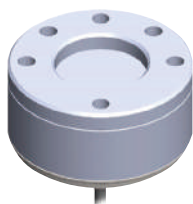


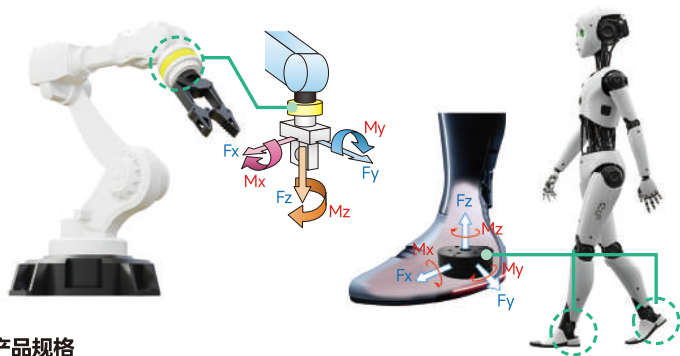
六维力传感器和扭矩传感器

六维力传感器

该传感器在多个领域带来创新性的解决方案，并开拓机器人技术的新前沿。



- 高力矩比**
对于正交力(Fxyz)实现高力矩(Mxyz)载荷(10:1)
※可应对意外的高力矩负载，提高了系统的安全性
- 小直径**
实现了φ63mm的小直径，额定为300N/30Nm
※直径小，适合在狭小空间内使用
- 耐冲击性（采用专用止挡机构）**
在金属上直接成膜（无需粘合剂即可固定传感器）
※因为不使用胶水，受温度变化和时间老化的影响很小
※不会因冲击等而脱落
- 耐环境性**
采用高灵敏度、低温度系数应变计
※高灵敏度（S/N）可提高传感器的刚性
※由于温度引起的输出变化小，能够得到稳定的输出
- 卓越的性价比与高品质**
※通过从传感器元件的制造到组装、校准，全部在自有工厂内一贯完成的垂直整合生产体系，实现了严格的质量管理与显著的成本效率提升



产品规格

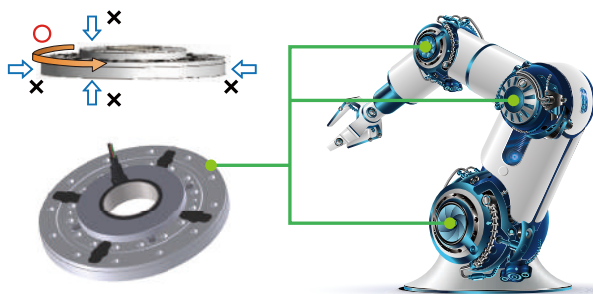
型号	FS063
形状	外径 φ63 mm 厚度 38 mm
额定负载	Fx, Fy, Fz ± 300 N Mx, My, Mz ± 30 Nm
线性	± 3 % F.S.
滞后	3 % F.S.
其他轴灵敏度	± 5 % F.S.
通信方式	RS-485
电源电压	24 VDC
重量	490 g 以下

扭矩传感器

该传感器针对安装在机器人的每个关节进行了优化，来实现多种应用方案。



- 高精度（高灵敏度、高分辨率、高稳定性）**
噪音低，易于检测微小扭矩
※内部制造的金属薄膜传感器实现了高精度
- 低串扰**
受其他轴影响较小
※通过精确的应变计放置技术和结构设计实现了低串扰
※可以检测出准确的扭矩值
- 内置冗余数字电路**
考虑 ISO 13849-1 Cat.3 的结构
- 中空形状**
机器人内部可以进行布线
- 兼具薄型化和高刚性**
刚度大于减速器
※薄型：厚度10mm，额定扭矩达270Nm
※高刚性：使用内制的高灵敏度薄金属传感器芯片
- 卓越的生产力**
专有工厂和自动化生产确保稳定的可靠性



产品规格

	规格①	规格②
形状	外径 φ117 mm 厚度 10 mm 中空直径 φ17.1 mm	φ116 mm 12 mm φ17.1 mm
额定扭矩	± 270 Nm	± 550 Nm
线性	± 3 % F.S.	± 3 % F.S.
滞后	3 % F.S.	3 % F.S.
其他轴灵敏度	± 5 % F.S.	± 5 % F.S.
通信方式	RS-485	RS-485
电源电压	24 VDC	24 VDC
重量	540 g 以下	600 g 以下



创意电子有限公司
Weltronics Component Limited

创意香港

电话 (852) 2410 0623
传真 (852) 2410 0920

创意深圳

(755) 8348 0330
(755) 8348 0105

创意广州

(020) 8351 1853
(020) 8351 1491

创意上海

(021) 6095 2881
(021) 6095 2882

创意北京

(010) 6298 2798
(010) 6298 0880

网址: www.weltronics.com

如信息有误，有奖纠错。（邮件至marketing@weltronics.com）

注：其他办事处联系方式请查询公司网址或邮箱咨询！

LEA: N2P-250808

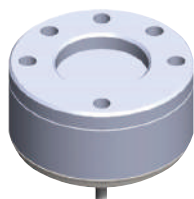


6-axis Force Sensors Torque Sensors

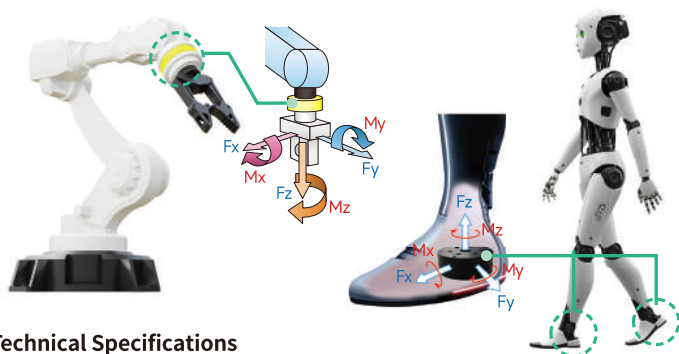
by applying direct thin-film deposition technology on metal

6-axis Force Sensor

Brings innovative solutions across various fields, and pioneers new frontiers in robotics technology.



- High Moment Ratio**
High moment (M_{xyz}) load to translational force (F_{xyz}) (10:1)
*Increased system safety due to ability to handle unexpectedly high moment loads.
- Small Diameter**
Small diameter of $\Phi 63\text{mm}$ for 300N/30Nm rated product
*Smaller diameter makes it suitable for use in confined spaces.
- Impact Resistance with Dedicated Stopper Mechanism**
Direct deposition on metal (adhesive-free sensor fastening)
*No adhesive is used, so there is little effect from changes due to temperature and humidity or deterioration over time.
*No peeling off due to impact, etc.
- Environmental Friendliness**
High-sensitivity, Used low-temperature coefficient strain gauges
*High sensitivity (S/N) allows for increased sensor rigidity
*Small output variation due to temperature, stable output can be obtained
- Superior Cost Performance and High Quality**
*Integrated production system from sensor element manufacturing to assembly in-house, ensures thorough quality control and significant cost efficiency.



Technical Specifications

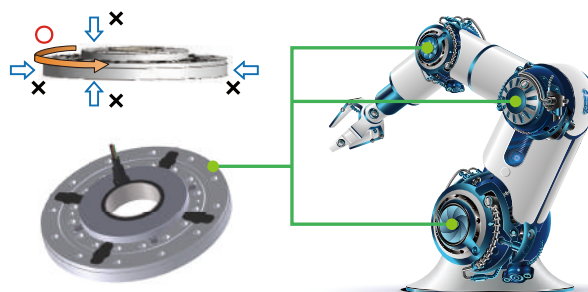
Model Name		FS063
Dimension	Outer Diameter	$\phi 63\text{ mm}$
	Thickness	38 mm
Rated Load	F_x, F_y, F_z	$\pm 300\text{ N}$
	M_x, M_y, M_z	$\pm 30\text{ Nm}$
Linearity		$\pm 3\% \text{ F.S.}$
Hysteresis		3 % F.S.
Crosstalk		$\pm 5\% \text{ F.S.}$
Communication Interface		RS-485
Power Supply Voltage		24 VDC
Weight		490g 以下

Torque Sensor

Optimized for installation in each joint of a robot, improves safety and other functions of collaborative robots.



- High Precision (Sensitivity, Resolution & Stability)**
Detects minute torque with minimal noise
*Achieved with our proprietary thin-film sensor on metal manufactured in-house.
- Low Crosstalk**
Minimal influence from other axes
*Realized through precise strain gauge placement and structural design, and enables accurate torque value detection.
- Built-in Redundant Digital Circuitry**
Structure considering ISO 13849-1 Cat.3
- Hollow Center**
Hollow-in wiring provides a slim design
- Thin and High Rigidity**
Rigidity exceeding that of a speed reducer
· Ultra-Thin Design: Delivers a rated torque of 270Nm in a thickness of 10mm
· High Rigidity: Proprietary thin-film sensor chip on metal manufactured internally
- Excellent Productivity**
Stable reliability achieved through dedicated factories and automation



Technical Specifications

		Model-1	Model-2
Dimension	Outer Diameter	$\phi 117\text{ mm}$	$\phi 116\text{ mm}$
	Thickness	10 mm	12 mm
	Hollow Diameter	$\phi 17.1\text{ mm}$	$\phi 17.1\text{ mm}$
Rated Torque		$\pm 270\text{ Nm}$	$\pm 550\text{ Nm}$
Linearity		$\pm 3\% \text{ F.S.}$	$\pm 3\% \text{ F.S.}$
Hysteresis		3 % F.S.	3 % F.S.
Crosstalk		$\pm 5\% \text{ F.S.}$	$\pm 5\% \text{ F.S.}$
Communication Interface		RS-485	RS-485
Power Supply Voltage		24 VDC	24 VDC
Weight		540g 以下	600g 以下



創意電子有限公司
Weltronics Component Limited

Hong Kong Office

Tel (852) 2410 0623
Fax (852) 2410 0920

Shenzhen Office

(755)8348 0330
(755)8348 0105

Guangzhou Office

(020) 8351 1853
(020) 8351 1491

Shanghai Office

(021) 6095 2881
(021) 6095 2882

Beijing Office

(010) 6298 2798
(010) 6298 0880

Web www.weltronics.com

Note: Other office contact information, please check the website or email for consultation!

If the information is wrong, there will be a reward for correction. (Email to marketing@weltronics.com)

