

LS Lingjie Series
Collaborative
Robots

SERIES

New Consumption · New Intelligence · A Lighter Future



Minimalist & Lightweight · Embodied Intelligence · Intelligent Services

New Retail | Commerce | Healthcare | Education | The premier choice for new consumer scenarios

With Each Use, AI
Evolves to
Understand You
Better.

Multimodal Command Input Interaction

Whether it is voice input, textual descriptions, or structured commands, robots can comprehend their environment and the given instructions, and then infer precise sequences of robotic actions.

Multimodal Perception

It can integrate visual, force-sensitive, and tactile sensors to perceive the environment in real time.

Force-Control Adaptive Algorithm

It can accurately detect the contours of the human body in real time, dynamically adjust the massage pressure and trajectory, and simulate the techniques of a human hand.

Drag-and-Drop Demonstration

Drag-and-drop demonstration: AI-assisted trajectory optimization boosts motion reproduction efficiency by 60%

LS SERIES

New Scenarios, Agile Boundless

The LS Series collaborative robots are specifically designed for commercial services and lightweight application scenarios in the new era of consumerism. Featuring a "minimalist and lightweight" design and powered by "embodied intelligence," these robots integrate seamlessly into the everyday needs of people in the realms of dining, housing, apparel, and transportation. Whether deployed in smart retail environments, unmanned coffee stations, community service facilities, hotel delivery operations, or for auxiliary tasks such as charging and refueling, as well as massage and physiotherapy services, the LS Series offers flexible adaptability. This enables small and medium-sized enterprises and service operators to rapidly deploy smart services, reduce costs, enhance efficiency, and elevate user experiences.

Lightweight and Versatile – the Top Choice for Commercial Use

Minimalist · Flexible · Secure · Efficient · Intelligent



High precision, high speed; ultra-high protection

high-accuracy:

Repeatability: ± 0.03 mm; precise and smooth motion control

high-speed:

The maximum joint speed can reach $180^\circ/\text{s}$, offering higher efficiency.

High protection:

IP65 protection rating; dustproof, waterproof, and oil-resistant

Wide temperature operating range:

-10°C to 50°C ; suitable for high-temperature or low-temperature environments.



Minimalist design, rapid deployment

Lightweight chassis: Plug-and-play functionality, delivering a 50% increase in deployment flexibility; supports multi-device daisy-chaining with plug-and-play capability for rapid adaptation to changing scenarios; comes standard with a MINI control box to save space and simplify integration.



Stylish and aesthetically pleasing; commercially viable

Smooth, streamlined exterior design:

Softer and more commercially appealing than traditional industrial robots, it is ideal for venues where aesthetic appeal is important—such as coffee shops, physiotherapy rooms, and retail stores.

low noise:

Optimized acoustic design ensures quiet operation at ≤ 70 dB, making it ideal for indoor commercial use.



Comprehensive safeguards for your peace of mind

Full electromagnetic brake design:

Emergency stop and stable locking upon power loss prevent slippage and descent, ensuring braking safety.

Millisecond-level connection interruption emergency stop:

The equipment instantly disconnects in the event of an abnormality, providing comprehensive protection for personnel safety.

End drag button:

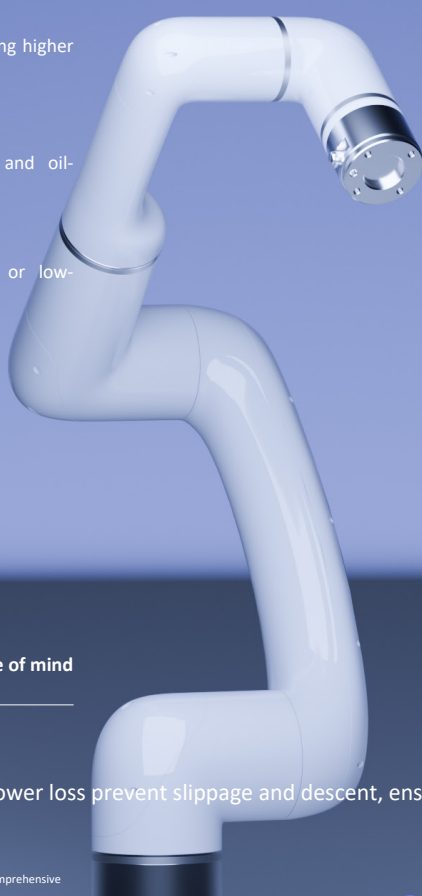
In the event of a failure, simply drag the device to the safe position with one click, making emergency debugging more convenient.



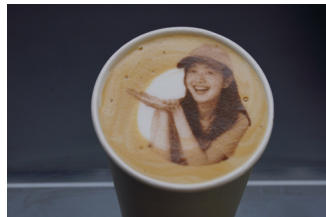
Boundless Openness, Comprehensive Development Support

High-speed EtherCAT communication bus: high synchronization precision and faster response times **SDK / ROS Driver:** provides end-to-end technical support

Operating System Compatibility: Compatible with a wide range of mainstream operating systems, enabling rapid integration with end-effector tools (grippers, suction cups, massage heads, coffee machines, etc.), empowering customers to deliver differentiated services.



 Smart Kitchen / Unmanned Food Service



Visual recognition of wine bottles, glasses, ingredients, etc.; force-sensing adaptive gripping; AI-optimized optimal pour trajectories or pouring angles, among other features.

 24-hour unmanned supermarket



Visual recognition of product locations or barcodes/price tags; haptic adaptive grasping or placement of products; autonomous

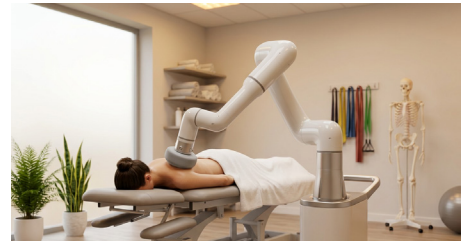
 Refuel / Charge



Identifies the position of the fuel cap or charging port based on time, and adaptively adjusts the insertion force and angle.



Physical Therapy & Wellness



Force and vision sensors enable real-time perception of the human back curvature, dynamically adjusting force and trajectory to simulate hand techniques.



service for life



planning of replenishment routes; independent elevator navigation with obstacle avoidance; silent operation; contactless delivery.



Scientific Research and Education



Visual recognition identifies object orientation and layout; haptic feedback enables adaptive adjustment of gripping force; dynamic compensation corrects motion errors; and the system supports scientific research, practical training, and board game instruction.

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LS Product Series Specifications



LS62		LS65	
technical parameter	Degrees of freedom	6	
	Load	2kg	5kg
	Working radius	655mm	850mm
	Repositioning accuracy	±0.03mm	
	Way to install	Any angle	
	Tool I/O	2xDI, 2xDO (PNP only)	
	Tool I/O power supply	24V,1A	
	Tool Communication	RS485	
	Joint range of motion	±360°	
Joint parameters	Foundation bed	125°/s	125°/s
	Shoulder	125°/s	125°/s
	Maximum joint velocity		
	Elbow	180°/s	125°/s
	Wrist 1	180°/s	180°/s
	Wrist 2	180°/s	180°/s
	Wrist 3	180°/s	180°/s
Physical parameters	Maximum tool speed	1.2m/s	1.5m/s
	Conduct oneself with dignity	11kg	15kg
	Base diameter	φ126mm	
	IPlevels of protection	IP65	
	Operating ambient temperature	-10℃ ~ 50 ℃	
	Work environment humidity	90% relative humidity (non-condensing)	
	Material	Aluminum alloy, steel, plastic, rubber	
	Standard cable length	5.5m	
Part Number	MINIcontrol cabinet	ERB1C600MET-Mini	
	Standard demonstration device	ERP500	
	Safety demonstration device (optional)	ERP500S	



MINIcontrol cabinet	
Model	ERB1C600MET-Mini
Type	Direct-currentMINI
I/O interface	8 x DI, 8 x DO; supports PNP; configurable I/O: 8x CI (supports PNP & NPN switching), 8x CO
I/Osupply electricity	24V/2A
CI	Ethernet, Profinet slave, Ethernet/IP slave, FINS TCP, Modbus TCP/RTU, RS485, CCLink slave (optional)
Dimensions (Length × Width × Height)	164.2mm x 130mm x 72mm
Levels of protection	IP20
Weight	1.5kg
Supply electricity	45~55VDC
Operating ambient temperature	-10℃ ~ 50 ℃
Work environment humidity	90% relative humidity (non-condensing)
Material	Alufer



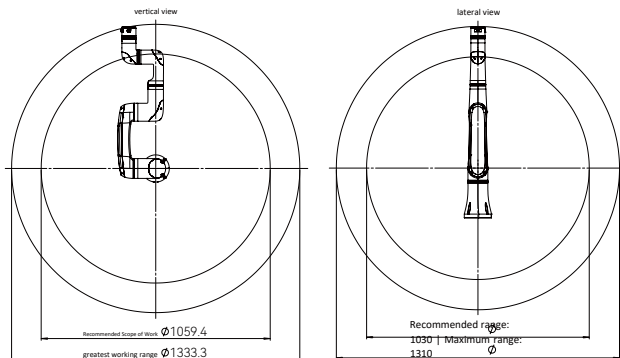
Standard demonstration device		Safety Demonstration Device	
Model	ERP500	ERP500S (optional)	
Dimensions (Length × Width × Height)	304mm x 169mm x 93mm		
Resolution ratio	1280 x 800		
Screen size	10.1 inches		
Physical manual buttons	Have		
Three-position switch	Not have	Have	
IPlevels of protection	IP54		
Weight	0.96kg		
Standard cable length	5.5m		
Operating ambient temperature	-10℃ ~ 50 ℃		
Relative humidity of the working environment	90% relative humidity (non-condensing)		
Material	Aluminum alloy, plastic, silicone rubber		

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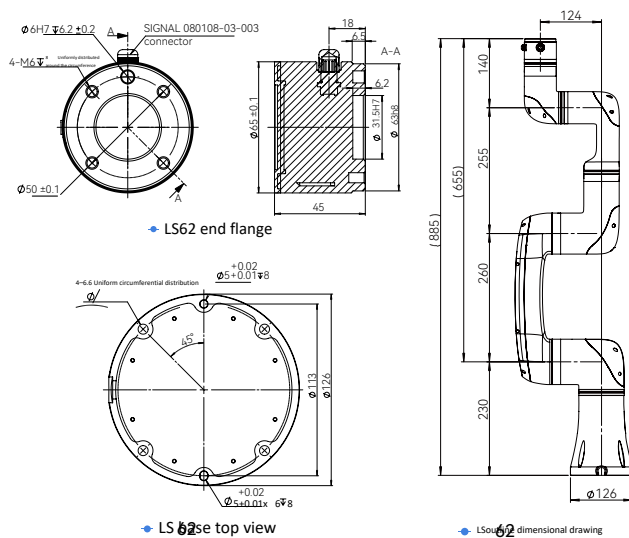
LS Series Dimensional Drawings

* All dimensions shown in the diagram are in mm.

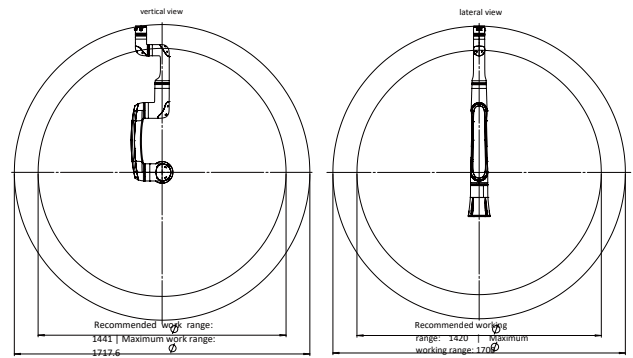
LS62 Dimensional Drawing



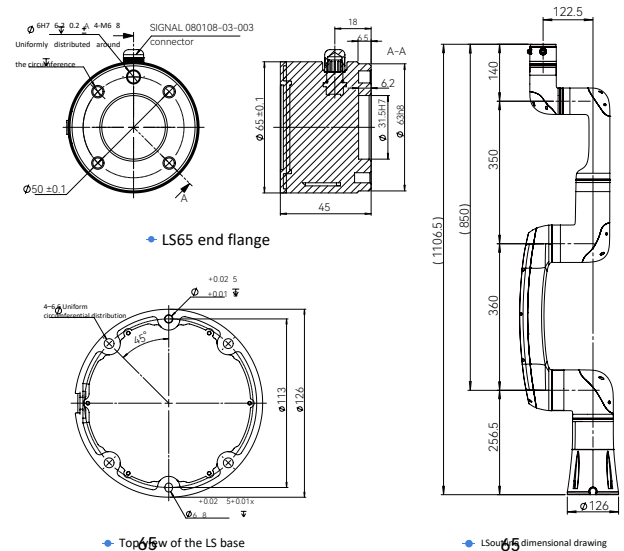
LS62 Scope Map



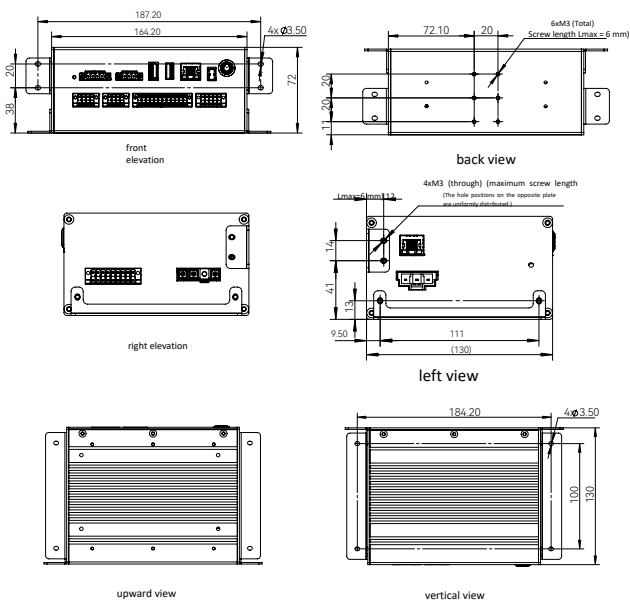
LS65 Dimensional Drawing



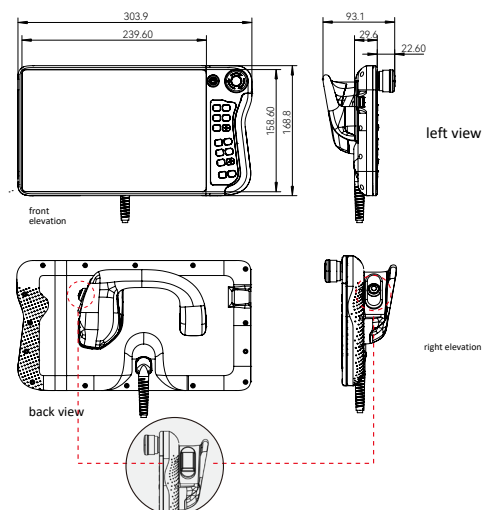
LS65 Scope of Work Diagram



Mini Control Box Dimensions Diagram



Demonstration device dimension diagram



Note: The ERP500S builds upon the ERP500 model by incorporating three additional switch buttons to enhance operational safety; otherwise, both models share identical external dimensions and basic structure.