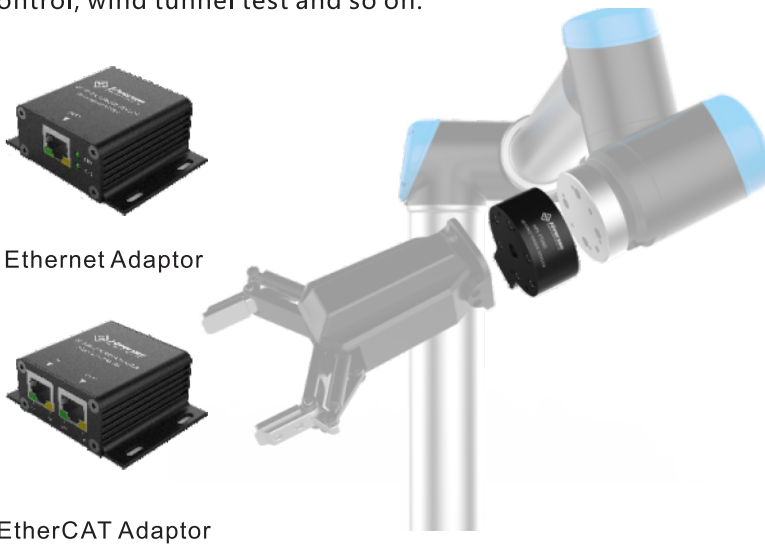
HPS-FT Series 6-Axis Force Torque sensors can measure the force and torque in real time in 3 directions: X, Y and Z. The high-precision strain gauge and structural design help it achieve higher SNR (signal-noise-ratio) and sensitivity. In addition, the embedded temperature compensation algorithm highly reduces the temperature drift caused by temperature changes.

The sensors can be applied in industrial robot, Cobots, exoskeleton robot, rehabilitation robot, flexible gripper, robot joints, automatic measurement and control, wind tunnel test and so on.



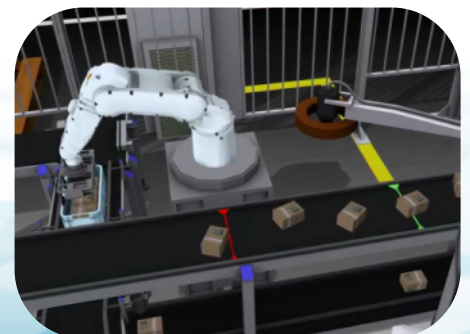
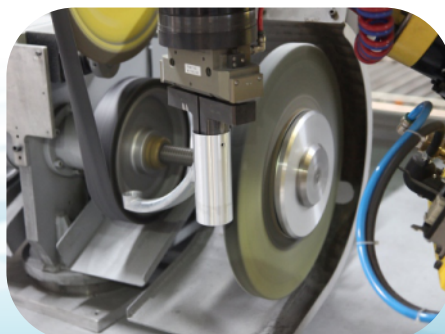
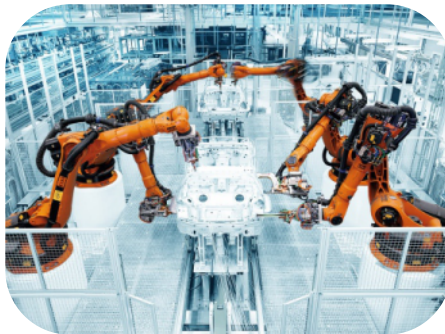
Features

- ※ High static overload protection
- ※ High ADC sampling rate: 24Bit
- ※ Up to 2000Hz data output rate
- ※ Fully digital output with high SNR
- ※ Optimized strain gauge measuring structure
- ※ Embedded high-precision decoupling, filtering and temperature compensation algorithm
- ※ Low zero drift & cross-axis effect, low temperature drift
- ※ Available with Ethernet, EtherCAT and



Applications

- ※ Robot hand guiding
- ※ Robot motion planning
- ※ Force controlled grinding & polishing
- ※ Force controlled palletizing
- ※ Precision assembly
- ※ Humanoid robot, Force/torque feedback control





Specifications

Model	HPS-FT025	HPS-FT060E	HPS-FT060S	HPS-FT120
Measuring range	± 150N (F _{xy})	± 600N (F _{xy})	± 1000N (F _{xy})	± 3000N (F _{xy})
	± 200N (F _z)	± 800N (F _z)	± 1400N (F _z)	± 4000N (F _z)
	± 4Nm (M _{xy})	± 15Nm (M _{xy})	± 30Nm (M _{xy})	± 150Nm (M _{xy})
	± 4Nm (M _z)	± 15Nm (M _z)	± 30Nm (M _z)	± 150Nm (M _z)
Precision	0. 05N (F _{xy})	0. 2N (F _{xy})	0. 5N (F _{xy})	1. 5N (F _{xy})
	0. 05N (F _z)	0. 4N (F _z)	0. 5N (F _z)	1. 5N (F _z)
	0. 001Nm (M _{xy})	0. 002Nm (M _{xy})	0. 004Nm (M _{xy})	0. 02Nm (M _{xy})
	0. 001Nm (M _z)	0. 002Nm (M _z)	0. 004Nm (M _z)	0. 02Nm (M _z)
Non-linearity	<1%	<1. 25%	<1. 25%	<2%
Overload	350%	350%	350%	350%
Crosstalk	<1 (F. S.)	<2 (F. S.)	<2 (F. S.)	<2 (F. S.)
Size	21x φ 25mm	87x78x28. 5mm	87x78x28. 5mm	142x126x49. 9mm
Weight	28g	255g	465g	1450g
Creep	<2%			
Hysteresis	0. 1 (F. S.)			
Communication Interface	RS-485、Ethernet、EtherCAT、Analog			
Data output rate	2000Hz (Max.)			
Power supply	DC 12~24V			
Operating Temperature	-10~+55℃			
Certification	CE、FCC、RoHS			



For More Info

*Hypersen reserves the right to change specifications without further notice.