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THE WORLD'S LEADING SOLUTION PROVIDER OF ALL-PERCEPTIVE INTELLIGENT ROBOTS

DOBOT SR Industrial Robot Series
More Intelligent / More Efficient / More convenient



CATALOG

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COMPANY PROFILE



Company Vision

THE WORLD'S LEADING SOLUTION PROVIDER OF ALL-PERCEPTIVE INTELLIGENT ROBOTS

Shenzhen Yuejiang Technology Co., Ltd. (DOBOT) is the world's leading technological solution provider for the robotics industry, focusing on the development of all-perceptive intelligent robotic arms that integrate perception and interaction. The company did all the research and development on its own in major technological areas like vision, controlling, drivers, and the robotic body. Key members of DOBOT Team all graduated from well-known domestic and foreign universities, including Shandong University, Harbin Institute of Technology, Chinese Academy of Sciences and MIT. DOBOT's expert team has been interviewed twice by Premier Li Keqiang. DOBOT was named one of the world's 80 most valuable robot companies by CB Insights; ranked among the Hurun Top 100 Most Valuable New Star Enterprises in China, the top 80 of artificial intelligence companies in 2018 and the top 50 with most development potential of China's industrial innovation list.

As a national high-tech enterprise, DOBOT has obtained ISO9001 quality management system, ISO14001 environmental management system and GB/T29490 intellectual property management system certification. DOBOT has always adhered to independent innovation. Up to now, it has more than 260 intellectual property rights in the field of robotics, including 9 international invention patents (PCT), 140 patents, 39 software copyrights, and 72 registered trademarks, covering the world's top 40 economies.

The new-generation all-perceptive intelligent robot arm, independently developed by DOBOT, won the CES 2018 Innovation Award, the 2018 Red Dot Award, the 2018 iF Design Award, and the China Innovation Design Red Star Award, the highest industrial design in China.

DOBOT robotic arms have been sold to more than 140 countries and regions around the world, widely used in education, industry and business. As the only selected Chinese technological company, DOBOT robotic arms showed at the Google I/O, the 23rd Korea PyeongChang Winter Olympics and CCTV online Spring Festival Gala in 2017 and 2018. Besides, DOBOT has cooperated with Volkswagen, Tencent Cloud and Alibaba in smart factories, robots and artificial intelligence.

"Yuejiang" originates from an ancient Chinese poem and means using technological innovation to establish a national industrial brand that is able to cross the border and enter the world market.



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SR Industrial Robot Series



Positioning

LIGHTWEIGHT ALL-PERCEPTIVE INDUSTRIAL ROBOTIC ARM

DOBOT SR Industrial Robot Series contains lightweight all-perceptive industrial robotic arms, independently developed by DOBOT, featuring integrated design of driver and controlling system, light and compact body, small footprint and efficient deployment. With high precision and fast-moving speed, the series is perfectly suitable for flexible production lines with limited working space and can meet the needs of precise assembly, inspecting, moving, loading and unloading, etc., greatly improving production efficiency.

Fully Self-developed, Outstanding Performance

Equipped with 100% self-developed encoders, controllers and drivers, DOBOT SR Robots have achieved brilliant breakthroughs in main technological areas including vision, control, drivers and robotic body, featuring outstanding performance thanks to its core technology of four-in-one servo driver.

All-perceptive man-machine collaboration

Combining identification of full-parameter dynamic model, auto-adaption of parameters and estimation of external force on the payload, DOBOT SR Robots realize force perception, collision detection, intelligent picking and hand-held teaching with 2D and 3D visual aids.

Optimal dynamic control, faster, more precise and more durable

As the dynamic feedforward keeps stable trajectory and optimal operating time, the robotic arm can automatically run on the best accelerating and decelerating parameters. Controlled and constrained by torque, both high speed and long operating life of the whole machine are fairly ensured.

Lightweight integration & Quick deployment

Featuring lightweight and compact design, integrated driver and controller, the small-size DOBOT SR robot is easy to move. Simple and flexible deployment makes it possible to quickly switch operations without changing the layout of the production line.

Simplified industrial visual applications

One-button auto-calibration, tool compensation and visual rectification enable the robotic arm to be used for visual applications, fast deployment of which can be realized when combined with a visual kit.





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4-AXIS INDUSTRIAL ROBOT SERIES

The professional design enables DOBOT 4-axis Industrial Robot Series to have stronger rigidity and higher reliability. Featuring high speed, high precision, high performance, and easy installment, operation and maintenance, the cost-effective robotic arms can greatly improve the adaptability for performing complex assembly tasks.

Product Features

1. Optimal dynamic time control, auto-operation at the perfect accelerating and decelerating parameters
2. Trajectory stays the same at both high and low speed, what you see is what you get
3. Vision kit enables high-accuracy visual applications

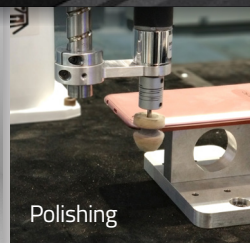
Application Scenarios



Inspecting



Assembling



Polishing



Picking and Placing



Material loading
And Unloading

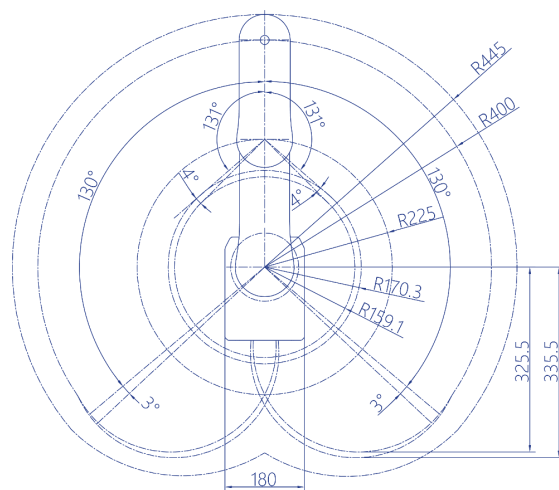
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SR4-1



Technical Parameters

Type	DT-DB-4R010-001	
Reach	400mm	
Payload	Rated Load	1kg
	Maximum	3kg
Standard Cycle Time	0.45s	
Position Repeatability	J1+J2	±0.01mm
	J3	±0.01mm
	J4	±0.01°
Motion Range	J1	±130°
	J2	±131°
	J3	150mm
	J4	±360°
Maximum Speed	J1	600°/s
	J2	600°/s
	J1+J2(resultant velocity)	6000mm/s
	J3	1100mm/s
Motor Power	J4	2600°/s
	J1	400W
	J2	100W
	J3	100W
I/O Interface	J4	100W
	· 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA)	
	User Circuit	15 Pin (D-Sub Port)
	User Air Pipe	φ4mm x 1, φ6mm x 2
Net Weight	13kg	
Communication Mode	Ethernet、Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 5°C ~40°C	
	Humidity: 10%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram



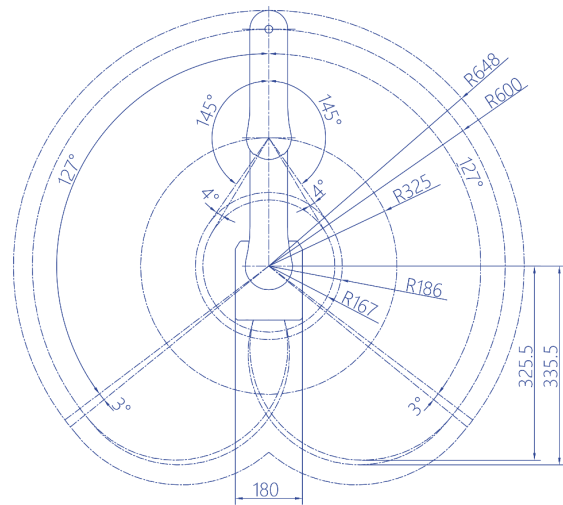
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DOBOT SR4-2



Technical Parameters

Type	DT-DB-4R020-001		
Reach	600mm		
Payload	Rated Load	2kg	
	Maximum	6kg	
Standard Cycle Time	0.42s		
Position Repeatability	J1+J2	±0.02mm	
	J3	±0.01mm	
	J4	±0.01°	
Motion Range	J1	±127°	
	J2	±145°	
	J3	200mm	
	J4	±360°	
Maximum Speed	J1	375°/s	
	J2	600°/s	
	J1+J2(resultant velocity)	6800mm/s	
	J3	833mm/s	
Motor Power	J4	1500°/s	
	J1	400W	
	J2	400W	
	J3	100W	
I/O Interface	J4	100W	
	<ul style="list-style-type: none"> · 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA) 		
	User Circuit	15 Pin (D-Sub Port)	
	User Air Pipe	φ4mm x 1, φ6mm x 2	
Net Weight	19kg		
Communication Mode	Ethernet、Modbus		
Internal PLC	Support		
External Axis Control	Support		
Working Environment	Temperature: 5°C ~40°C Humidity: 10%~80%, no condensation		
Mounting Type	Desk		



Operating Space Diagram

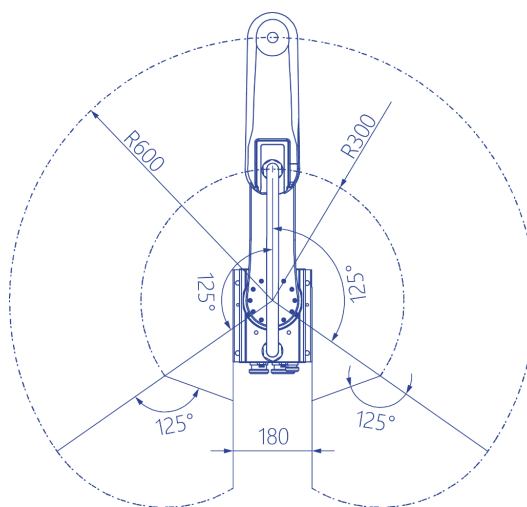
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SR4-5



Technical Parameters

Type	DT-DB-4R050-001	
Reach	600mm	
Payload	Rated Load	5kg
	Maximum	6kg
Standard Cycle Time	0.45s	
Position Repeatability	J1+J2	±0.01mm
	J3	±0.01mm
	J4	±0.005°
Motion Range	J1	±125°
	J2	±125°
	J3	230mm
	J4	±360°
Maximum Speed	J1	375°/s
	J2	600°/s
	J1+J2(resultant velocity)	7000mm/s
	J3	833mm/s
Motor Power	J4	1500°/s
	J1	400W
	J2	400W
	J3	100W
I/O Interface	J4	100W
	· 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA)	
	User Circuit	16 Pin, 8in/8out expandable
	User Air Pipe	φ6mm x 2
Net Weight	20kg	
Communication Mode	Ethernet、Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 5°C ~40°C Humidity: 10%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram



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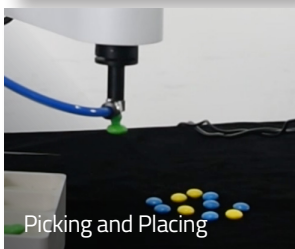
6-AXIS INDUSTRIAL ROBOT SERIES

Equipped with a great servo control system and high-precision driver-integrated technology, DOBOT 6-axis robot makes fast, flexible and agile movement at high precision with excellent dynamic payload performance. Smooth running track, simple and smooth control, and light & compact design makes it capable of assembly line operations without any pressure.

Product Features

1. Easy-to-move integrated driver and controller & Quick and flexible employment
2. Dynamic torque control, faster, more stable and more endurable
3. Advanced dynamic trajectory & Smooth controlling experience
4. User guided palletizing kit

Application Scenarios







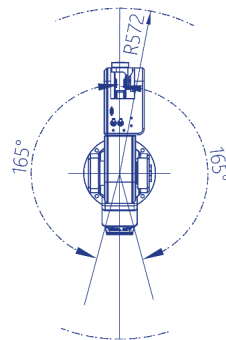
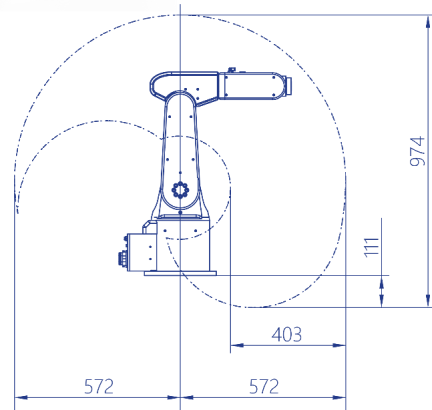
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DOBOT SR6-3



Technical Parameters

Type	DT-DB-6R030-001	
Reach	572mm	
Payload	Rated Load	3kg
	Maximum	4kg
Position Repeatability	±0.02mm	
Motion Range	J1	±165°
	J2	±110°
	J3	-90° ~ +70°
	J4	±160°
	J5	±110°
	J6	±400°
Maximum Speed	J1	250°/s
	J2	250°/s
	J3	250°/s
	J4	320°/s
	J5	320°/s
	J6	420°/s
Motor Power	J1	400W
	J2	400W
	J3	200W
	J4	100W
	J5	50W
	J6	50W
I/O Interface	<ul style="list-style-type: none"> · 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA) 	
User Circuit	15 Pin (D-Sub Port)	
User Air Pipe	φ6mm x 2	
Net Weight	29.5kg	
Communication Mode	Ethernet、Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 5°C ~40°C Humidity: 10%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram

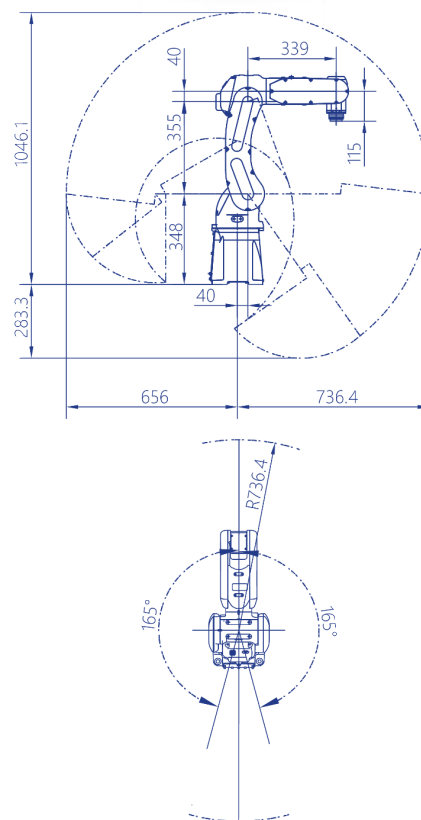
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SR6-5⁷³⁵



Technical Parameters

Type	DT-DB-6R050-001	
Reach	735mm	
Payload	Rated Load	5kg
	Maximum	7kg
Position Repeatability	±0.03mm	
Motion Range	J1	±160°
	J2	-10° ~ +170°
	J3	-70° ~ +170°
	J4	±270°
	J5	±120°
	J6	±360°
Maximum Speed	J1	300°/s
	J2	220°/s
	J3	370°/s
	J4	380°/s
	J5	360°/s
	J6	592°/s
Motor Power	J1	750W
	J2	750W
	J3	400W
	J4	100W
	J5	100W
	J6	100W
I/O Interface	<ul style="list-style-type: none"> · 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA) 	
User Circuit	standard configuration 16 in/16 out	
User Air Pipe	φ6mm x 2	
Net Weight	40kg	
Communication Mode	Ethernet, Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 0°C ~45°C Humidity: 20%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram



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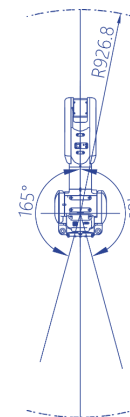
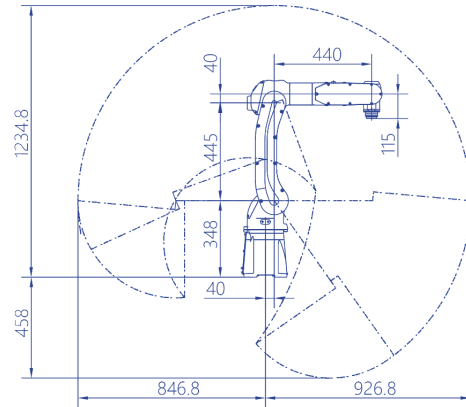


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SR6-5⁹²⁵

Technical Parameters

Type	DT-DB-6R050-011	
Reach	925mm	
Payload	Rated Load	5kg
	Maximum	7kg
Position Repeatability	±0.03mm	
Motion Range	J1	±160°
	J2	-10° ~ +170°
	J3	-70° ~ +170°
	J4	±270°
	J5	±120°
	J6	±360°
Maximum Speed	J1	300°/s
	J2	220°/s
	J3	370°/s
	J4	380°/s
	J5	360°/s
	J6	592°/s
Motor Power	J1	942W
	J2	942W
	J3	400W
	J4	100W
	J5	100W
	J6	100W
I/O Interface	<ul style="list-style-type: none"> · 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA) 	
User Circuit	standard configuration 16 in/16 out	
User Air Pipe	φ6mm x 2	
Net Weight	45kg	
Communication Mode	Ethernet, Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 0°C ~45°C Humidity: 20%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram

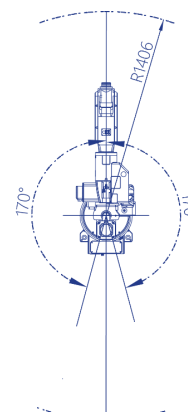
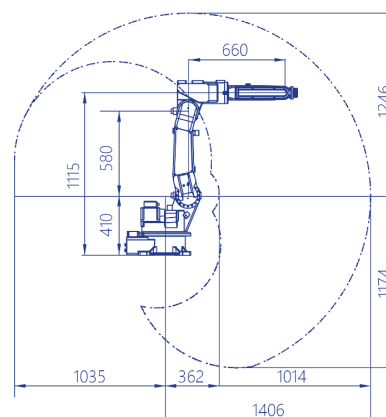
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SR6-12



Technical Parameters

Type	DT-DB-6R100-001	
Reach	1406mm	
Payload	Rated Load	10kg
	Maximum	12kg
Position Repeatability	±0.05mm	
Motion Range	J1	±170°
	J2	-90°~+155°
	J3	-20°~+170°
	J4	±180°
	J5	-50°~+230°
	J6	±360°
Maximum Speed	J1	199°/s
	J2	190°/s
	J3	190°/s
	J4	480°/s
	J5	450°/s
	J6	630°/s
Motor Power	J1	1KW
	J2	1.5KW
	J3	1KW
	J4	200W
	J5	100W
	J6	100W
I/O Interface	<ul style="list-style-type: none"> · 5 relay outputs · 16 digital outputs · 24 digital inputs · 2 analog outputs (0V-10V, 4mA-20mA) · 4 analog inputs (0V-10V, 4mA-20mA) 	
User Circuit	--	
User Air Pipe	φ6mm x 2	
Net Weight	163kg	
Communication Mode	Ethernet、Modbus	
Internal PLC	Support	
External Axis Control	Support	
Working Environment	Temperature: 5°C ~40°C Humidity: 10%~80%, no condensation	
Mounting Type	Desk	



Operating Space Diagram



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CONTROL SYSTEM



Driver-integrated controller solution

Combining man-machine interaction, controller and driver, the one-stop solution is tailored for industrial robots, and can quickly adapt to various robot models including SCARA, six-joint, DELTA.

Four-in-one servo driver solution

Equipped with four-in-one servo driver, the controller satisfies different servo requirements of users with support of encoders from Panasonic, Tamagawa, BISS and Nikon.

Minimum size & Quick employment

The size of the super compact controller is 400*360*180mm, only 20% of traditional robot controllers' and similar to a computer main cabinet. Just plug and use, easy to move.

Modular & Expandable

EtherCAT networking, modular design, easy extension of external axes, I/O ports, abundant interface resources, remote diagnosis and more.

SC SERIES INTEGRATED ROBOT CONTROLLER

The SR series integrated controller is a super compact product developed by DOBOT with strong performance, high quality at low cost. By adopting fully self-developed encoders, controllers and drivers, DOBOT reduced 80% of the controller's original size. Highly integrated with intensive power density, support remote diagnostics.



Technical Parameters

Type	DT-DB-SC140-001	DT-DB-SC160-001	DT-DB-SC161-001	DT-DB-SC162-001
Controlled Axes	4 axes + external axes	6 axes + external axes	6 axes + external axes	6 axes + external axes
Input Power	Single-phase 220V/230V AC, 10A,50/60HZ	Single-phase 220V/230V AC, 12A,50/60HZ	Single-phase 220V/230V AC, 15A,50/60HZ	Single-phase 220V/230V AC, 30A,50/60HZ
Output Power	24V DC, 8.8A	24V DC, 14.6A	24V DC, 14.6A	24V DC, 14.6A
Supported Motor Power (max.)	All joints:400W	All joints:400W	All joints:750W	J1: 1.5KW J2: 1.5KW J3: 1.5KW J4: 750W J5: 750W J6: 750W
Braking Resistor	two, 80W, 80Ω	three, 80W, 80Ω	three, 80W, 80Ω	two, 200W, 50Ω
Supported Encoder Type	Panasonic, Tamagawa, BISS, Nikon			
Communication	EtherCAT (for external axes), Ethernet			
I/O Ports	5 relay outputs、16 digital outputs、24 digital inputs、2 analog outputs (voltage: 0V-10V, current: 4mA-20mA)、4 analog inputs (voltage: 0V-10V, current: 4mA-20mA)			
Teaching Play-back Method	Holding the teaching play-back device in hand			
Programming Language	Lua			
Installation Method	Floor type			
Environment	Environmental temperature: 0°C~45°C Humidity: ≤95%, and no condensation			
Protection Rating	IP20			
Cooling Method	Forced air cooling			
Safety Function	Emergency stop function, reserved external safety interface (can be controlled by I/O interface)			
Indicator status	When the power is turned on normally, the indicator light is steady red; when the power is off, the indicator is off.			
Maintenance	Diagnostic software、Power-off zero save、Reserve remote service			

TEACH PENDANT

Support both button and touch control. Friendly interface, innovative interactive programming, secondary development available and mechanical structure dynamic algorithms of various for various applications.



Electrical Specifications

Rated Power	< 8W
Rated Voltage	DC24V, working range DC 18V~32V
Power Protection	Power surge, lightning protection
Allowed Power-off Time	< 5ms
CE	Comply with EN61000-6-2:2005, EN61000-6-4:2007
RoHS	RoHS compliant with lightning surge ± 4 KV, group pulse ± 4 KV Static electricity 4KV, air discharge 8KV

Environment Requirements

Working Temperature	0°C ~50°C
Storage Temperature	-25°C ~60°C
Ambient Humidity	10~90%RH (no condensation)
Shock Resistance	10~25Hz (2G/30 minutes in X, Y, Z directions)
Cooling Method	natural air cooling

Other

Protection Rating	IP20 for the whole machine
Mechanical Structure	ABS
Machine Size	250×160×95 (mm) (without power terminal)
Machine Weight	Main body is about 900g, whole machine (including cable and wiring box) is 1600g

Hardware Specifications

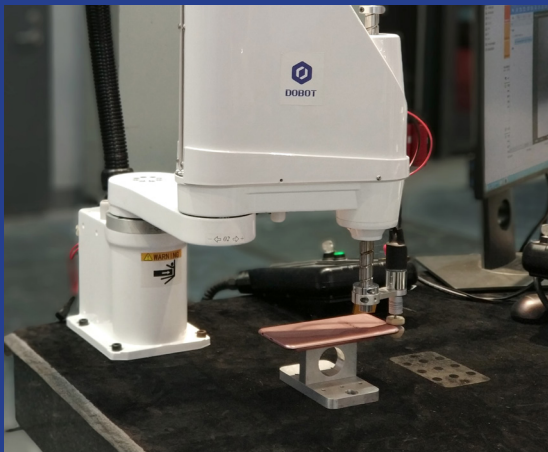
Display Screen	7" TFT LCD
Resolution	800×480
Color	65536 color
Brightness	450 cd/m ²
Backlight	LED
LCD Lifespan	50000 Hours
Touch Screen	4-wire industrial resistance touch screen (surface hardness 4H)
CPU	32 Bit 400MHz RISC
Memory	128M Flash + 64M DDR2 DRAM
RTC	Built-in real-time clock
Ethernet	100M
USB Port	1 \uparrow USB Host 1.1 port
Operating System	LINUX or WINDOWS CE optional
Buttons	A three-segment safety switch, a key switch A self-locking switch with light, a safety emergency stop switch 6 sets of 12 programmable silica gel (metal plate) buttons



INDUSTRY APPLICATION

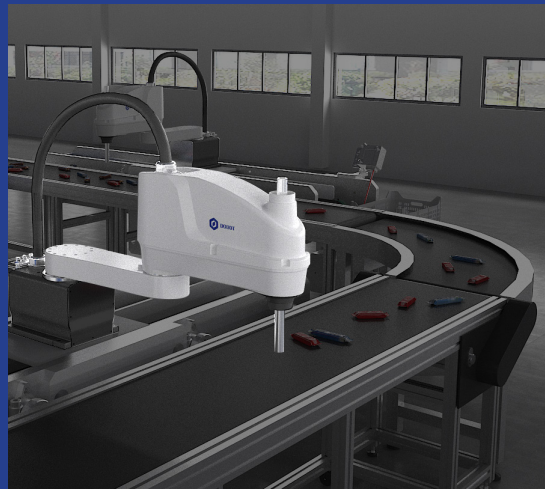
3C Industry

The 3C industry has always faced the challenge of automation efficiency for the high-precision components and frequent replacement of production lines. Perfect for the above environment, DOBOT industrial robots can satisfy the soft contact and high flexibility needed in automation tasks of many digital components' intelligent production tasks, including metal forging, testing, assembly and grinding.



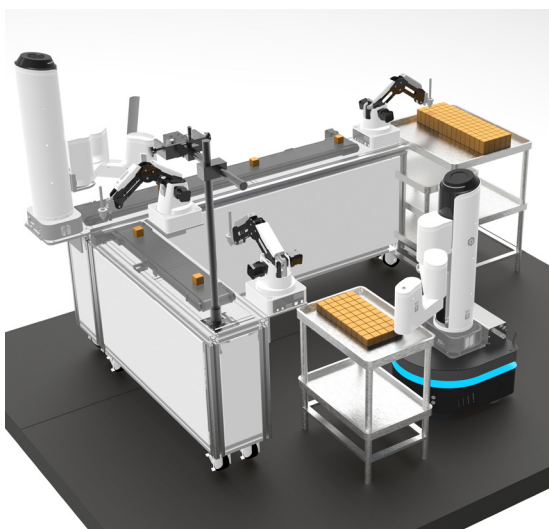
Food Industry

DOBOT SR industrial robots can effectively meet the needs of the food industry for efficient and seasonal labor supply. They can be used for handling, sorting, boxing and packing of various foods in bags, boxes and bottles.



Logistics Industry

Applying 2D/3D visual fusion technology to access outer dimensions, features and express bar code information, DOBOT SR industrial robots can realize fast sorting and handling of packages.



Research Education

So far, DOBOT robotic arms have been widely used in universities and vocational colleges around the world. DOBOT SR Industrial Robotic Arm Series can provide various new robotics technologies for research and educational activities, and a powerful industry-tested platform for future innovation and talents training. Combining industry, university, research and application, DOBOT will cultivate more future artificial intelligence talents for the global manufacturing industry.



Medical industry

DOBOT SR Industrial Robotic Arm Series can fully take on mundane tasks like the transportation and sorting of drugs, samples and other items in medical facilities, helping medical personnel to get rid of repeated and cumbersome work, effectively reducing the risk of human contamination and patient waiting time, and greatly improving the operation speed of the hospital.





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SERVICE AND SUPPORT

With year's of rapid development, the service network of DOBOT has gradually covered more than 140 countries and regions around the world, with several branches established throughout the country and partnerships with over 40 agents worldwide, all aiming to provide users with continuous follow-up service.



📍 **Shenzhen headquarters**

📍 **Shandong Branch**

📍 **Shanghai Branch**

📍 **Beijing Branch**

📍 **Wuhan Branch**

📍 **Chongqing Branch**

📍 **US Branch**



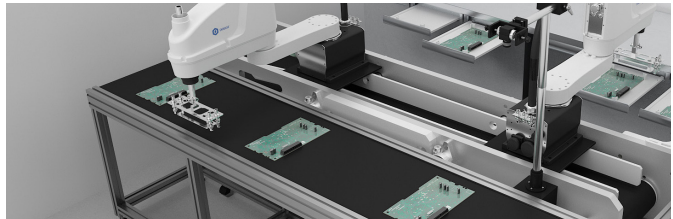
Technical Support

DOBOT has been continuously providing open and friendly technical support to help customers better use our products, offering guide on equipment installation, field service, robot expansion, upgrade and transformation, remote technical support, etc.



Solution Support

DOBOT will customize optimum robotic solutions for every client since the very beginning of cooperation. Professional engineers will offer analysis, simulation and testing service throughout the project to ensure smooth and efficient deployment of the solution.



Course Training

DOBOT provides regular step-by-step training for robotic technology to increase our partners' understanding and application ability of DOBOT all-perceptive intelligent robots. Standard and customized courses are offered to meet different requirements from our partners, training them into robot experts by combining theories and practices.



After-sale Service

DOBOT provides the fastest and most professional 7/24 after-service for robots. Online support from professionals can be reached via phone or emails at any time. Besides, we offer on-site support service including equipment debugging, maintenance and troubleshooting.





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