

舍弗勒集团成立于1946年，总部位于德国巴伐利亚州，是一家专注驱动技术的科技公司，旗下拥有INA、LuK和FAG三大产品品牌。聚焦电驱动、低碳驱动、底盘应用和可再生能源四大领域，舍弗勒通过八大产品谱系，提供所有与驱动技术相关的产品及服务。自1995年在中国投资生产，30余年来，舍弗勒坚守“本土资源服务本土市场”，深耕本土生产研发，为客户提供高品质产品与近距服务。

舍弗勒具身智能机器人（太仓）有限公司为舍弗勒在中国成立的一家独资公司，位于太仓市高新区，专注于人形机器人核心零部件与关键子系统研发生产，并提供训练迭代、数据共享等增值服务，致力成为人形机器人行业的首选技术合作伙伴。依托丰富的驱动技术产品组合，舍弗勒具身智能机器人公司为人形机器人提供滚动/滑动轴承、滚柱/滚珠丝杠、精密减速器和、到电机、传感器、直线及旋转驱动器，以及热管理及电池管理模块等丰富产品，满足人形机器人驱动、传动、感知与反馈、动力控制、能源管理等功能需求。

Established in 1946, Schaeffler is a leading motion technology company, headquartered in Bavaria, Germany. The company has three product brands, INA, LuK and FAG. Schaeffler provides its customers with whatever product or solution they need when it comes to motion by means of eight product families, covering electric mobility, CO₂-efficient drives, chassis solutions and renewable energies. Having started investing in 1995, Schaeffler is committed to local production and R&D, providing products of the highest quality and zero-distance services to customers.

Schaeffler Humanoids (Taicang) Co., Ltd., located in the Taicang High-Tech Industrial Development Zone, specializes in the R&D and production of core humanoid components and subsystems. By providing essential value-added services, including iterative model training and data sharing, Schaeffler is committed to becoming the preferred technology partner for humanoid robotics. Drawing on Schaeffler's extensive portfolio of drive technology products, Schaeffler Humanoids (Taicang) Co., Ltd. is capable of providing a wide range of products for humanoid robots, including rolling bearings, roller screws, precision reducers, electric motors, and sensors, as well as integrated modules for rotary and linear actuation, thermal management, and battery management. These products meet the functional requirements of humanoid robots in terms of actuation, transmission, sensing and feedback, power control, and energy management.

核心产品介绍

Core Product Introduction

直线关节模组

Linear Joint Module

在人形机器人腿部与躯干集成直线关节模组，可实现大推力、高刚度的升降伸缩，动作平稳顺滑。依托滚珠/行星滚柱丝杠，它在有限空间内同时实现高负载和高定位精度，克服了传统旋转关节在直线运动场景下传动链复杂、刚度不足、定位精度受限等问题。无论在工业物流还是服务场景，该关节模组都能显著提升人形机器人在真实环境中的作业可靠性与交互质感，带来更自然、更可信的具身智能表现。

Linear Joint Module is integrated into the legs and torso of humanoid robot, enabling high-thrust and high-stiffness lifting and telescoping with smooth and stable motion. Using a planetary roller screw/ball screw structure, it offers high load capacity and precision in limited spaces, overcoming issues like complex transmission chains and low stiffness in traditional rotary joints. Ideal for industrial logistics and service scenarios, it enhances the robot's reliability and interaction quality in real-world environments.



轻量化一体式谐波减速器关节模组

Lightweight & Integrated Strain Wave Joint Module

人形机器人执行抓取任务（如搬运工件或握举重物）时，谐波减速器关节模组被部署于肩、肘、腕等关键部位，需在狭小空间内实现高精度、高负载的运动控制。满足在严格受限的空间与重量下，兼顾高扭矩输出、低惯量与高刚性，并提升系统集成度度的关键挑战。

When humanoid robots perform grasping tasks—such as handling industrial parts or lifting groceries—the strain wave joint modules are deployed at critical positions like the shoulder, elbow, and wrist, requiring high-precision motion control under significant loads within tight space constraints.



MEMS拉压力/扭矩传感器

MEMS Force Sensor / Torque Sensor

力传感器（拉压力或扭矩）是用于检测机器人与环境或物体间作用力的装置，主要通过半导体应变片或MEMS测量弹性体形变实现多维力/扭矩检测。按安装部位可分为腕力传感器、关节力传感器、握力传感器等类型，其中六维力传感器可同时测量三个正交方向的力和绕轴力矩。

A force sensor is a device used to detect the forces between a robot and its environment or objects, primarily measuring the deformation of elastic bodies through semiconductor strain gauges or MEMS to achieve multidimensional force/torque detection. Depending on the installation location, it can be categorized into types such as wrist force sensors, joint force sensors, and grip force sensors. Among these, a six-axis force sensor can simultaneously measure forces in three orthogonal directions and torque around the axes.

