

INOVANCE

Inovance Robot Selection Guide



Industrial Automation



Intelligent Elevator



New Energy Vehicle



Industrial Robot










Rail Transit





FORWARD, ALWAYS PROGRESSING

Robot Product Family

6-Axis Robot

IR-R4 Series	P 3	IR-R4H (hollow wrist) Series	P 5	IR-R7H(Hollow Wrist)	P 7	IR-R11 Series	P 9
							
Load 4 kg		Load 4 kg		Load 7kg		Load 10 kg / 11.3 kg	
Arm length 560.6 mm		Arm length 545.7 mm		Arm length 722.3mm/911.9mm		Arm length 1101.6 mm / 901.9 mm	
Model IR-R4-56S-INT		Model IR-R4H-54S-INT		Model IR-R7H-70S-INT IR-R7H-90S-INT		Model IR-R10-110S-INT IR-R11-90S-INT	
IR-R10H(Hollow Wrist)	P 11	IR-R10 Series	P 13	IR-R25 Series	P 15		
							
Load 10kg		Load 10 kg		Load 16kg/25kg			
Arm length 1201.2mm		Arm length 1422 mm		Arm length 2107mm/1783mm			
Model IR-R10H-120S-INT		Model IR-R10-140S-INT		Model IR-R16-210S-INT IR-R25-178S-INT			

SCARA Robot

IR-S4 Series	P 17	IR-S7 Series	P 19	IR-S10 Series	P 21	IR-S20 Series	P 23
							
Load 4 kg		Load 7 kg		Load 10 kg		Load 20 kg	
Arm length 400 mm		Arm length 500 mm / 600 mm / 700 mm		Arm length 600 mm / 700 mm / 800 mm		Arm length 800 mm / 1000 mm	
Model IR-S4-40Z15S-INT		Model IR-S7-50Z20S-INT IR-S7-60Z20S-INT IR-S7-70Z20S-INT		Model IR-S10-60Z20S-INT IR-S10-70Z20S-INT IR-S10-80Z20S-INT		Model IR-S20-80Z42S-INT IR-S20-100Z42S-INT	

SCARA Robot

IR-GS20 Series

P 25



Load	20 kg
Arm length	800 mm / 1000 mm
Model	IR-GS20-80Z42S-INT IR-GS20-100Z42S-INT

IR-S35 Series

P 27



Load	35kg
Arm length	800mm/1000mm
Model	IR-S35-80Z42S-INT IR-S35-100Z42S-INT

IR-GS60 Series

P 31



Load	60kg
Arm length	1200mm
Model	IR-GS60-120Z40S-INT

IR-TS4 Series

P 33



Load	4 kg
Arm length	350 mm
Model	IR-TS4-35Z15S-INT

IR-TS5 Series

P 35



Load	5 kg
Arm length	550 mm
Model	IR-TS5-55Z15S-INT

Robot Controller

IRCB501 Series

P 37



IRCB501 High protection Series

P 39



Teach pendant

IR-TP200 Series

P 41



6-Axis Robot

IR-R4 Series

Robots featuring compact structure, with overall height and structural height reaching a new level in the industry, and short cycle time to adapt to a range of application scenarios.

Scope of Application

Handling and loading/unloading in 3C industry; handling in the photovoltaic industry; and assembly and dispensing.

Features

Load	4 kg
Arm length	560.6 mm
Repeatability	±0.01 mm
IP rating	IP40



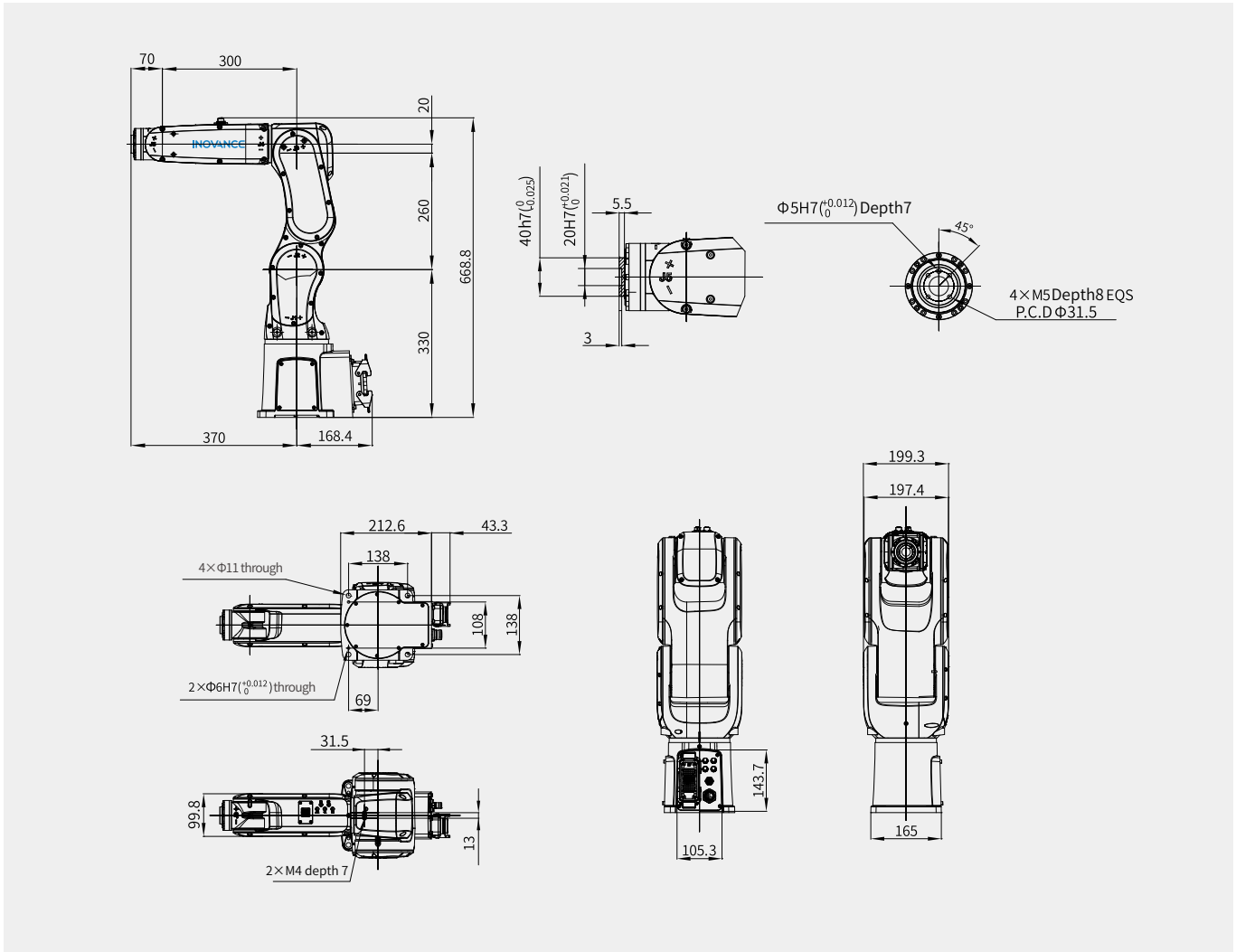
Technical Data

Model		IR-R4-56S-INT
Structural style		Vertical axis cascading structure
Number of Axes		6 axes
Maximum reach		560.6 mm
Repeatability		±0.01 mm
Maximum load		4kg
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
IP rating		IP40
Maximum Axis Motion Velocity	J1	450° /s
	J2	460° /s
	J3	520° /s
	J4	560° /s
	J5	560° /s
	J6	900° /s
Axis Motion Range	J1	±170°
	J2	-120° to +110°
	J3	-69° to +205°
	J4	-190° to +190°
	J5	-120° to +120°
	J6	-360° to +360°
Allowed wrist torque	J4	8.86 N·m
	J5	8.86 N·m
	J6	4.9 N·m
Allowed wrist inertia	J4	0.2 kg·m ²
	J5	0.2 kg·m ²
	J6	0.067 kg·m ²
Customer Connections	Wiring	12 Signal lines 30V 0.5A
	Air	Φ4mm×4,0.59 MPa
Operating Conditions	Operating Ambient Temperature ^[1]	0°C ~45°C
	Ambient Humidity	5%~95%(Non-condensing)
	Maximum Temperature Gradient	1.5°C /min
Weight		24kg
Input power (average power consumption)		2kVA (0.5kW)
Noise ^[2]		≤ 75dB
Matching Controller		IRCB501-6LD-INT
Mounting Mode		Floor mounted、ceiling mounted
Certification		CE,cSGSUs,KCs,Kc

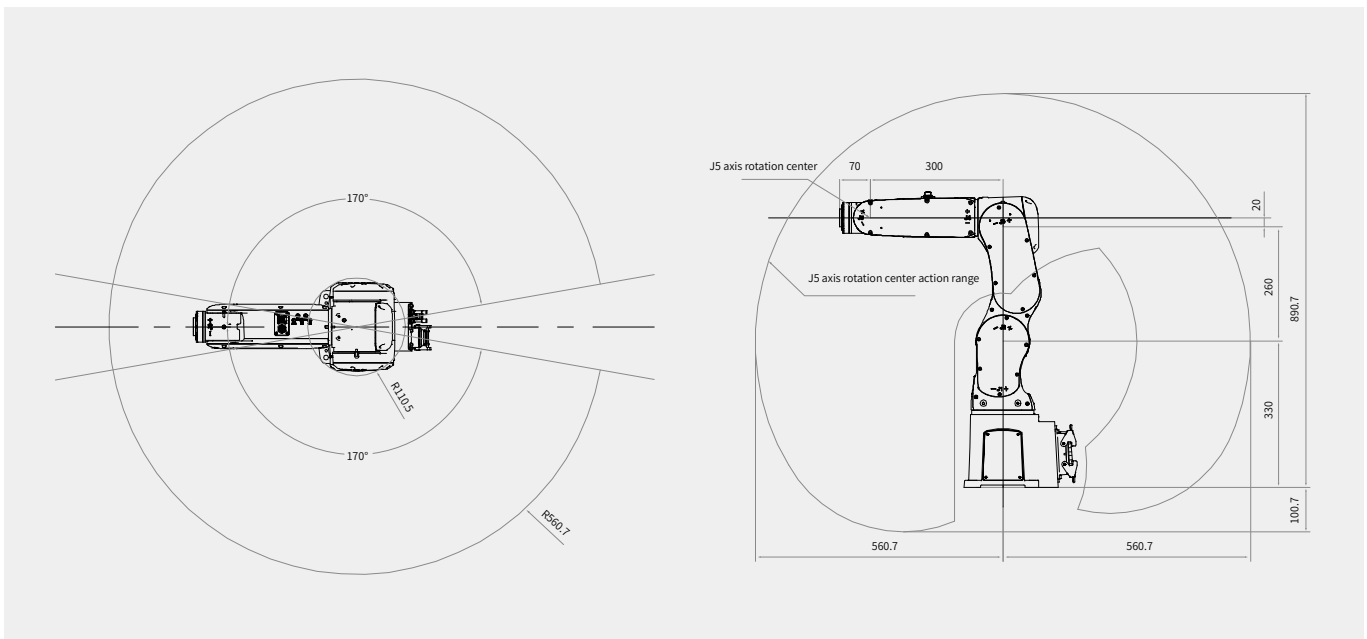
[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2]: Noise level: The operating conditions are 6-joint linkage, 100% speed and acceleration, and 50% duty cycle; the measurement position is the front of the robot, 1000 mm away from the action area, and 50mm above the base mounting surface.

Mounting Dimensions(mm)



Motion Range(mm)



6-Axis Robot

IR-R4H (Hollow wrist)

Robots featuring compact structure, with overall height and structural height reaching a new level in the industry, and short cycle time to adapt to a range of application scenarios.

Scope of Application

Handling and loading/unloading in 3C industry; handling in the photovoltaic industry; and assembly and dispensing.

Features

Load	4 kg
Arm length	545.7 mm
Repeatability	±0.02 mm
IP rating	IP40



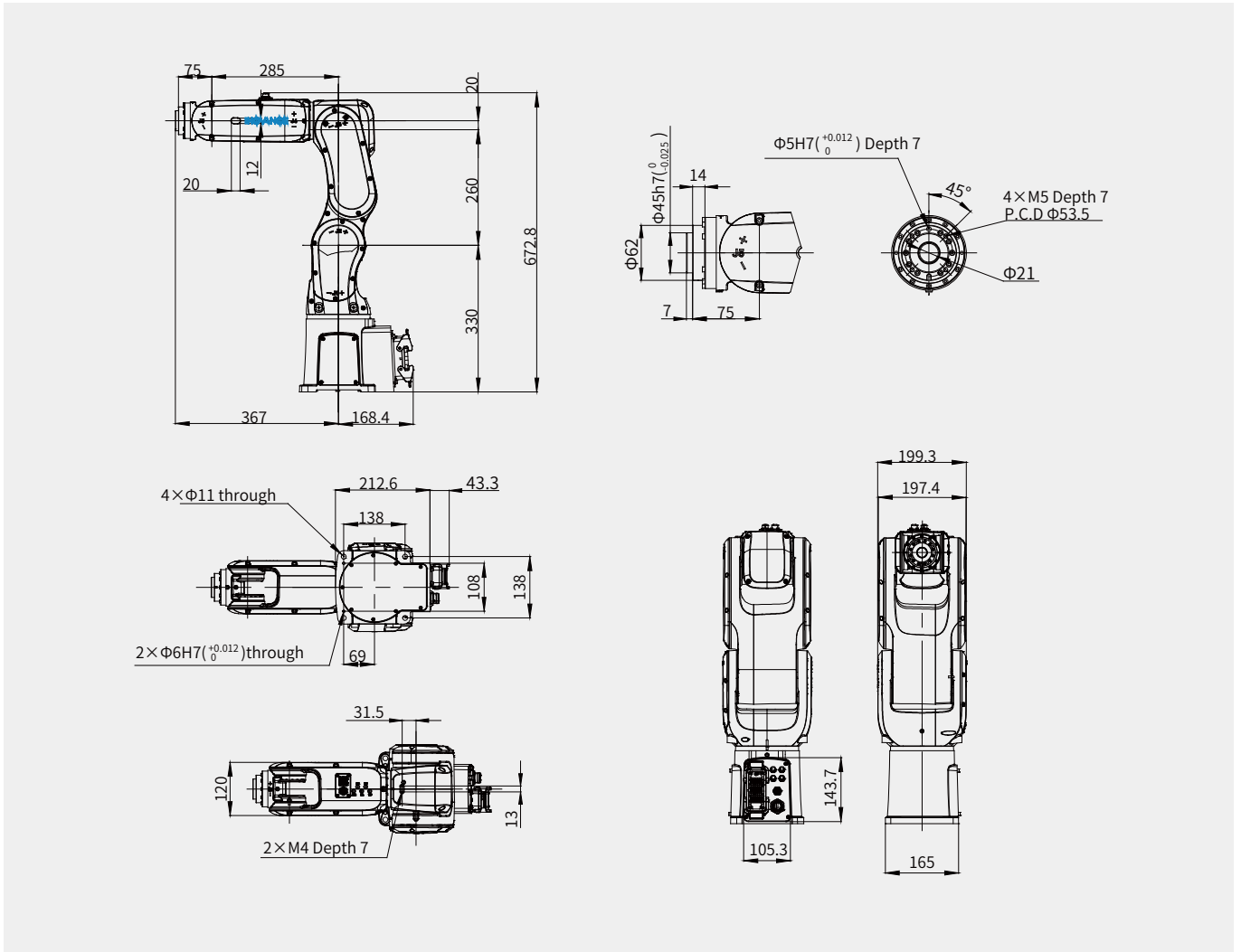
Technical Data

Model		IR-R4H-54S-INT
Structural style		Vertical axis cascading structure
Number of Axes		6 axes
Maximum reach		545.7 mm
Repeatability		±0.02 mm
Maximum load		4 kg
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
IP rating		IP40
Maximum Axis Motion Velocity	J1	450° /s
	J2	460° /s
	J3	520° /s
	J4	560° /s
	J5	560° /s
	J6	900° /s
Axis Motion Range	J1	±170°
	J2	-120° to +110°
	J3	-65° to +195°
	J4	-190° to +190°
	J5	-120° to +120°
	J6	-360° to +360°
Allowed wrist torque	J4	8.86 N·m
	J5	8.86 N·m
	J6	4.9 N·m
Allowed wrist inertia	J4	0.2 kg·m ²
	J5	0.2 kg·m ²
	J6	0.067 kg·m ²
Customer Connections		Wiring: 12 Signal lines 30V 0.5A; 8 signal lines 30V 0.2A Air: Φ4mm×4, 0.59 MPa
Operating Conditions	Operating Ambient Temperature ^[1]	0°C ~45°C
	Ambient Humidity	5%~95%(Non-condensing)
	Maximum Temperature Gradient	1.5°C /min
Weight		24.5kg
Input power (average power consumption)		2kVA (0.5kW)
Noise ^[2]		≤ 80dB
Matching Controller		IRCB501-6LD-INT
Mounting Mode		Floor mounted, Ceiling Mounted
Certification		CE,cSGSus,KCs,Kc

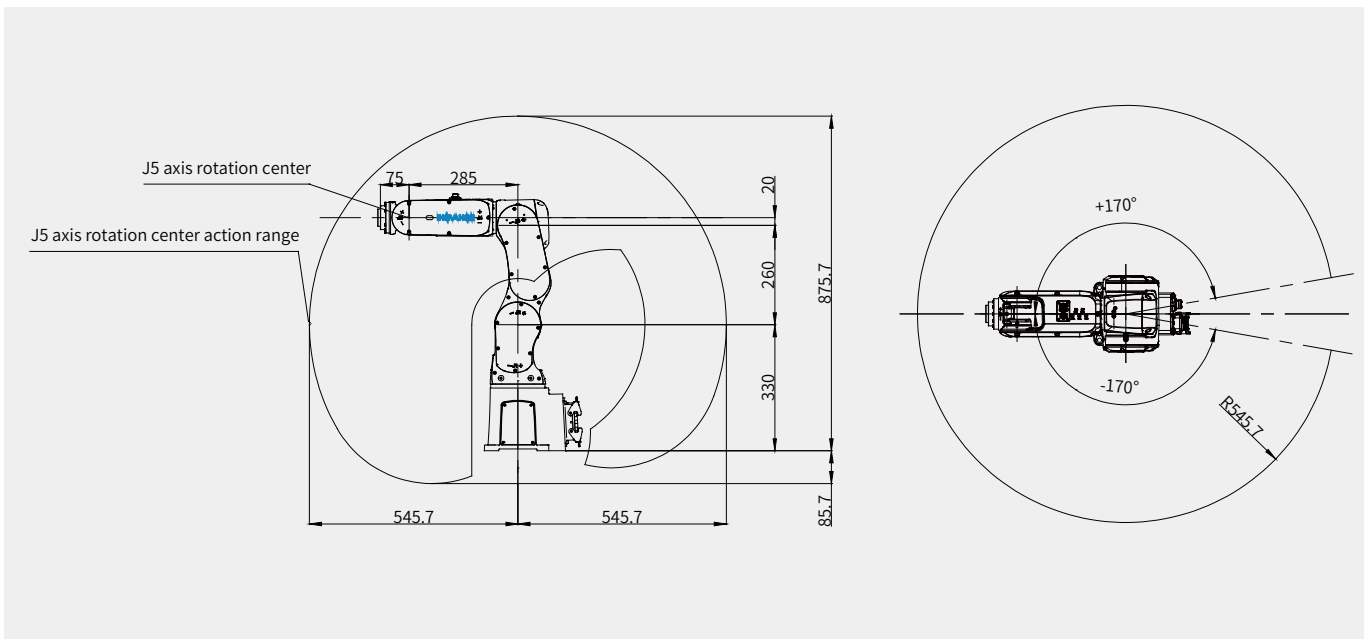
[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2]: Noise level: The operating conditions are 6-joint linkage, 100% speed and acceleration, and 50% duty cycle; the measurement position is the front of the robot, 1000 mm away from the action area, and 50mm above the base mounting surface.

Mounting Dimensions(mm)



Motion Range(mm)



6-Axis Robot

IR-R7H (Hollow wrist)

Designed with hollow wrist structure, compact, lightweight and flexible, high tempo, efficient and easy to use; Meet the needs of various scenarios such as handling, assembly, and gluing

Scope of Application

It is widely used in dispensing, assembly, sorting, labeling and other scenarios in 3C, automotive electronics, medical, pharmaceutical and other industries.

Features

Load	7kg
Arm length	722.3mm/911.9mm
Repeatability	±0.015mm/±0.02mm
IP rating	IP40



Technical Data

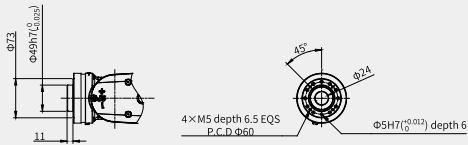
Model		IR-R7H-70S-INT	IR-R7H-90S-INT
Structural style		Vertical axis cascading structure	Vertical axis cascading structure
Number of Axes		6 axes	6 axes
Maximum reach		722.3mm	911.9mm
Repeatability		±0.015mm	±0.02mm
Maximum load		7kg	7kg
Cable		Standard: 3m/5m/10m/15m High Flexible: 3m/5m/10m/15m	
IP rating		IP40	IP40
Maximum Axis Motion Velocity	J1	420° /s	336° /s
	J2	336° /s	280° /s
	J3	487.5° /s	390° /s
	J4	550° /s	550° /s
	J5	438° /s	438° /s
	J6	764.7° /s	764.7° /s
Axis Motion Range	J1	-170° ~+170°	-170° ~+170°
	J2	-135° ~+80°	-135° ~+80°
	J3	-70° ~+190°	-70° ~+190°
	J4	-190° ~+190°	-190° ~+190°
	J5	-120° ~+120°	-120° ~+120°
	J6	-360° ~+360°	-360° ~+360°
Allowed wrist torque	J4	16.9N·m	16.9N·m
	J5	16.9N·m	16.9N·m
	J6	9.4N·m	9.4N·m
Allowed wrist inertia	J4	0.49kg·m ²	0.49kg·m ²
	J5	0.49kg·m ²	0.49kg·m ²
	J6	0.15kg·m ²	0.15kg·m ²
Customer Connections	Wiring	17 Signal lines 30V 0.5A; 8 Signal Lines, 30V 0.2A	
	Air	Φ4mmx4,0.59 MPa	
Operating Conditions	Operating Ambient Temperature ^[1]	0°C ~45°C	
	Ambient Humidity	5% RH~95% RH (Non-condensing)	
	Maximum Temperature Gradient	1.5°C /min	
Weight		31kg	33kg
Input power (average power consumption)		2kVA (0.5kW)	2kVA (0.5kW)
Matching Controller		IRCB501-6LD-INT	IRCB501-6LD-INT
Mounting Mode		Floor mounted, Ceiling mounted	
Noise ^[2]		LAeq ≤ 80dB(A)	
Mounting Dimensions		160mmx160mm(4xΦ11mm)	160mmx160mm(4xΦ11mm)
Certification		CE,cSGSsus,FCC,KCs, Function Safety(SGS-TUV Saar)	

[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

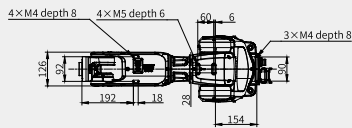
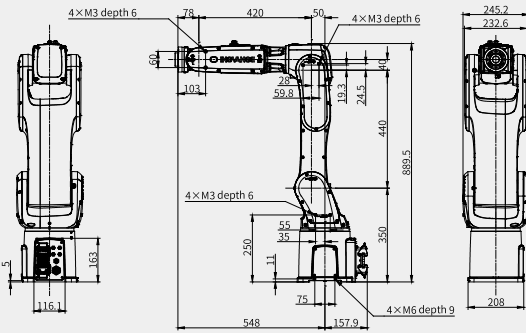
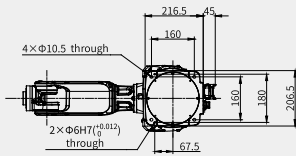
[2]: Noise Level: This value is the A-load equivalent noise level measured according to ISO11201 (EN31201). (Measurement conditions: operation at rated load and maximum speed)

Mounting Dimensions(mm)

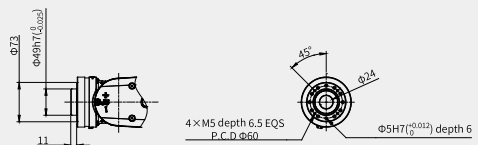
IR-R7H-90S-INT



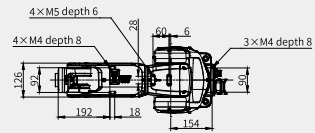
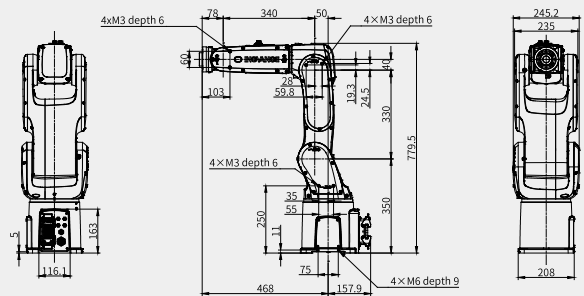
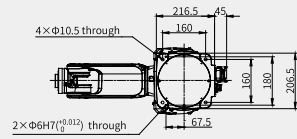
Detail 2: 1



IR-R7H-70S-INT

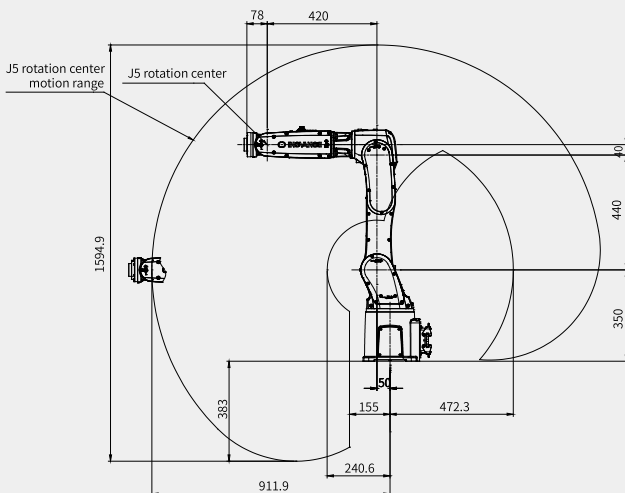


Detail 2: 1

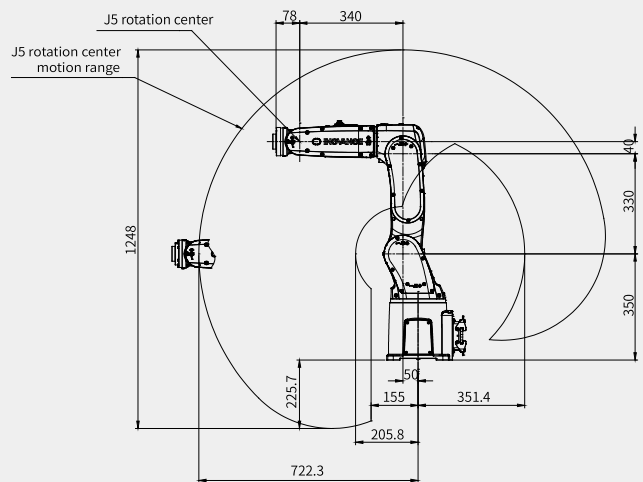


Motion Range(mm)

IR-R7H-90S-INT



IR-R7H-70S-INT



6-Axis Robot

IR-R11 Series

Robots featuring compact structure, with overall height and structural height reaching a new level in the industry, and short cycle time to adapt to a range of application scenarios.

Scope of Application

Handling and loading/unloading in 3C industry; handling in the photovoltaic industry; and assembly and dispensing.

Features

Load	10 kg / 11.3 kg
Arm length	1101.6 mm / 901.9 mm
Repeatability	±0.02 mm
IP rating	IP40



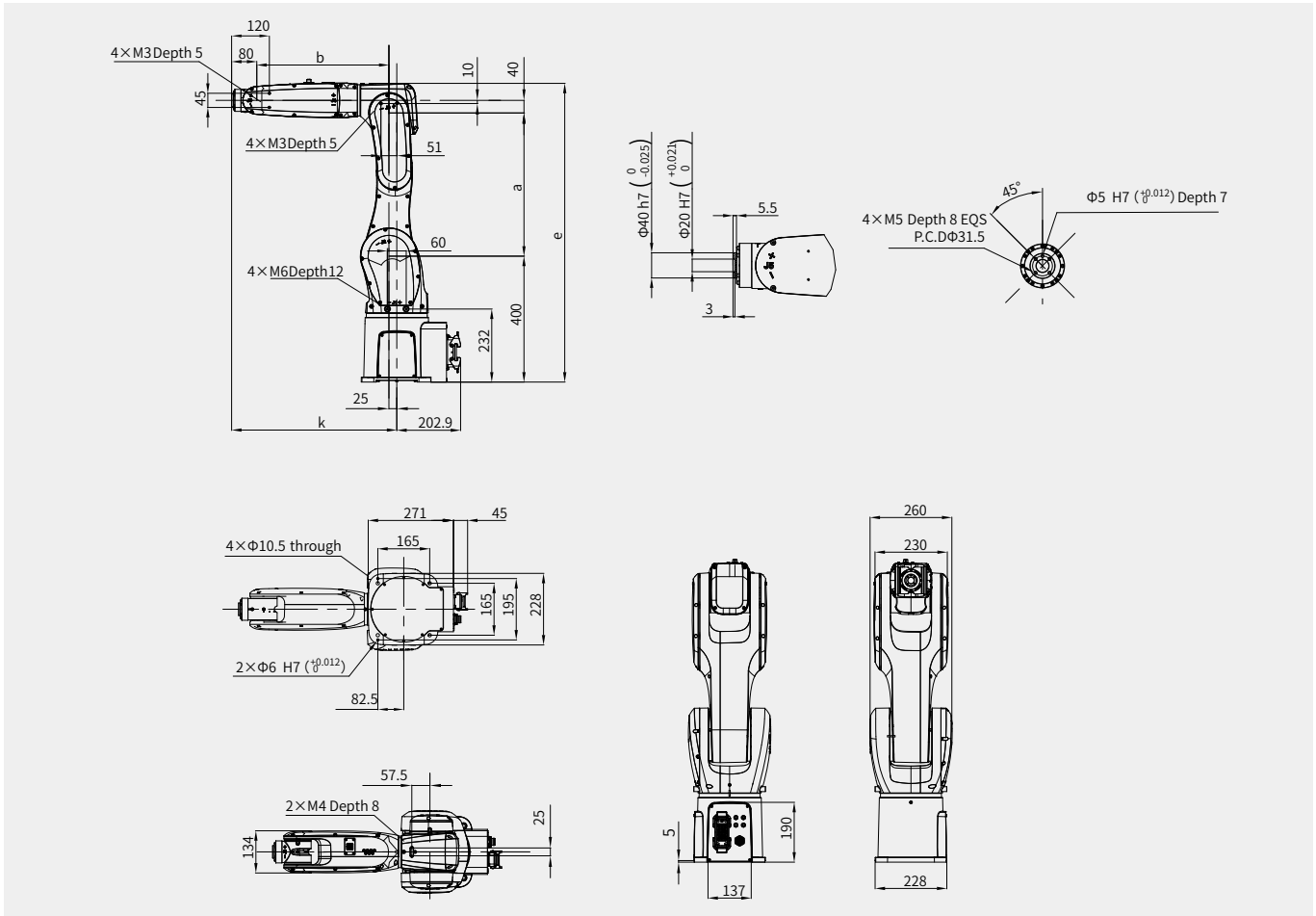
Technical Data

Model		IR-R10-110S-INT	IR-R11-90S-INT
Structural style		Vertical axis cascading structure	Vertical axis cascading structure
Number of Axes		6 axes	6 axes
Maximum reach		1101.6 mm	901.9 mm
Repeatability		±0.02 mm	±0.02 mm
Maximum load		10 kg	11.3 kg
Cable		Standard:3m/5m/10m/15m	High Flexible:3m/5m/10m/15m
IP rating		IP40	IP40
Maximum Axis Motion Velocity	J1	300° /s	300° /s
	J2	225° /s	225° /s
	J3	330° /s	330° /s
	J4	450° /s	450° /s
	J5	420° /s	420° /s
	J6	720° /s	720° /s
Axis Motion Range	J1	±170°	±170°
	J2	-135° to +100°	-135° to +100°
	J3	-66° to +210°	-66° to +210°
	J4	-190° to +190°	-190° to +190°
	J5	-125° to +125°	-125° to +125°
	J6	-360° to +360°	-360° to +360°
Allowed wrist torque	J4 Axis	18.59 N·m	20.45 N·m
	J5	18.59 N·m	20.45 N·m
	J6	9.8 N·m	10.8 N·m
Allowed wrist inertia	J4	0.6 kg·m ²	0.6 kg·m ²
	J5	0.6 kg·m ²	0.6 kg·m ²
	J6	0.2 kg·m ²	0.2 kg·m ²
Customer Connections	Wiring	12 Signal lines 30V 0.5A	12 Signal lines 30V 0.5A
	Air	Φ4mm×4,0.59 MPa	Φ4mm×4,0.59 MPa
Operating Conditions	Operating Ambient Temperature ^[1]	0°C ~45°C	0°C ~45°C
	Ambient Humidity	5%~95%(Non-condensing)	5%~95%(Non-condensing)
	Maximum Temperature Gradient	1.5°C /min	1.5°C /min
Weight		48kg	45kg
Input power (average power consumption)		3kVA (0.6kW)	3kVA (0.6kW)
Noise ^[2]		≤ 75dB	≤ 75dB
Matching Controller		IRCB501-6FD-INT	IRCB501-6FD-INT
Mounting Mode		Floor mounted	Floor mounted
Certification		CE,cSGSus,KCs,Kc	

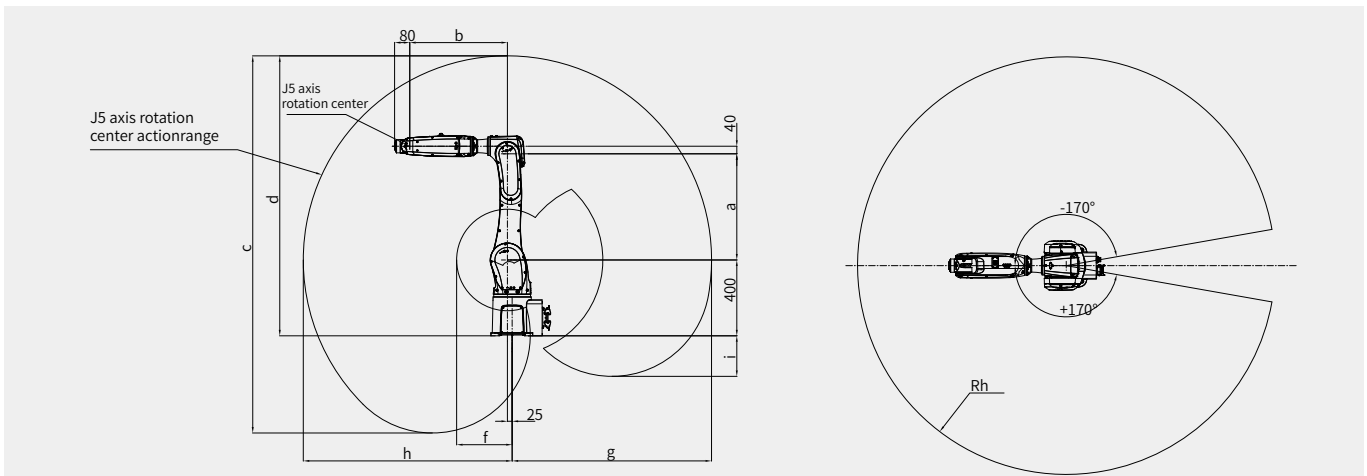
[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2]: Noise level: The operating conditions are 6-joint linkage, 100% speed and acceleration, and 50% duty cycle; the measurement position is the front of the robot, 1000 mm away from the action area, and 50mm above the base mounting surface.

Mounting Dimensions(mm)



Motion Range(mm)



Model: IR-R11 Series	IR-R10-110S-INT	IR-R11-90S-INT
a: Length from J2 to J3	560mm	455mm
b: Horizontal distance from J3 to J5	515mm	420mm
c: Maximum range of motion in the vertical direction	1989.1mm	1620.5mm
d: Height from the lowest point to the base installation plane in the vertical direction	1476.6mm	1276.9mm
e: Maximum height in zero position	1054mm	949mm
f: Minimum unreachable working radius limited by J3 rotation angle	292.8mm	250.1mm
g: Maximum working radius limited by J1 rotation angle	1051.6mm	851.9mm
h: Maximum reach	1101.6mm	901.9mm
i: Working radius limited by J2 rotation angle arm length	213.8mm	100.9mm

6-Axis Robot

IR-R10H Series (Hollow wrist)

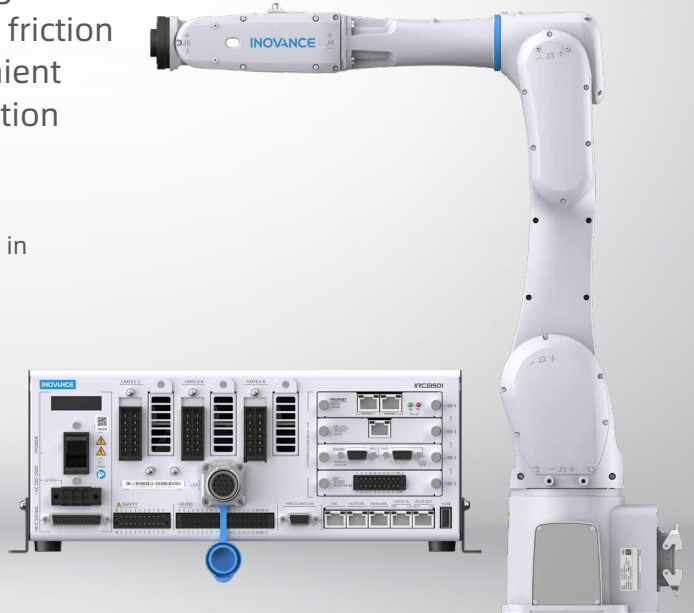
Compact structure, high rigidity, flexibility, high beat; Hollow wrist structure design to reduce friction and interference; Large aperture and convenient wiring help efficient and high-quality production

Scope of Application

Handling and loading/unloading in 3C industry; handling in the photovoltaic industry; and assembly and dispensing.

Features

Load	10 kg
Arm length	1201.2mm
Repeatability	±0.025mm
IP rating	IP40



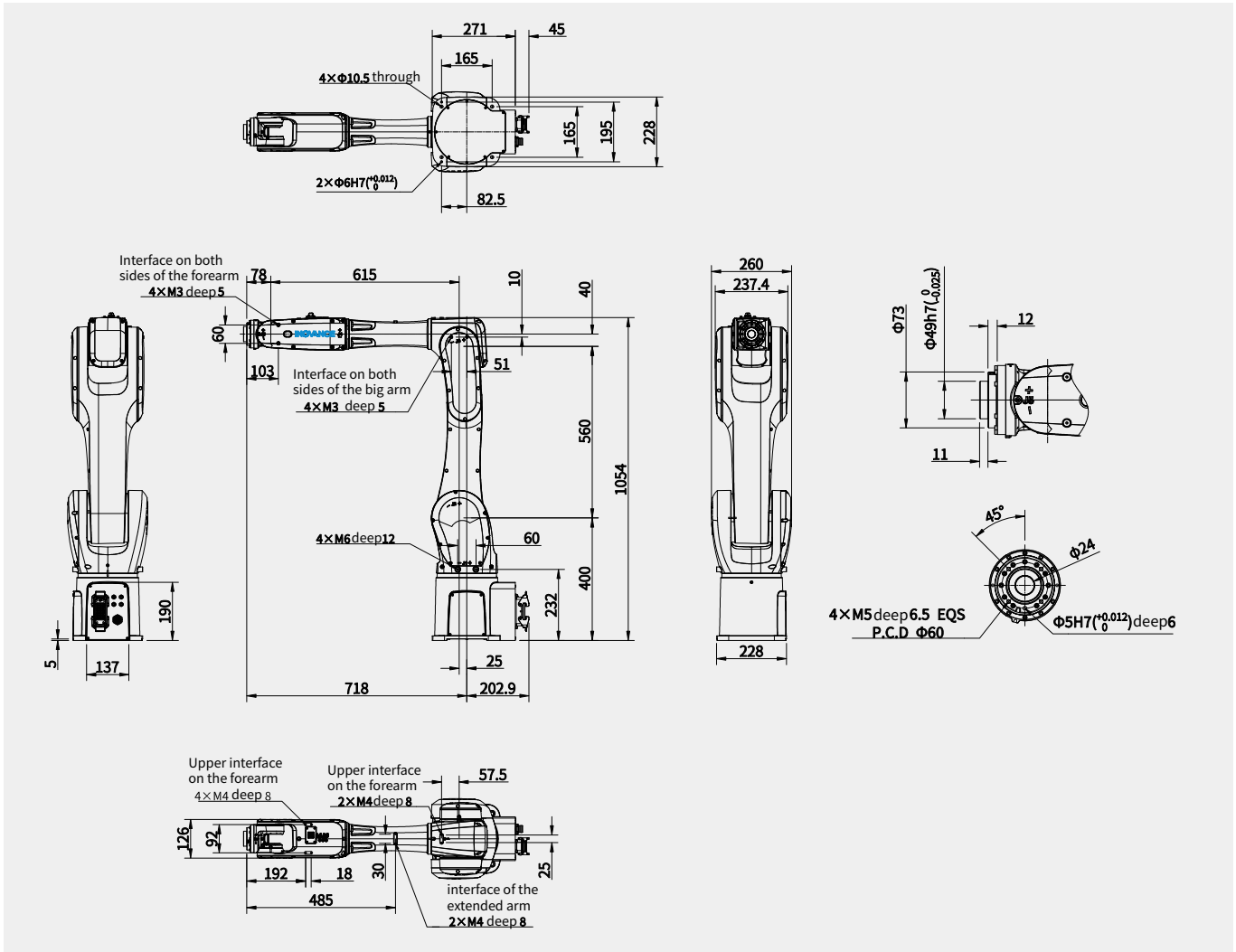
Technical Data

Model		IR-R10H-120S-INT
Structural style		Vertical axis cascading structure
Number of Axes		6
Maximum reach		1201.2mm
Repeatability		±0.025mm
Maximum load		10kg
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
IP rating		IP40
Maximum Axis Motion Velocity	J1	240° /s
	J2	180° /s
	J3	330° /s
	J4	470° /s
	J5	438° /s
	J6	764.7° /s
Axis Motion Range	J1	-170° ~+170°
	J2	-135° ~+100°
	J3	-66° ~+210°
	J4	-190° ~+190°
	J5	-120° ~+120°
	J6	-360° ~+360°
Allowed wrist torque	J4	18.59N·m
	J5	18.59N·m
	J6	9.8N·m
Allowed wrist inertia	J4	0.6kg·m ²
	J5	0.6kg·m ²
	J6	0.2kg·m ²
Customer Connections	Wiring	17 Signal lines, 30V 0.5A; 8 Signal lines, 30V 0.2A
	Air	Φ4mm×4, 0.59 MPa
Operating Conditions	Operating Ambient Temperature ^[1]	0°C ~45°C
	Ambient Humidity	5% RH~95% RH (Non-condensing)
	Maximum Temperature Gradient	1.5°C /min
Weight		50kg
Input power (average power consumption)		3kVA (0.6kW)
Matching Controller		IRCB501-6FD-INT
Mounting Mode		Floor mounted
Noise		≤ 80dB
Mounting Dimensions		165mm×165mm(4×Φ11mm)
Certification		CE, cSGSUS, FCC, KCs, Function Safety (SGS-TUV Saar)

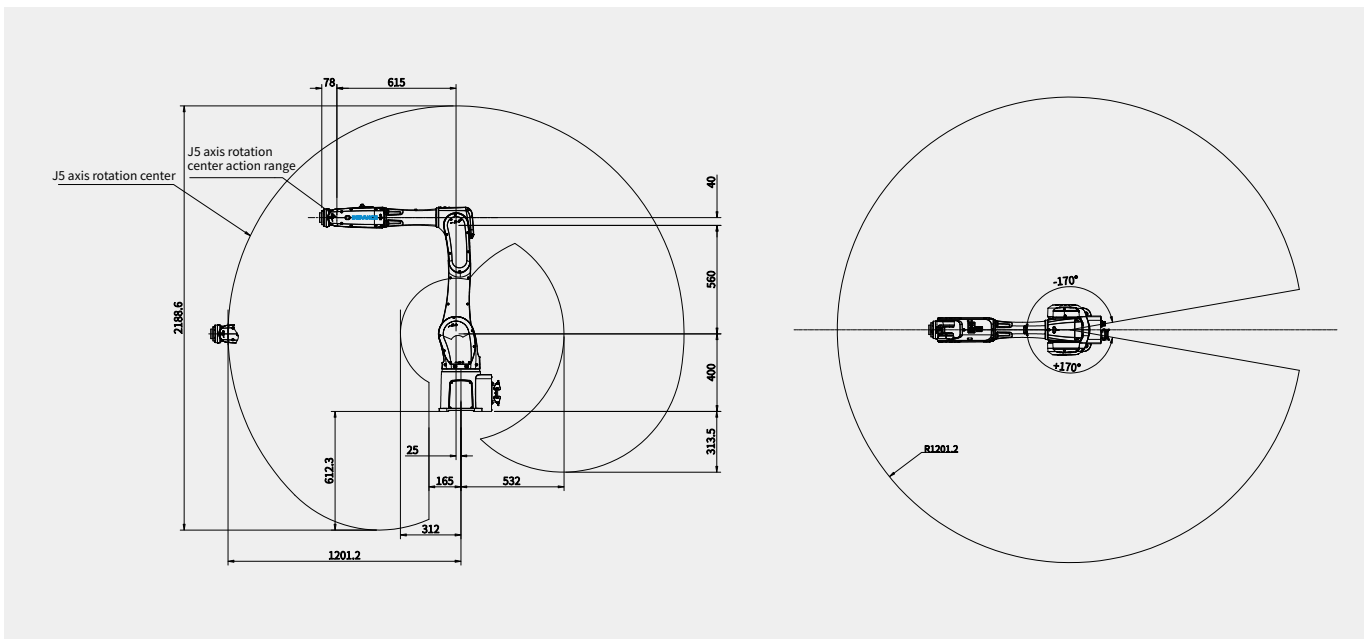
[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2]: Noise Level: This value is the A-load equivalent noise level measured according to ISO11201 (EN31201).
(Measurement conditions: operation at rated load and maximum speed)

Mounting Dimensions(mm)



Motion Range(mm)



6-Axis Robot

IR-R10 Series

Aesthetically designed robots with high motion speed and rigidity, together with dedicated motor and controller, providing customers with cost-effective solutions.

Scope of Application

Handling, machine loading/unloading, dispensing, deburring, grinding, polishing, welding, and more.

Features

Load	10 kg
Arm length	1422 mm
Repeatability	±0.05 mm
IP rating	IP65 (IP67 for wrist)



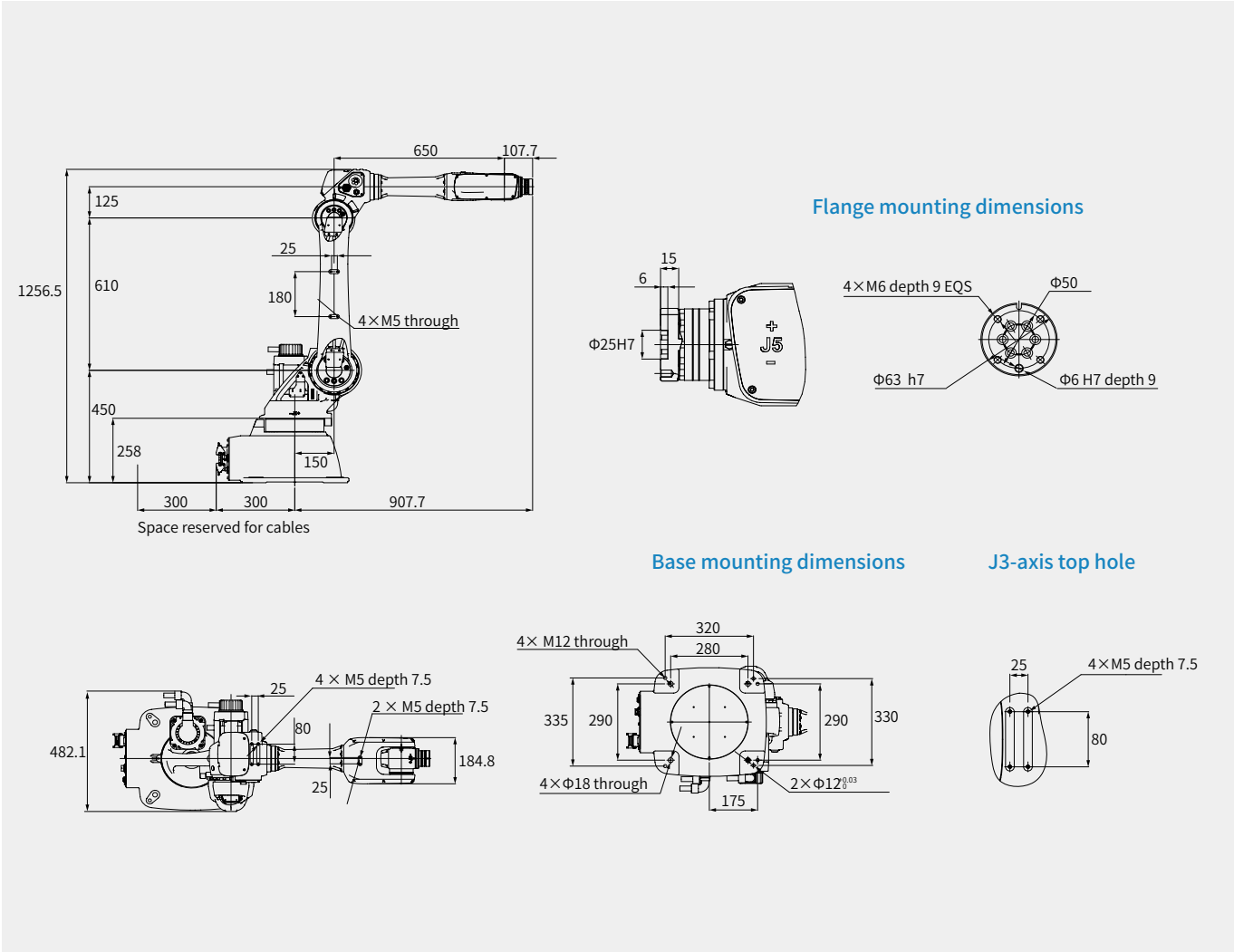
Technical Data

Model		IR-R10-140S-INT
Structural style		Vertical axis cascading structure
Number of Axes		6 axes
Maximum reach		1422mm
Repeatability		±0.05mm
Maximum load		10kg
Cable		Standard:3m/5m/10m/15m
IP rating		IP65 (IP67 for wrist)
Maximum Axis Motion Velocity	J1	200° /s
	J2	200° /s
	J3	200° /s
	J4	375° /s
	J5	375° /s
	J6	600° /s
Axis Motion Range	J1	-170° to +170°
	J2	-160° to +60°
	J3	-80° to +160°
	J4	-180° to +180°
	J5	-140° to +140°
	J6	-360° to +360°
Allowed wrist torque	J4	22N·m
	J5	22N·m
	J6	9.8N·m
Allowed wrist inertia	J4	0.63kg·m ²
	J5	0.63kg·m ²
	J6	0.2kg·m ²
Customer connections	Wiring	18 signal lines 30V 0.5A
	Air	Φ8 mm×1, 0.59 MPa
Operating conditions	Operating ambient temperature ^[1]	0°C ~45°C
	Ambient humidity	10%~80% (non-condensing)
	Maximum Temperature Gradient	1.5°C /min
Weight		130kg
Input power (average power consumption)		3kVA (0.6kW)
Noise ^[2]		≤ 80dB
Matching controller		IRCB501-6ND-INT
Mounting mode		Floor mounted、Ceiling mounted
Certification		CE,cSGS,KCs,Kc

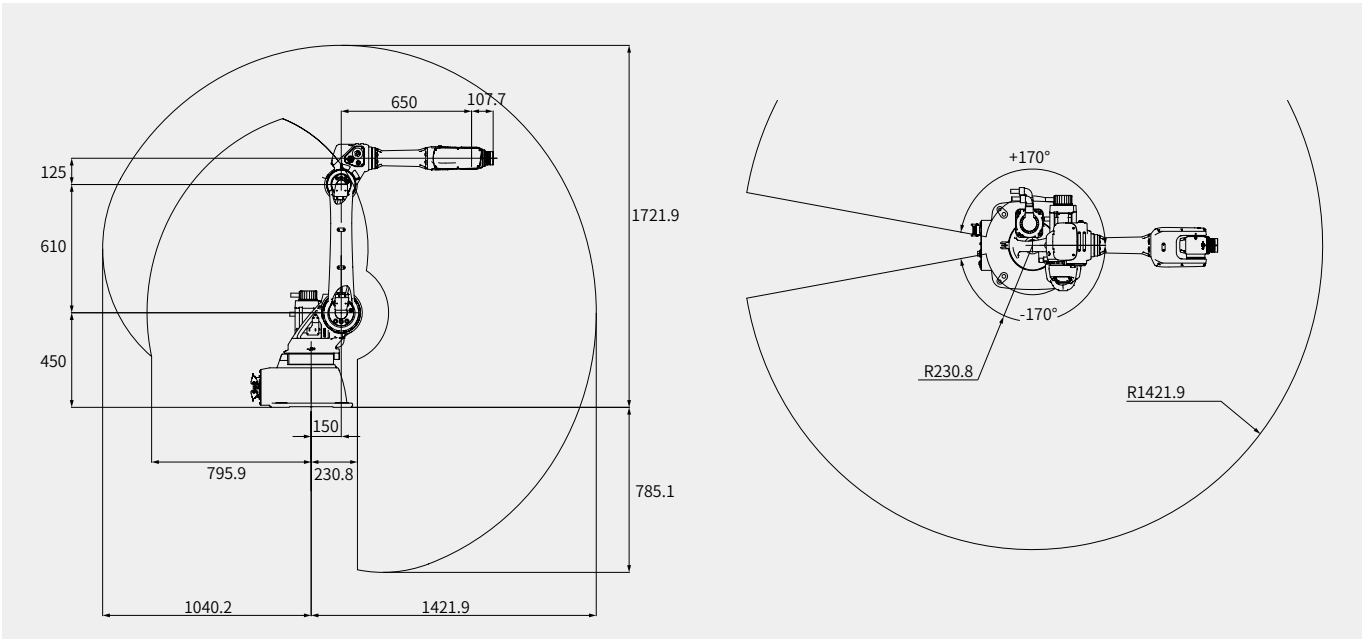
[1]: Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2]: Noise level: The operating conditions are 6-joint linkage, 100% speed and acceleration, and 50% duty cycle; the measurement position is the front of the robot, 1000 mm away from the action area, and 50mm above the base mounting surface.

Mounting Dimensions(mm)



Motion Range(mm)



6-Axis Robot

IR-R25 Series

The maximum load is increased to 25 kg, the structure is compact, the bearing capacity is strong, High repetition accuracy, easy to use and high reliability.

Scope of Application

It can be applied to handling, assembly, loading and unloading, grinding and polishing, and stamping automation in general industry, and other applications.

Features

Load	16kg/25kg
Arm length	2107mm/1783mm
Repeatability	±0.03mm
IP rating	IP65 (IP67 for wrist)



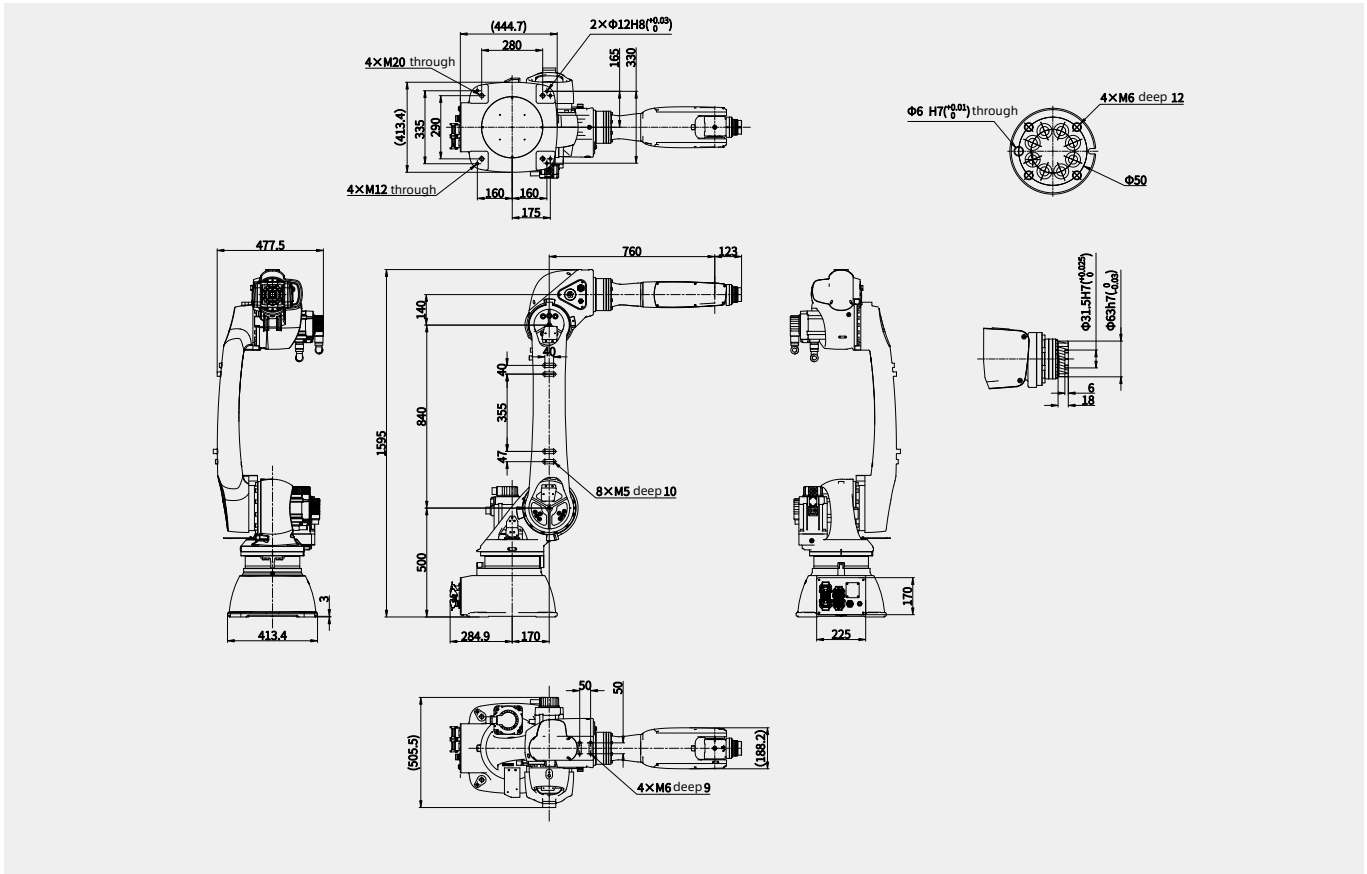
Technical Data

Model		IR-R16-210S-INT	IR-R25-178S-INT
Structural style		Vertical axis cascading structure	Vertical axis cascading structure
Number of Axes		6	6
Maximum reach		2107mm	1783mm
Repeatability		±0.03mm	±0.03mm
Maximum load		16kg	25kg
Cable		Standard: 3m/5m/10m/15m High Flexible:	3m/5m/10m/15m
IP rating		IP65 (IP67 for wrist)	IP65 (IP67 for wrist)
Maximum Axis Motion Velocity	J1	190° /s	190° /s
	J2	175° /s	175° /s
	J3	200° /s	200° /s
	J4	400° /s	400° /s
	J5	360° /s	360° /s
	J6	610° /s	610° /s
Axis Motion Range	J1	-170° ~+170°	-170° ~+170°
	J2	-155° ~+80°	-155° ~+80°
	J3	-75° ~+160°	-75° ~+160°
	J4	-180° ~+180°	-180° ~+180°
	J5	-140° ~+140°	-140° ~+140°
	J6	-360° ~+360°	-360° ~+360°
Allowed wrist torque	J4	25N·m	50N·m
	J5	25N·m	50N·m
	J6	12N·m	30N·m
Allowed wrist inertia	J4	0.78kg·m ²	2.2kg·m ²
	J5	0.78kg·m ²	2.2kg·m ²
	J6	0.3kg·m ²	1.5kg·m ²
Customer connections	Wiring	18 Signal lines 30V 0.5A	18 Signal lines 30V 0.5A
	Air	Φ8mm×1, 0.59 MPa	Φ8mm×1, 0.59 MPa
Operating conditions	Operating ambient temperature ^[1]	0°C ~45°C	0°C ~45°C
	Ambient humidity	5% RH~95% RH (Non-condensing)	5% RH~95% RH (Non-condensing)
	Maximum Temperature Gradient	1.5°C /min	1.5°C /min
Weight		260kg	255kg
Input power (average power consumption)		5kVA (1kW)	5kVA (1kW)
Matching Controller		IRCB501-6FD-INT	IRCB501-6ND-INT
Mounting Mode		Floor mounted, Ceiling mounted	Floor mounted, Ceiling mounted
Noise ^[2]		≤ 80dB	≤ 80dB
Mounting Dimensions		290mm×280mm-(4×Φ20mm)	290mm×280mm-(4×Φ20mm)
Certification		CE, cSGSus, FCC, KCs, Function Safety(SGS-TUV Saar)	

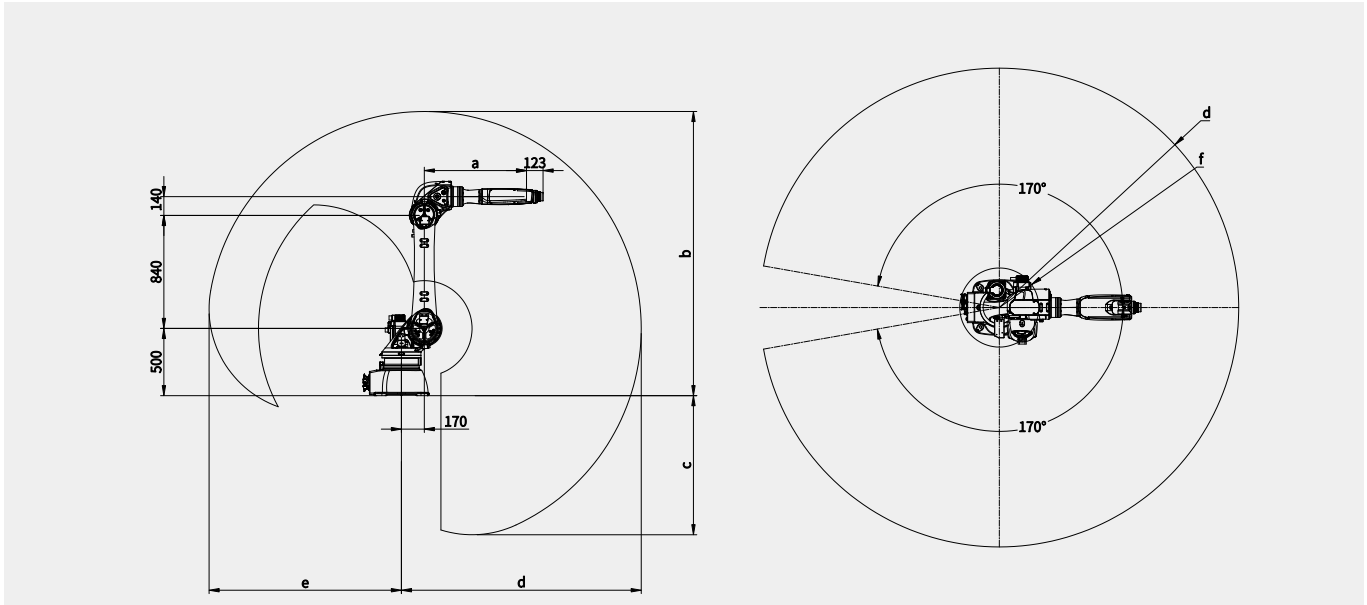
[1] Ambient temperature: If the product is used in a low temperature environment similar to the lowest temperature of the specification, it is recommended to warm up for 10 minutes before operation.

[2] Noise Level: This value is the A-load equivalent noise level measured according to ISO11201 (EN31201). (Measurement conditions: operation at rated load and maximum speed).

Mounting Dimensions(mm)



Motion Range(mm)



Model: IR-XXX-XXX	R25-178S-INT	R16-210S-INT
a: Length from J3 to J5	760mm	1088mm
b: Height from the highest point to the base installation plane in the vertical direction	2113mm	2437mm
c: Height from the lowest point to the base installation plane in the vertical direction	1034mm	1358mm
d: Maximum reach	1783mm	2107mm
e: Maximum working radius limited by J1 rotation angle	1430mm	1754mm
f: Minimum unreachable working radius limited by J3 rotation angle	294mm	316mm

SCARA Robot

IR-S4 Series

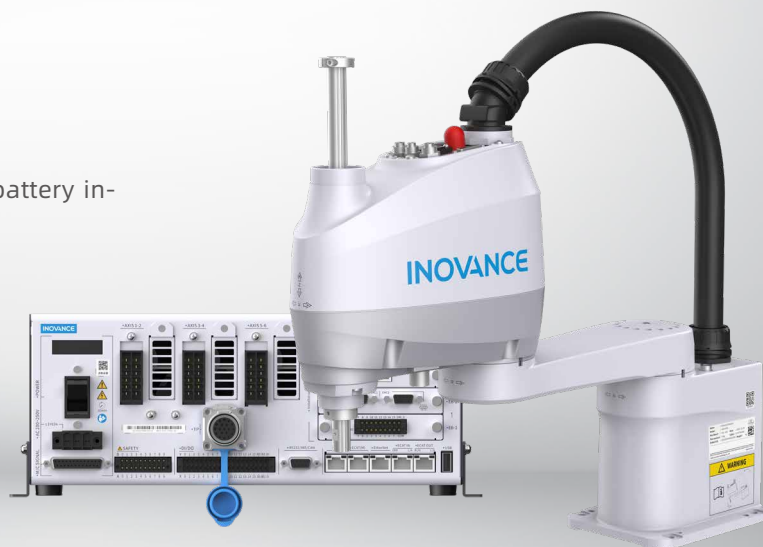
Robots with enhanced load capacity and multiple arm length options, suitable for large load applications in various industries.

Scope of Application

Assembly and dispensing in 3C industry, lithium battery industry, photovoltaic industry, and display industry.

Features

Load	4 kg
Arm length	400 mm
Efficiency	0.342s
Repeatability	±0.01 mm



Technical Data

Model		IR-S4-40Z15S-INT
Arm length	Arm 1 + Arm 2	400 mm
	Arm 1	225 mm
	Arm 2	175 mm
Maximum speed	J1 + J2	7200 mm/s
	J3	1300 mm/s
	J4	2600° /s
Repeatability	J1 + J2	±0.01 mm
	J3	±0.01 mm
	J4	±0.01°
Handling capacity (load)	Rated	2 kg
	Maximum	4 kg
Allowable inertia moment of J4	Rated	0.005 kg.m ²
	Maximum	0.05 kg.m ²
Mounting hole		120×120 mm (4-Φ9 mm)
Weight (excluding cables)		12kg
Press-in force of J3		100 N
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
Customer signal line		15 (15pin: D-sub) CAT5E
Customer air piping		Φ6 mm×2, 0.59 MPa Φ4 mm×1, 0.59 MPa
Operating conditions	Ambient temperature ^[1]	5°C ~40°C (no excessive temperature changes)
	Relative humidity	10%~80%
Noise level ^[2]		Laeq=70 dB(A)
Maximum motion range	J1	±132°
	J2	±141°
	J3	150 mm
	J4	±360°
Cycle time ^[3]		0.342s
Input power (average power consumption)		2kVA (0.3kW)
Matching Controller		IRCB501-4AD-INT
Certification		CE,cSGSus,KCs,Kc

[1]If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

[2]Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3]Standard cycle time for 3kg/4kg SCARA: 1kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

SCARA Robot

IR-S7 Series

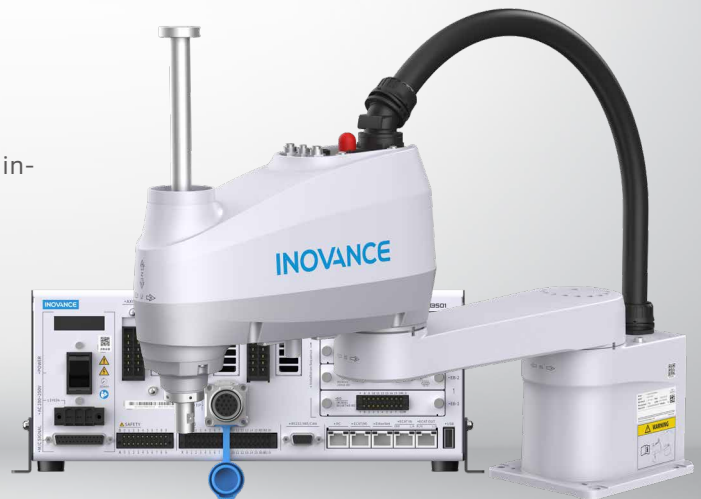
Robots with enhanced load capacity and multiple arm length options, suitable for large load applications in various industries.

Scope of Application

Assembly and dispensing in 3C industry, lithium battery industry, photovoltaic industry, and display industry.

Features

Load	7 kg
Arm length	500 mm / 600 mm / 700 mm
Efficiency	0.351s/0.36s/0.375s
Repeatability	J1 and J2: ± 0.02 mm; J3: 0.01 mm; J4: $\pm 0.01^\circ$



Technical Data

Model		IR-S7-50Z20S-INT	IR-S7-60Z20S-INT	IR-S7-70Z20S-INT
Arm length	Arm 1 + Arm 2	500 mm	600 mm	700 mm
	Arm 1	225 mm	325 mm	425 mm
	Arm 2	275 mm	275 mm	275 mm
Maximum speed	J1 + J2	7120 mm/s	7850 mm/s	8590 mm/s
	J3	1600 mm/s	1600 mm/s	1600 mm/s
	J4	2000° /s	2000° /s	2000° /s
	J1 + J2	± 0.02 mm	± 0.02 mm	± 0.02 mm
Repeatability	J3	± 0.01 mm	± 0.01 mm	± 0.01 mm
	J4	$\pm 0.01^\circ$	$\pm 0.01^\circ$	$\pm 0.01^\circ$
	J1 + J2	3 kg	3 kg	3 kg
Handling capacity (load)	Maximum	7 kg	7 kg	7 kg
	Rated	0.01 kg.m ²	0.01 kg.m ²	0.01 kg.m ²
Allowable inertia moment of J4	Maximum	0.12 kg.m ²	0.12 kg.m ²	0.12 kg.m ²
	Mounting hole	150x150 mm (4- $\Phi 9$ mm)		
Weight (excluding cables)		17kg	17.5kg	19kg
Press-in force of J3		150 N		
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m		
Customer signal line		15 (15pin: D-sub) CAT5E		
Customer air piping		$\Phi 6$ mmx2, 0.59 MPa $\Phi 4$ mmx1, 0.59 MPa		
Operating conditions	Ambient temperature ^[1]	5°C ~40°C (no excessive temperature changes)		
	Relative humidity	10%~80%		
Noise level ^[2]		Laeq=70 dB(A)		
Maximum motion range	J1	$\pm 132^\circ$		
	J2	$\pm 150^\circ$		
	J3	200 mm		
	J4	$\pm 360^\circ$		
Cycle time ^[3]		0.351s	0.36s	0.375s
Input power (average power consumption)		2kVA (0.3kW)		
Matching Controller		IRCB501-4CD-INT		
Certification		CE,cSGSUS,KCs,Kc		

[1] When used in a low-temperature environment approximating the lowest allowable temperature, or when idle for a long period of time due to holidays and nighttime, it is recommended to warm up the product for 10 minutes before operating it.

[2] Measured in front of the robot at a distance of 1000 mm from its operating area and at least 50 mm above the base mounting surface with four joints operating at 100% speed and acceleration, with a duty cycle of 50%.

[3] Time required for a 7 kg/10 kg SCARA robot to move a 2 kg payload between two points 300 mm apart at a height of 25 mm.

Mounting Dimensions(mm)

The symbol * represents the stroke margin of the mechanical stopper.

Motion range of IR-S7 series robots with different arm lengths

Model	IR-S7-50Z20S-INT	IR-S7-60Z20S-INT	IR-S7-70Z20S-INT
a: Length of arm 1 + arm 2 (mm)	500	600	700
b: Length of arm 1 (mm)	225	325	425
c: Maximum motion range (mm)	552	652	752
d: Motion range of J1 (°)	132		
e: Motion range of J2 (°)	150		
f: Motion range (mm)	138.1	162.6	232
g: Rear motion range (mm)	425.6	492.5	559.4
h: Angle of mechanical stop position of J1 (°)	1		
i: Angle of mechanical stop position of J2 (°)	1	3	4
j: Range of mechanical stop position (mm)	134.2	148.3	214.8
k: Range of rear mechanical stop position (mm)	428.5	496.7	564.9
m: Motion range (mm)	240	220	220
n: Motion range (mm)	245		

Parameters of IR-S7 series robots with different arm lengths

Model	IR-S7-50Z20S-INT	IR-S7-60Z20S-INT	IR-S7-70Z20S-INT
α	225	325	425
β	545	569	599

Motion Range(mm)

Area in front of mechanical stopper

Area in front of mechanical stopper

Base mounting surface

SCARA Robot

IR-S10 Series

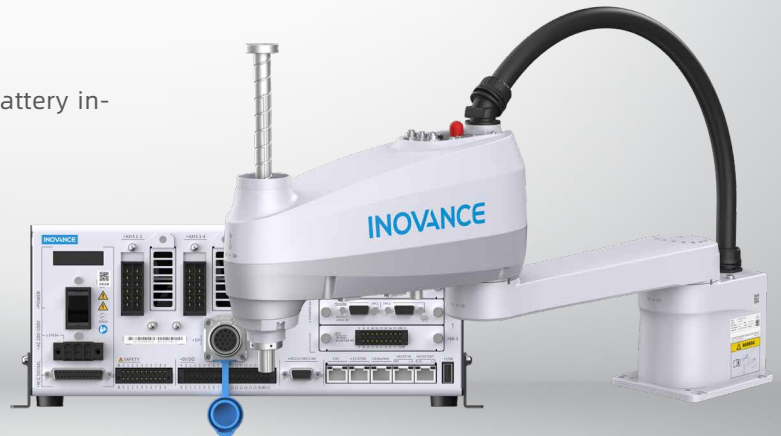
Robots with enhanced load capacity and multiple arm length options, suitable for large load applications in various industries.

Scope of Application

Assembly and dispensing in 3C industry, lithium battery industry, photovoltaic industry, and display industry.

Features

Load	10 kg
Arm length	600 mm / 700 mm / 800 mm
Cycle time	0.361s/0.386s/0.416s
Repeatability	J1 and J2: ±0.02 mm to 0.025 mm J3: 0.01 mm; J4: ±0.01°



Technical Data

Model		IR-S10-60Z20S-INT	IR-S10-70Z20S-INT	IR-S10-80Z20S-INT
Arm length	Arm 1 + Arm 2	600 mm	700 mm	800 mm
	Arm 1	225 mm	325 mm	425 mm
	Arm 2	375 mm	375 mm	375 mm
Maximum speed	J1 + J2	9100 mm/s	9800 mm/s	10500 mm/s
	J3	1600 mm/s	1600 mm/s	1600 mm/s
	J4	2700° /s	2700° /s	2700° /s
	J1 + J2	±0.02 mm	±0.02 mm	±0.025 mm
Repeatability	J3	±0.01 mm	±0.01 mm	±0.01 mm
	J4	±0.01°	±0.01°	±0.01°
	J1 + J2	±0.01 mm	±0.01 mm	±0.01 mm
Handling capacity (load)	Rated	5 kg	5 kg	5 kg
	Maximum	10 kg	10 kg	10 kg
Allowable inertia moment of J4	Rated	0.02 kg.m ²	0.02 kg.m ²	0.02 kg.m ²
	Maximum	0.3 kg.m ²	0.3 kg.m ²	0.3 kg.m ²
Mounting hole	150×150 mm (4-Φ9 mm)			
Weight (excluding cables)	18.5 kg		19 kg	20.5 kg
Press-in force of J3	200 N		200 N	200 N
Cable	Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m			
Customer signal line	15 (15pin: D-sub) CAT5E			
Customer air piping	Φ6 mm×2, 0.59 MPa Φ4 mm×1, 0.59 MPa			
Operating conditions	Ambient temperature ^[1]	5°C ~40°C (no excessive temperature changes)		
	Relative humidity	10%~80%		
Noise level ^[2]	L _{aeq} =70 dB(A)			
Maximum motion range	J1	±132°		
	J2	±150°		
	J3	200 mm		
	J4	±360°		
Cycle time ^[3]	0.361s	0.386s	0.416s	
Input power (average power consumption)	2kVA (0.3kW)			
Matching Controller	IRCB501-4CD-INT			
Certification	CE,cSGSUs,KCs,Kc			

[1] When used in a low-temperature environment approximating the lowest allowable temperature, or when idle for a long period of time due to holi days and nighttime, it is recommended to warm up the product for 10 minutes before operating it.

[2] Measured in front of the robot at a distance of 1000 mm from its operating area and at least 50 mm above the base mounting surface with four joints operating at 100% speed and acceleration, with a duty cycle of 50%.

[3] Time required for a 7 kg/10 kg SCARA robot to move a 2 kg payload between two points 300 mm apart at a height of 25 mm.

Mounting Dimensions(mm)

Motion range of IR-S10 series robots with different arm lengths

Model	IR-S10-60Z20S-INT	IR-S10-70Z20S-INT	IR-S10-80Z20S-INT
a: Length of arm 1 + arm 2 (mm)	600	700	800
b: Length of arm 1 (mm)	225	325	425
c: Maximum motion range (mm)	653	753	853
d: Motion range of J1 (°)	132		
e: Motion range of J2 (°)	150		
f: Motion range (mm)	212.4	187.5	212.6
g: Rear motion range (mm)	525.6	592.5	659.4
h: Angle of mechanical stop position of J1 (°)	1		
i: Angle of mechanical stop position of J2 (°)	1	3	4
j: Range of mechanical stop position (mm)	208.9	170.5	186
k: Range of rear mechanical stop position (mm)	528.5	596.7	664.9
m: Motion range (mm)	420	330	320
n: Motion range (mm)	300		

Parameters of IR-S10 series robots with different arm lengths

Model	IR-S10-60Z20S-INT	IR-S10-70Z20S-INT	IR-S10-80Z20S-INT
α	225	325	425
β	545	569	599

Motion Range(mm)

Area in front of mechanical stopper

Base mounting surface

SCARA Robot

IR-S20 Series

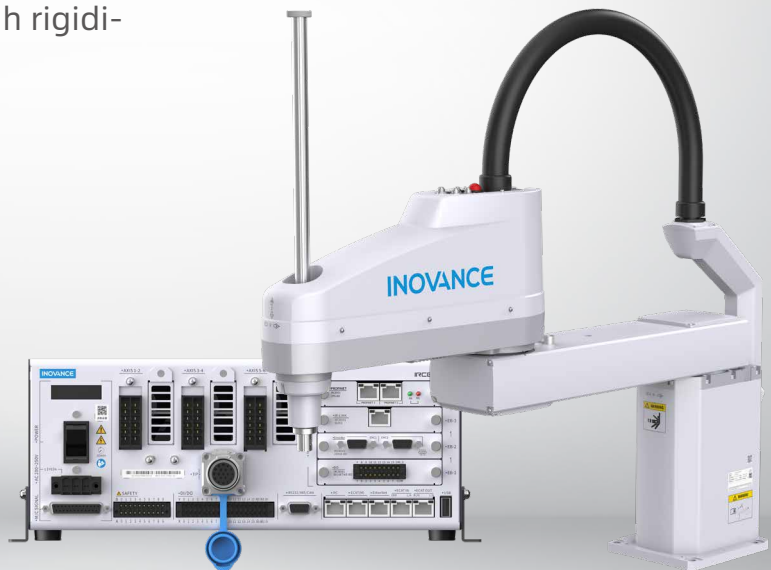
SCARA robots with harmonic drive for the fourth joint, featuring high inertia, high rigidity and high repeatability.

Scope of Application

Applications in lithium battery industry.

Features

Load	20 kg
Arm length	800 mm / 1000 mm
Cycle time	0.36s/0.38s
Repeatability	J1,J2:±0.04mm, J3:±0.01mm,J4:±0.01°



Technical Data

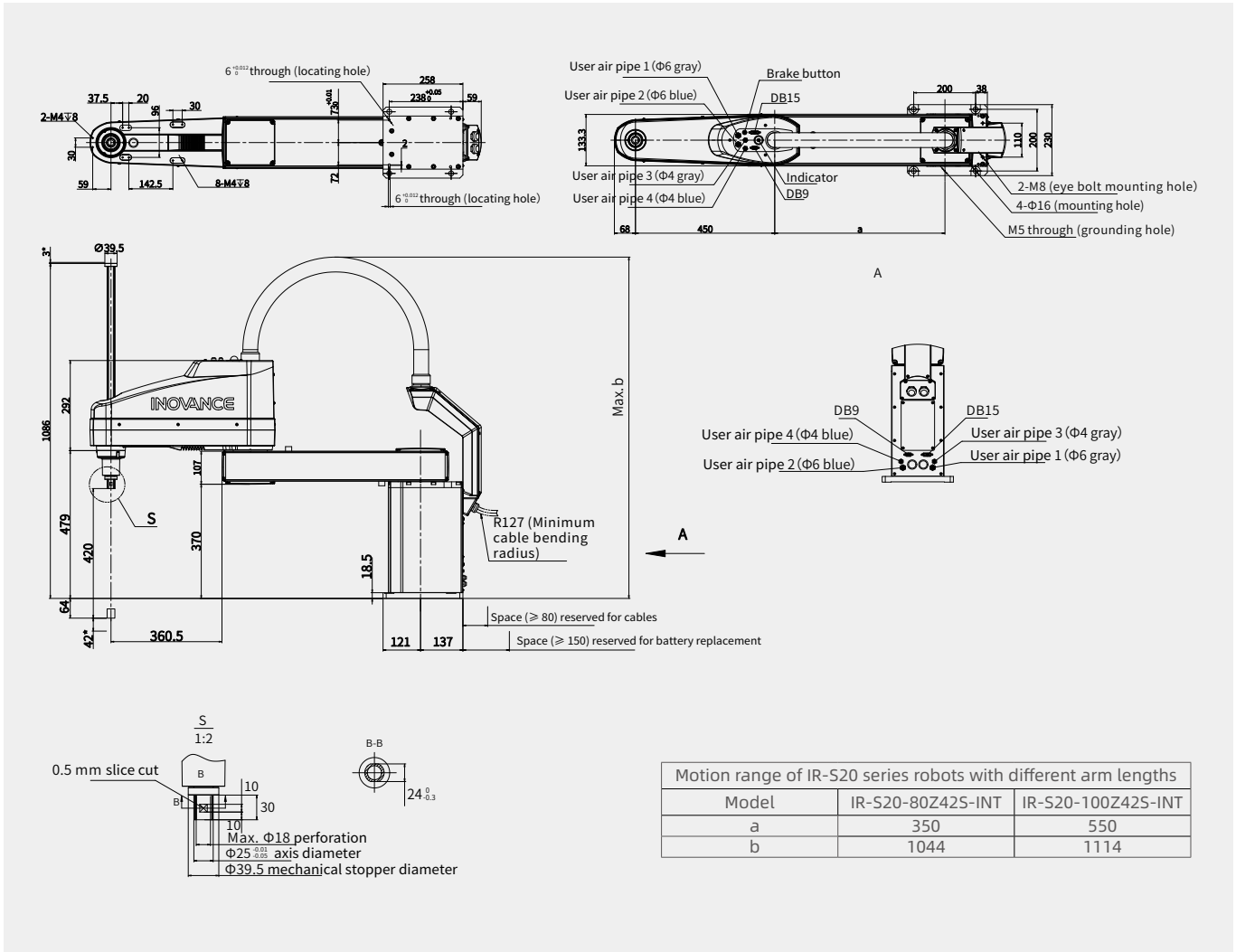
Model		IR-S20-80Z42S-INT	IR-S20-100Z42S-INT
Arm length	Arm 1 + Arm 2	800mm	1000mm
	Arm 1	350mm	550mm
	Arm 2	450mm	450mm
Maximum speed	J1 + J2	9550mm/s	10800mm/s
	J3	1010mm/s	1010mm/s
	J4	705° /s	705° /s
	J1 + J2	±0.04mm	±0.04mm
Repeatability	J3	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°
	J1 + J2	±0.01°	±0.01°
Handling capacity(load)	Rated	10kg	10kg
	Maximum	20kg	20kg
Allowable inertia moment of J4	Rated	0.5kg.m ²	0.5kg.m ²
	Maximum	1.0kg.m ²	1.0kg.m ²
Mounting hole	200mm×200mm(4-Φ16mm)		
Weight (excluding cables)	53kg		56kg
Press-in force of J3	250N		250N
Cable	Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m		
Customer signal line	9(9 pin: D-sub),15(15 pin: D-sub)		
Customer air piping	Φ6 mm×2, 0.59 MPa (6 kgf/cm ² :86 psi) Φ4 mm×2, 0.59 MPa (6 kgf/cm ² :86 psi)		
Operating condition	Ambient temperature ^[1]	5°C ~40°C (no excessive temperature changes)	
	Relative humidity	10%~80%	
Noise level ^[2]	Laeq=75dB(A)		
Maximum motion range	J1	±132°	
	J2	±152°	
	J3	420mm	
	J4	±360°	
Cycle time ^[3]	0.36s	0.38s	
Input power (average power consumption)	2kVA (0.3kW)		2kVA(0.3kW)
Matching Controller	IRCB501-4ED-INT		
Certification	CE,cSGSsus,KCs,Kc		

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

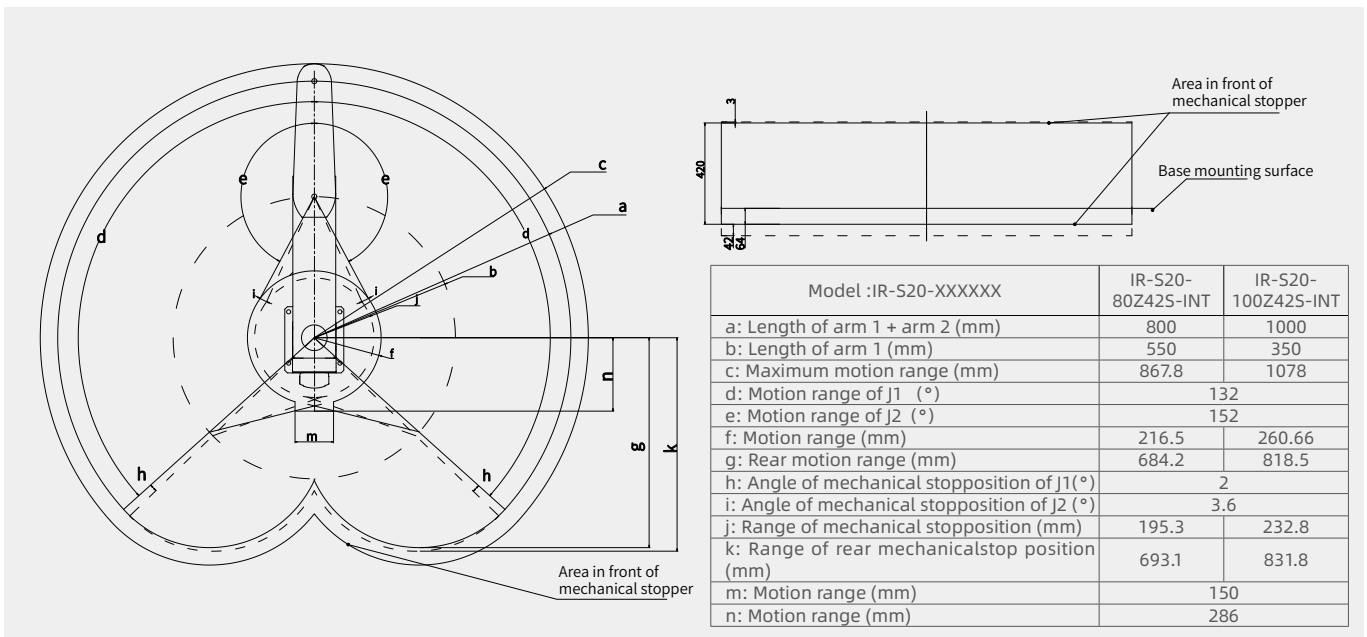
[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3] Standard cycle time for 20kg SCARA : 2kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Mounting Dimensions(mm)



Motion Range(mm)



SCARA Robot

IR-GS20 Series

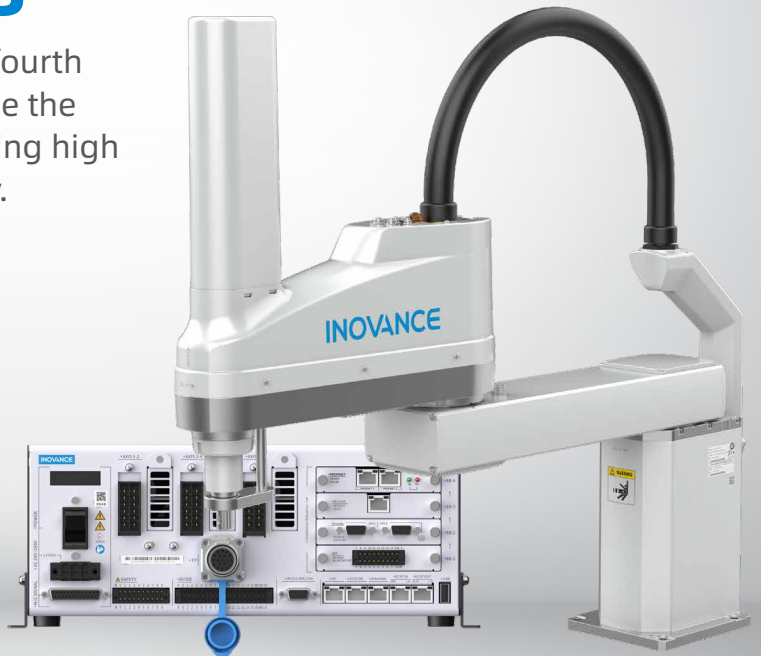
SCARA robots with harmonic drive for the fourth joint, together with a plain shaft to increase the rigidity in the overturning direction, featuring high inertia, high rigidity and high repeatability.

Scope of Application

Applications in the lithium battery industry.

Features

Load	20 kg
Arm length	800 mm / 1000 mm
Cycle time	0.36s / 0.38s
Repeatability	J1,J2: ±0.04mm, J3:±0.01mm,J4:±0.01°



Technical Data

Model		IR-GS20-80Z42S-INT	IR-GS20-100Z42S-INT
Arm length	Arm 1 + Arm 2	800mm	1000mm
	Arm 1	350mm	550mm
	Arm 2	450mm	450mm
Maximum speed	J1 + J2	9550mm/s	10800mm/s
	J3	1010mm/s	1010mm/s
	J4	705° /s	705° /s
	J1 + J2	±0.04mm	±0.04mm
Repeatability	J3	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°
	J1 + J2	±0.04mm	±0.04mm
Handling capacity(load)	Rated	10kg	10kg
	Maximum	20kg	20kg
Allowable inertia moment of J4	Rated	0.5kg.m ²	0.5kg.m ²
	Maximum	1.0kg.m ²	1.0kg.m ²
Mounting hole	200mm×200mm(4-Φ16mm)		
Weight (excluding cables)	54kg		57kg
Press-in force of J3	250N		250N
Cable	Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m		
Customer signal line	9 (9 pin: D-sub) 、 15 (15 pin: D-sub)		
Customer air piping	Φ6 mm×2, 0.59 MPa Φ4 mm×2, 0.59 MPa		
Operating condition	Ambient temperature ^[1]	5°C ~40°C (no excessive temperature changes)	
	Relative humidity	10%~80%	
Noise level ^[2]	Laeq=75dB(A) ^[2]		
Maximum motion range	J1	±132°	
	J2	±152°	
	J3	420mm	
	J4	±360°	
Cycle time ^[3]	0.36s		0.38s
Input power (average power consumption)	2kVA (0.3kW)		
Matching Controller	IRCB501-4ED-INT		
Certification	CE,cSGSUs,KCs,Kc		

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3] Standard cycle time for 20kg SCARA : 2kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

SCARA Robot

IR-S35 Series

The special machine for the lithium battery industry has the characteristics of high inertia, strong rigidity and high precision

Scope of Application

Lithium battery

Features

Load	35kg
Arm length	800mm/1000mm
Cycle time	0.31s/0.33s
Repeatability	J1, J2: ±0.05mm, J3: ±0.01mm, J4: ±0.01°



Technical Data

Model		IR-S35-80Z42S-INT	IR-S35-100Z42S-INT
Arm length	Arm 1 + Arm 2	800mm	1000mm
	Arm 1	350mm	550mm
	Arm 2	450mm	450mm
Maximum speed	J1 + J2	8100mm/s	9400mm/s
	J3	2100mm/s	2100mm/s
	J4	705° /s	705° /s
	J1 + J2	±0.05mm	±0.05mm
Repeatability	J3	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°
	J1 + J2	±0.05mm	±0.05mm
Handling capacity(load)	Rated	20kg	20kg
	Maximum	35kg	35kg
Allowable inertia moment of J4	Rated	0.6kg·m ²	0.6kg·m ²
	Maximum	1.2kg·m ²	1.2kg·m ²
Mounting hole		200mm×200mm(4×Φ16mm)	200mm×200mm(4×Φ16mm)
Weight (excluding cables)		70.5kg	74.5kg
Press-in force of J3		250N	250N
Cable		Standard: 3m/5m/10m/15m High Flexible: 3m/5m/10m/15m	
Customer signal line		25 signal lines 30V 0.5A	25 signal lines 30V 0.5A
Customer air piping		Φ6 mm×2, Φ8 mm×2, 0.59 MPa	Φ6 mm×2, Φ8 mm×2, 0.59 MPa
Operating condition	Ambient temperature ^[1]	5°C ~40°C	5°C ~40°C
	Relative humidity	10% RH~80% RH	10% RH~80% RH
Noise level ^[2]		LAeq ≤ 80dB(A)	LAeq ≤ 80dB(A)
Maximum motion range	J1	±139°	±139°
	J2	±151°	±151°
	J3	420mm	420mm
	J4	±360°	±360°
Cycle time ^[3]		0.31s	0.33s
Input power (average power consumption)		2 kVA (0.3 kW)	2 kVA (0.3 kW)
Matching controller		IRCB501-4ED-INT	IRCB501-4ED-INT
Mounting mode		Floor mounted	Floor mounted

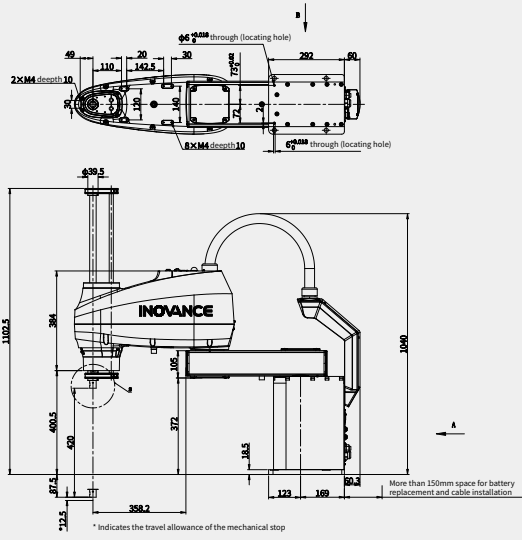
[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running.

[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

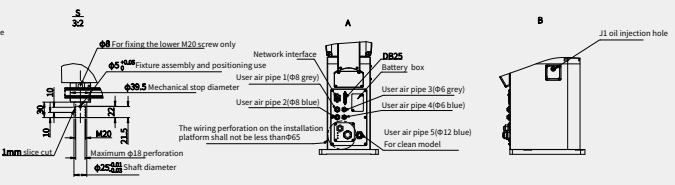
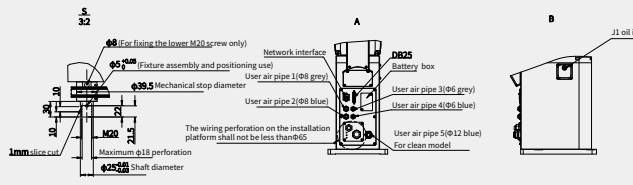
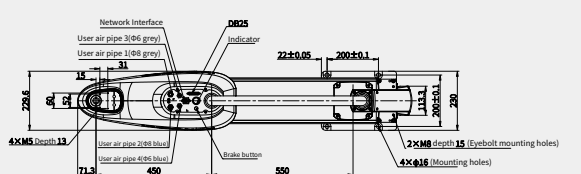
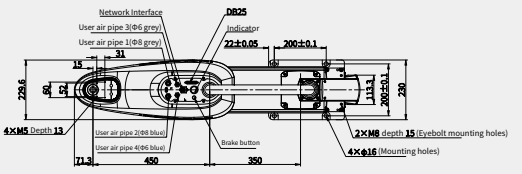
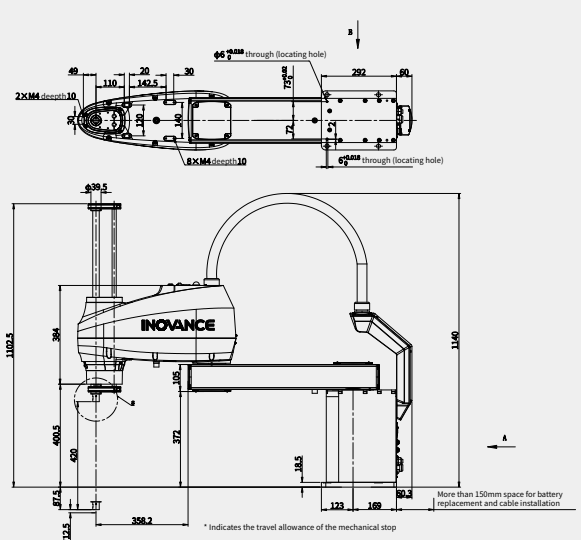
[3] Standard cycle time for 20kg SCARA : 2kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Mounting Dimensions(mm)

IR-S35-80Z42S-INT

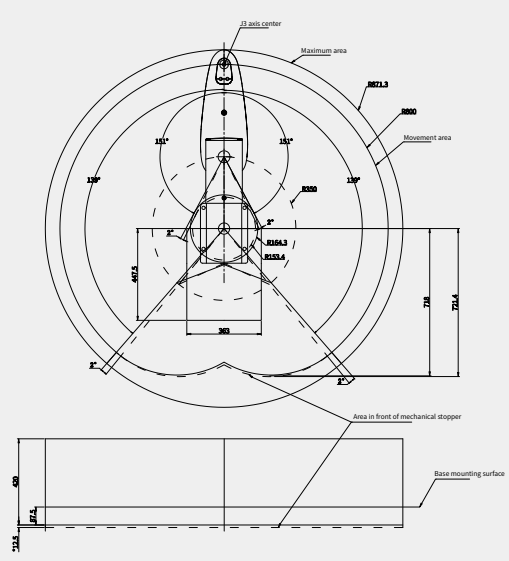


IR-S35-100Z42S-INT

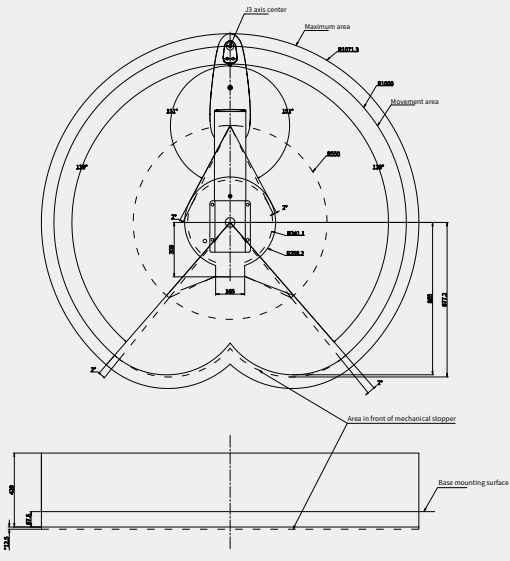


Motion Range(mm)

IR-S35-80Z42S-INT



IR-S35-100Z42S-INT



SCARA Robot

IR-GS60 Series

Star products in the field of SCARA robots with large load, high efficiency, high precision and high speed.

Scope of Application

Widely used in the upper and lower branch, precision assembly, handling, dispensing, locking screws, labeling, plug-ins. Sorting and other scenarios

Features

Load	60kg
Arm length	1200mm
Cycle time	0.67s
Repeatability	J1, J2: ±0.07mm, J3: ±0.02mm, J4: ±0.005°



Technical Data

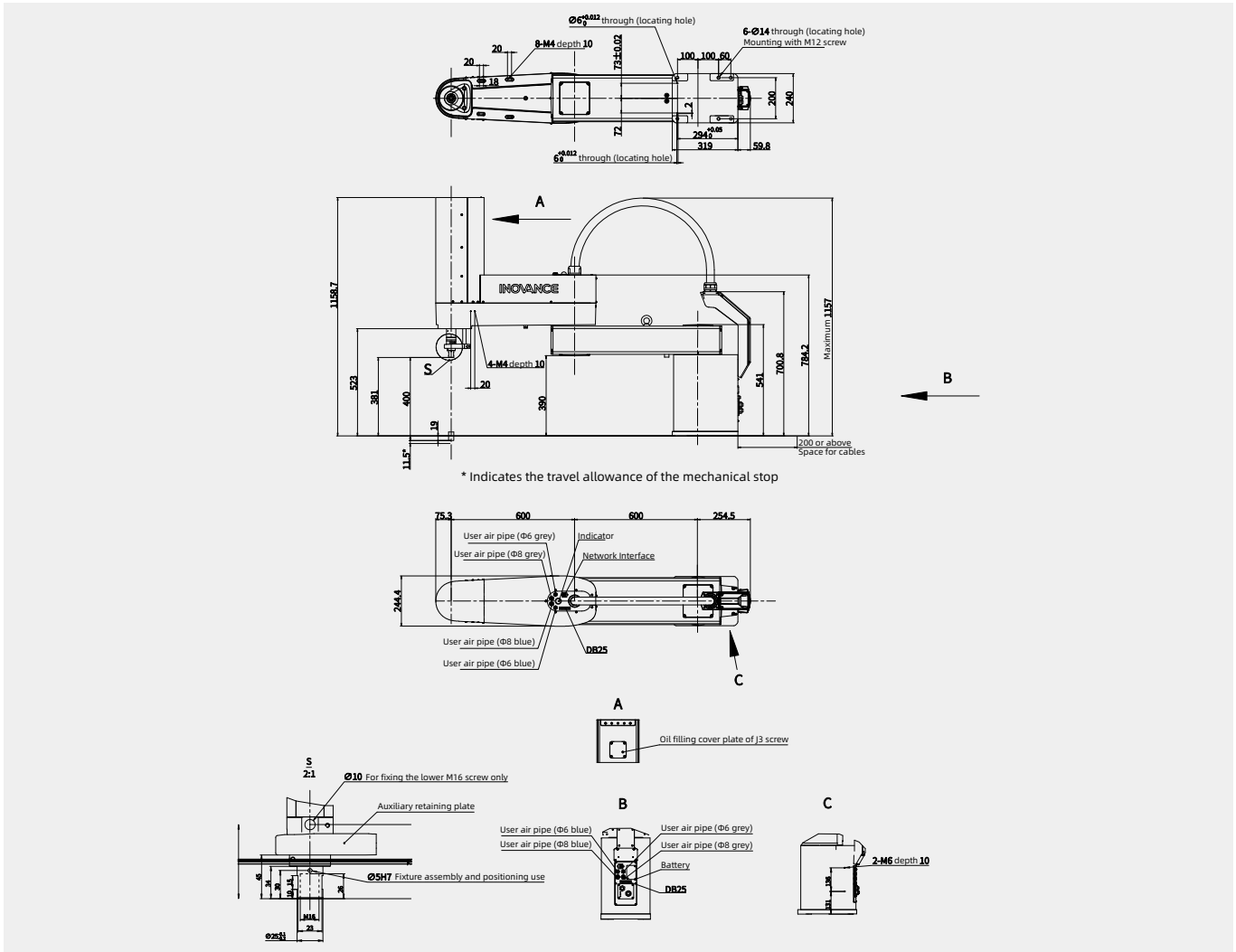
Model		IR-GS60-120Z40S-INT
Arm length	Arm 1 + Arm 2	1200mm
	Arm 1	600mm
	Arm 2	600mm
Maximum speed	J1 + J2	7400mm/s
	J3	1500mm/s
	J4	600° /s
	J1 + J2	±0.07mm
Repeatability	J3	±0.02mm
	J4	±0.005°
	Rated	30kg
Handling capacity(load)	Maximum	60kg
	Rated	1.20kg·m ²
Allowable inertia moment of J4	Maximum	2.45kg·m ²
	Mounting hole	200mm×200mm×60mm(6×Φ14mm)
Weight (excluding cables)		136kg
Press-in force of J3		/
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
Customer signal line		25 signal lines 30V 0.5A, CAT5E
Customer air piping		Φ6 mm×2,Φ8 mm×2, 0.59 MPa
Operating condition	Ambient temperature ^[1]	5° C~40° C
	Relative humidity	10% RH~80% RH
Noise level ^[2]		L _{Aeq} ≤ 80dB(A)
Maximum motion range	J1	±135°
	J2	±150°
	J3	400mm
	J4	±360°
Cycle time ^[3]		0.67s
Input power (average power consumption)		7 kVA (0.6 kW)
Matching controller		IRCB501-4MD-INT
Mounting mode		Floor mounted
Certification		CE,cSGSsus,FCC,KCs,Function Safety(SGS-TUV Saar)

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

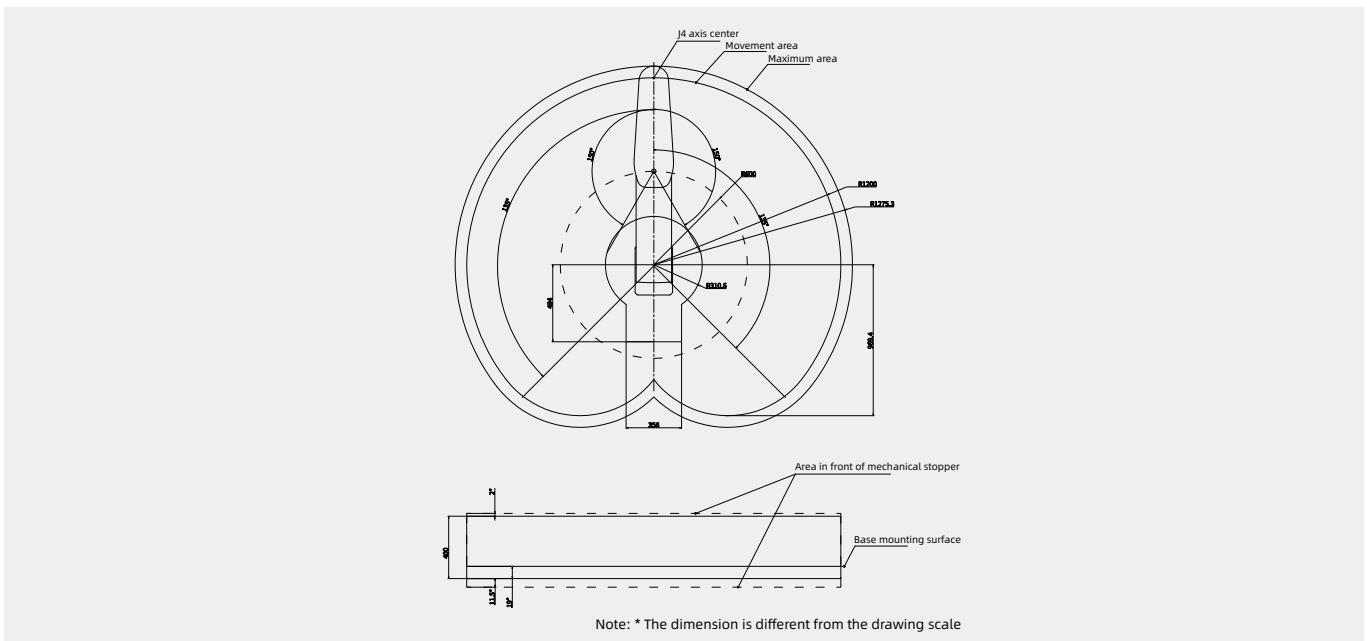
[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3] Standard cycle time for 60kg SCARA : 5kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Mounting Dimensions(mm)



Motion Range(mm)



SCARA Robot

IR-TS4 Series

Robots with enhanced load capacity and multiple arm length options, suitable for large load applications in various industries.

Scope of Application

Assembly and dispensing in 3C industry, lithium battery industry, photovoltaic industry, and display industry.

Features

Load	4 kg
Arm length	350 mm
Cycle time	0.306s
Repeatability	J1-J3: ± 0.01 mm; J4: $\pm 0.01^\circ$



Technical Data

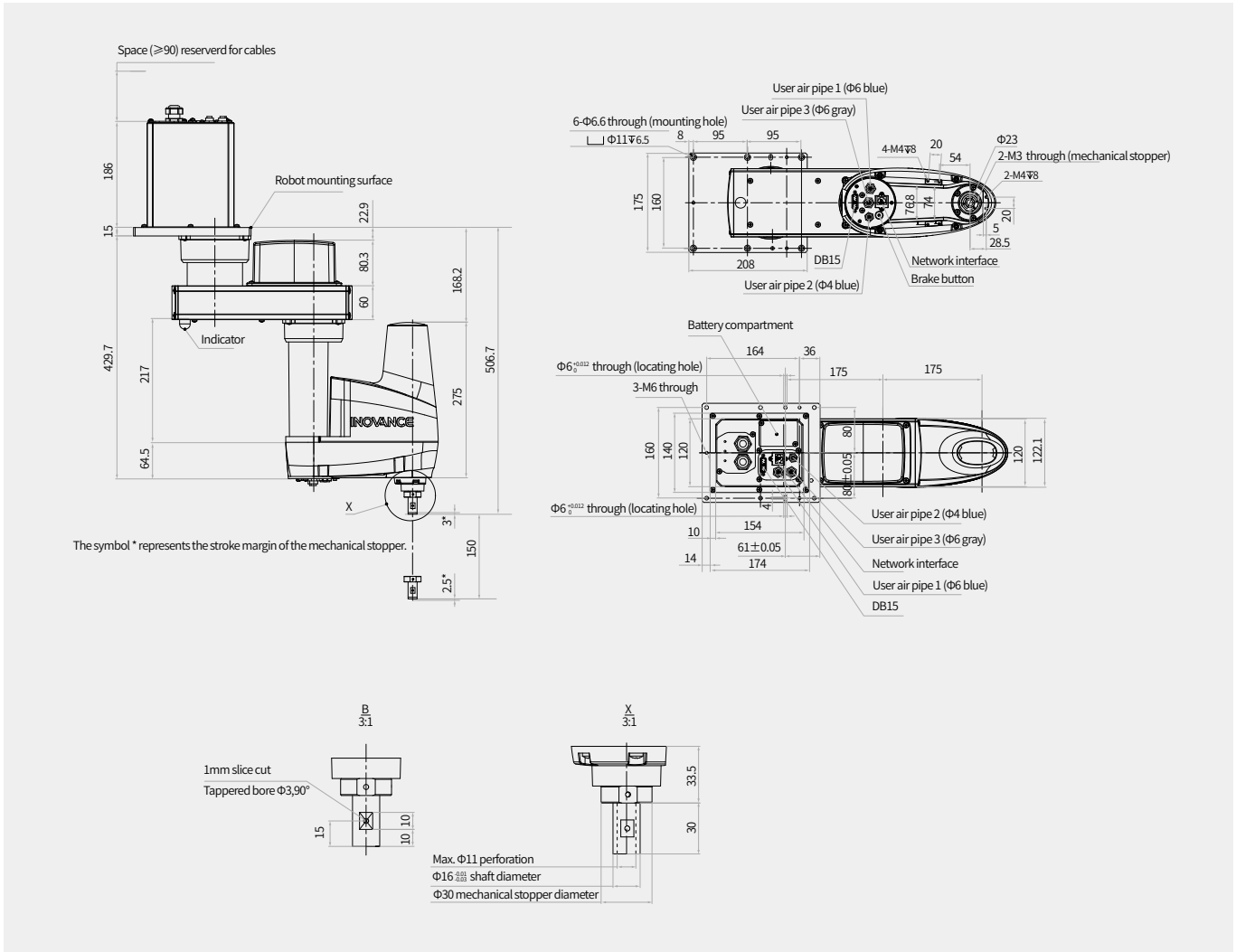
Model		IR-TS4-35Z15S-INT
Arm length	Arm 1 + Arm 2	350 mm
	Arm 1	175 mm
	Arm 2	175 mm
Maximum speed	J1 + J2	6180 mm/s
	J3	1300 mm/s
	J4	2600° /s
	J1 + J2	± 0.01 mm
Repeatability	J3	± 0.01 mm
	J4	$\pm 0.01^\circ$
	J1 + J2	± 0.01 mm
Handling capacity (load)	Rated	2 kg
	Maximum	4 kg
Allowable inertia moment of J4	Rated	0.005 kg.m ²
	Maximum	0.05 kg.m ²
Mounting hole		95×95×160 mm (6-Φ6.6 mm)
Weight (excluding cables)		18.5 kg
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
Press-in force of J3		100 N
Customer signal line		15 (15pin: D-sub) CAT5E
Customer air piping		Φ6 mm×2, 0.59 MPa Φ4 mm×1, 0.59 MPa
Operating conditions	Ambient temperature ^[1]	5°C to 40°C (no excessive temperature changes)
	Relative humidity	10% to 80%
Noise level ^[2]		Laeq=70 dB(A)
Maximum motion range	J1	$\pm 225^\circ$
	J2	$\pm 225^\circ$
	J3	150 mm
	J4	$\pm 720^\circ$
Cycle time ^[3]		0.306s
Input power (average power consumption)		2kVA (0.3kW)
Matching controller		IRCB501-4CD-INT
Certification		CE,cSGSUS,KCs,Kc

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

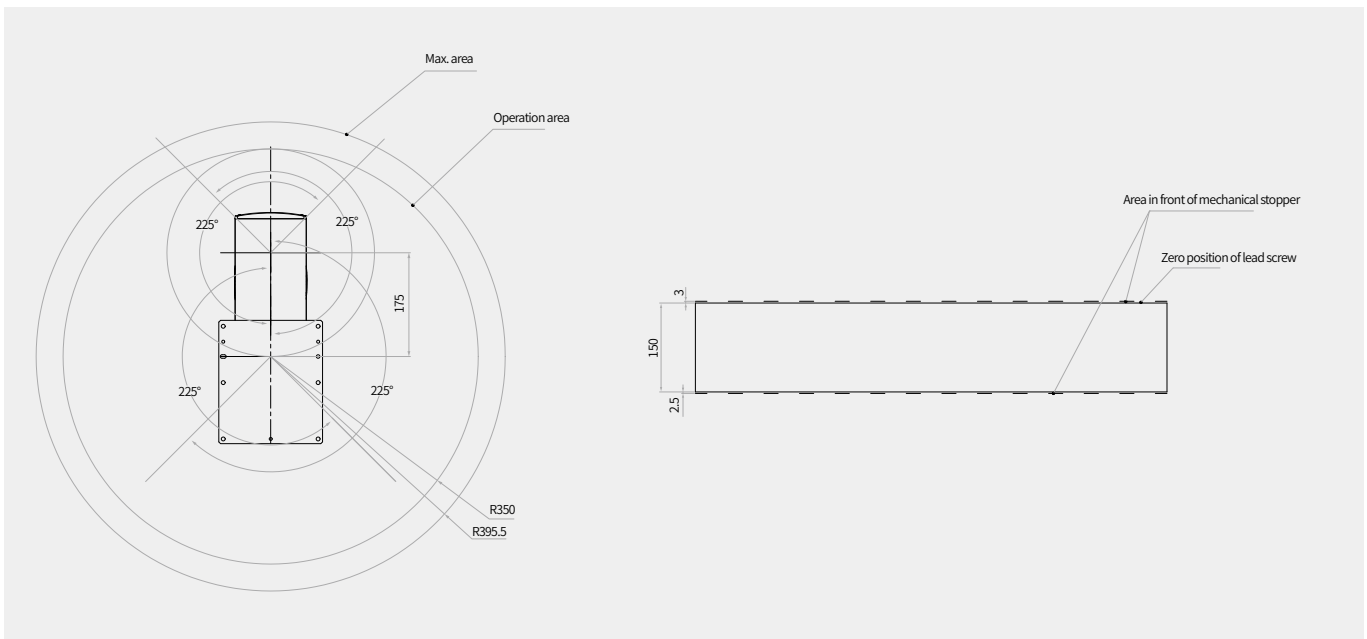
[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3] Standard cycle time for 4kg Inverted SCARA : 1kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Mounting Dimensions(mm)



Motion Range(mm)



SCARA Robot

IR-TS5 Series

Robots with enhanced load capacity and multiple arm length options, suitable for large load applications in various industries.

Scope of Application

Assembly and dispensing in 3C industry, lithium battery industry, photovoltaic industry, and display industry.

Features

Load	5 kg
Arm length	550 mm
Cycle time	0.351s
Repeatability	J1 and J2: ± 0.015 mm; J3: 0.01 mm; J4: $\pm 0.01^\circ$



Technical Data

Model		IR-TS5-55Z15S-INT
Arm length	Arm 1 + Arm 2	550 mm
	Arm 1	275 mm
	Arm 2	275 mm
Maximum speed	J1 + J2	9712 mm/s
	J3	1300 mm/s
	J4	2000°/s
	J1 + J2	± 0.015 mm
Repeatability	J3	± 0.01 mm
	J4	$\pm 0.01^\circ$
	Rated	2 kg
Handling capacity (load)	Maximum	5 kg
	Rated	0.01 kg.m ²
Allowable inertia moment of J4	Maximum	0.12 kg.m ²
	Mounting hole	95×95×160 mm (6-Φ6.6 mm)
Weight (excluding cables)		20 kg
Press-in force of J3		150N
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m
Customer signal line		15 (15pin: D-sub) CAT5E
Customer air piping		Φ6 mm×2, 0.59 MPa Φ4 mm×1, 0.59 MPa
Operating conditions	Ambient temperature ^[1]	5°C to 40°C (no excessive temperature changes)
	Relative humidity	10% to 80%
Noise level ^[2]		Laeq=70 dB(A)
Maximum motion range	J1	$\pm 225^\circ$
	J2	$\pm 225^\circ$
	J3	150 mm
	J4	$\pm 720^\circ$
Cycle time ^[3]		0.351s
Input power (average power consumption)		2kVA (0.3kW)
Matching controller		IRCB501-4CD-INT
Certification		CE,cSGSUS,KCs,Kc

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface.

[3] Standard cycle time for 5kg Inverted SCARA : 1kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Robot Controller

IRCB501 Series

Robot controllers featuring delicate structure, abundant functions, easy installation, and easy extension to meet the market demands for compact structure, flexible production and productivity boost in 3C industry.

Applicable Robots

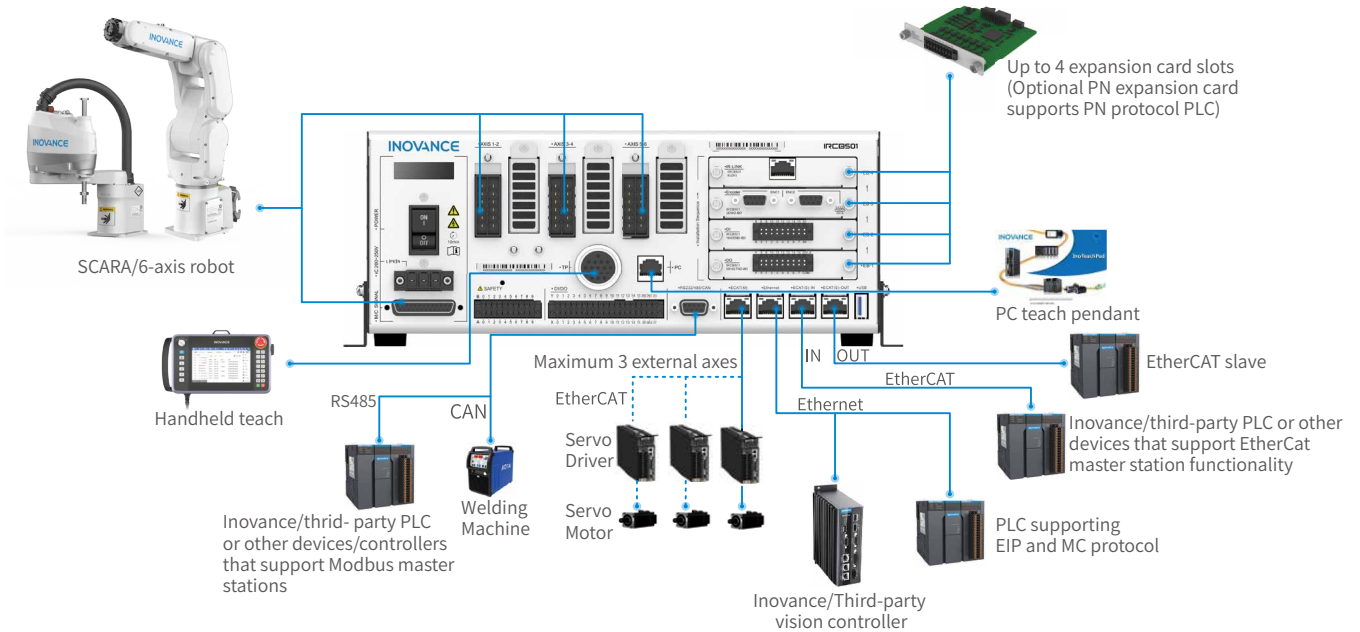
SCARA Robot	IR-S4/7/10 Series	●
	IR-TS4/5 Series	●
	IR-S20 Series	●
	IR-GS20 Series	●
	IR-S35 Series	●
	IR-S50 Series	●
6-Axis Robot	IR-GS60 Series	●
	IR-R7H Series	●
	IR-R4/R4H Series	●
	IR-R11 Series	●



Technical Data

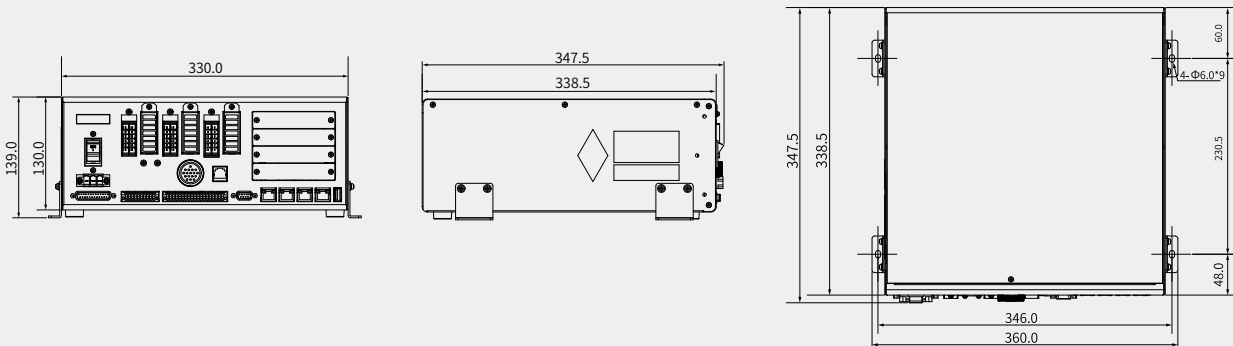
Mounting mode	Vertical mounting, horizontal mounting, 19" rack mounting	
Standard I/Os	16 inputs and 16 NPN outputs (extendable)	
Communication interfaces	Ethernet interface: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication	
	EtherCAT-IN interface: EtherCAT slave -IN interface	
	EtherCAT-OUT interface: EtherCAT master -OUT interface	
	EtherCAT interface: Used for extension of external axes	
	RS232/RS485 interface: Used for serial and Modbus RTU communication (RS485 only)	
	USB2.0 interface: Used for backup/upload programs and export robot status information	
Control mode	Optional interface: Profinet Slave	
	PC programming platform control, teach pendant control, remote I/O control, remote Modbus control, and API control	
Power supply	Input voltage: Single-phase 200V AC to 240V AC, 10A/20A, 50 Hz to 60 Hz	
	Max. power consumption: 3.1 kW (depending on the robot model)	
IP rating	IP20	
Operating conditions	Temperature: 5° C to 40° C ; Relative humidity: 20% to 95% RH@30° C (non-condensing)	
Dimensions	Standard	High- Power
	330mm×338.5mm×130mm	330mm×400mm×130mm
Weight	8kg	10kg
Applicable Robots	SCARA: IR-S4/7/10 Series、IR-TS4/5 Series 6-Axis: IR-R7H Series、IR-R4/R4H Series	SCARA: IR-S20 Series、IR-GS20 Series、IR-S35 Series、 IR-S50 Series、IR-GS60 Series 6-Axis: IR-R11 Series

System Topology

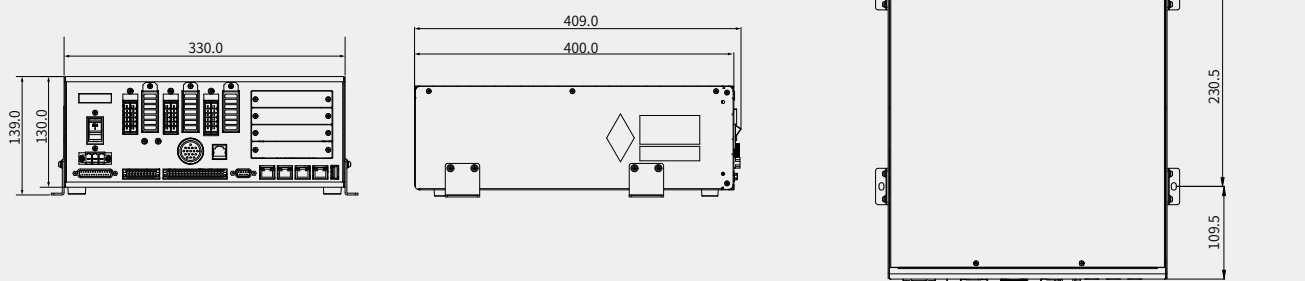


Mounting Dimensions(mm)

Standard



High-Power



Robot Controller

IRCB501 High-Protection Series

Integrating drive and control functions, the IRCB501 high-protection series features delicate structure, abundant functions, easy installation, and easy extension. It is widely used in automotive, die casting, machine tools, packaging and other industrial automation industries, as well as medical, laboratory automation and consumer product automation production industries.

Applicable Robots

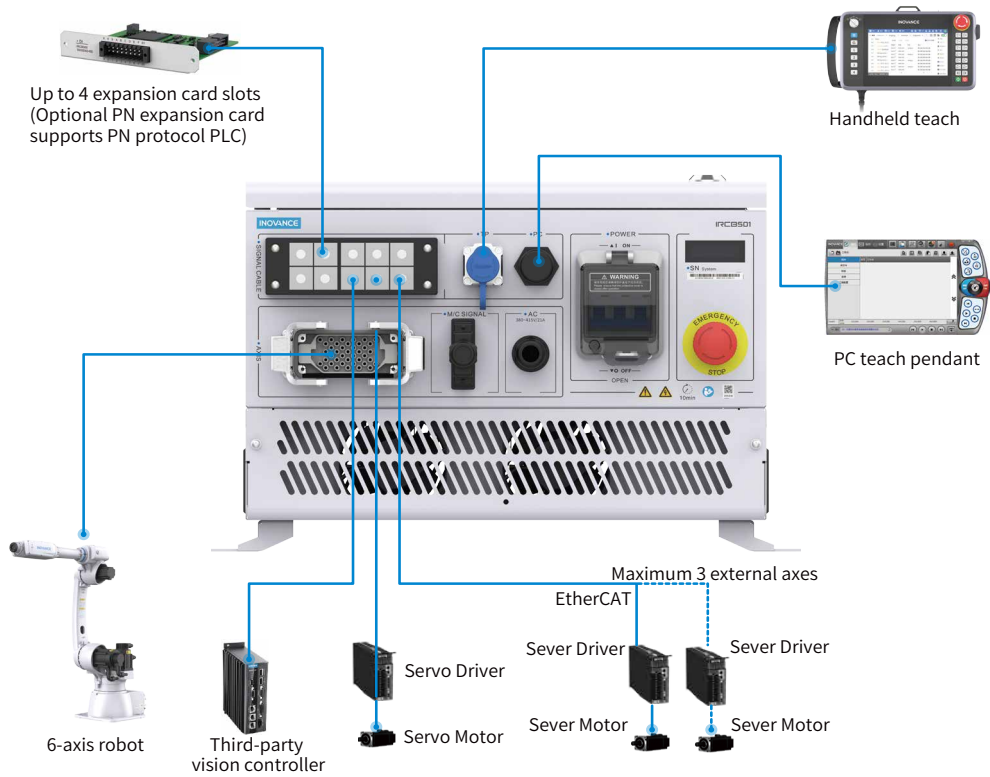
6-Axis Robot	IR-R10 Series	●
	IR-R20 Series	●



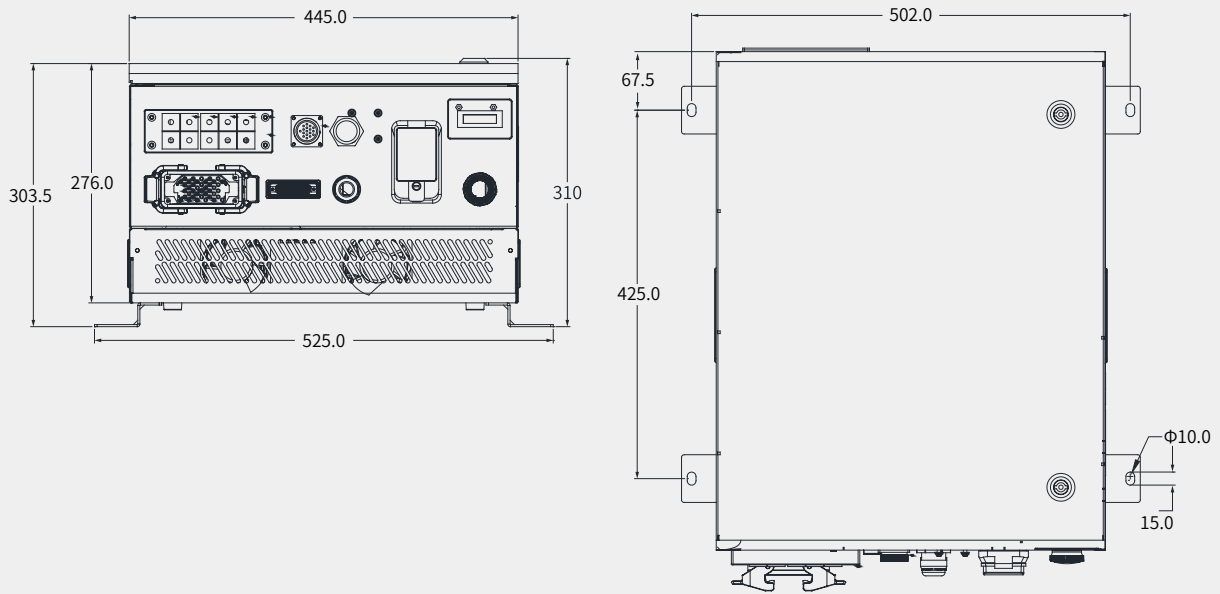
Technical Data

Mounting mode	Vertical mounting, horizontal mounting, rack mounting
Standard I/Os	16 inputs and 16 NPN outputs (extendable)
Communication interfaces	Ethernet interface: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication
	EtherCAT-IN interface: EtherCAT slave -IN interface
	EtherCAT-OUT interface: EtherCAT master -OUT interface
	EtherCAT interface: Used for extension of external axes
	RS232/RS485 interface: Used for serial and Modbus RTU communication (RS485 only)
	USB2.0 interface: Used for backup/upload programs and export robot status information
Optional interface: Profinet Slave	
Control mode	PC programming platform control, teach pendant control, remote I/O control, remote Modbus control, and API control
Power supply	Input voltage: Single-phase 200V AC to 250V AC, 23A, 50 Hz to 60 Hz
	Max. power consumption: 4.5 kW (depending on the robot model)
Operating conditions	IP54 + anti metal dust
Dimensions	Temperature: 0° C to 45° C; Relative humidity: 20% to 95% RH@30° C (non-condensing)
Dimensions	445mm×575mm×276mm
Weight	30kg
Applicable Robots	6-Axis: IR-R10 Series、IR-R20 Series

System Topology



Mounting Dimensions(mm)



IR-TP200 Series

Teaching Pendant 2.0 New Upgrade

Software advantages



Easy to edit

- Wizard-style instruction modification to achieve quick editing and replacement of instructions



Easy to commission

- Floating window system design, extreme jump reduction



Easy to manage

- Quick navigation, one-click direct access to common functions; Tab-type program, one-click direct sub-program, 6axis scenario, no matter how many sub-programs there are, it will not be messy



Excellent Experience

- Global Prompt System Optimized for a More Comfortable User Experience
- Log system optimization, more flexible and precise, adaptable to various needs
- User-friendly guided operation

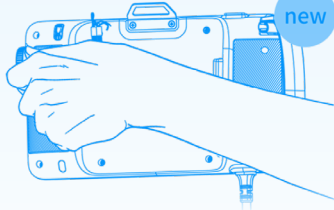


Wizard process module

- Visual calibration, palletizing process, following process and other integrated process package modules are provided, so that programmers can quickly complete the setting of relevant process parameters according to the process production guide, with rich functions, friendly operation interface and high usability.



Hardware advantage



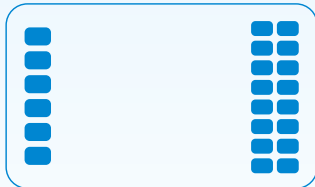
Excellent Experience

- Optimize the long-term one-handed holding experience



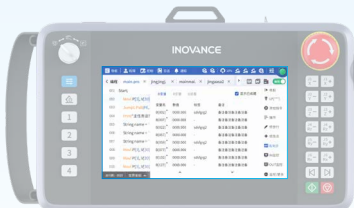
Safer

- Three-position switch, CE certified
- Self-locking slot and spring pen cord, anti-lost design



Ultimate Tactile Sensation

- Extreme tactile sensation, soft and labor-saving
- Feedback is clear, facilitating the optimization of operation layout, More convenient access to all buttons



More user-friendly

- Large screen, integrated panel design



Efficient and reliable

- One-step accurate insertion
- Threadless snap fastener ensures no slipping

List of Robot Models

6-Axis Robot

Model		IR-R4 -56S-INT	IR-R4H -54S-INT	IR-R7H -70S-INT	IR-R7H -90S-INT	IR-R11 -90S-INT
Structure		Articulated robot				Articulated robot
Number of axes		6				
Maximum reach		560.6mm	545.7mm	722.3mm	911.9mm	901.9mm
Repeatability		±0.01mm	±0.02mm	±0.015mm	±0.02mm	±0.02mm
Maximum load		4kg	4kg	7kg	7kg	11.3kg
IP rating		IP40	IP40	IP40	IP40	IP40
Maximum Speed	J1	450° /s	450° /s	420° /s	336° /s	240° /s
	J2	460° /s	460° /s	336° /s	280° /s	180° /s
	J3	520° /s	520° /s	487.5° /s	390° /s	330° /s
	J4	560° /s	560° /s	550° /s	550° /s	450° /s
	J5	560° /s	560° /s	438° /s	438° /s	420° /s
	J6	900° /s	900° /s	764.7° /s	764.7° /s	720° /s
Maximum motion range	J1	-170° ~+170°	-170° ~+170°	-170° ~+170°	-170° ~+170°	-170° ~+170°
	J2	-120° ~+110°	-120° ~+110°	-135° ~+80°	-135° ~+80°	-135° ~+100°
	J3	-69° ~+205°	-65° ~+195°	-70° ~+190°	-70° ~+190°	-66° ~+210°
	J4	-190° ~+190°	-190° ~+190°	-190° ~+190°	-190° ~+190°	-190° ~+190°
	J5	-120° ~+120°	-120° ~+120°	-120° ~+120°	-120° ~+120°	-125° ~+125°
	J6	-360° ~+360°	-360° ~+360°	-360° ~+360°	-360° ~+360°	-360° ~+360°
Allowed wrist torque	J4	8.86N·m	8.86N·m	16.9N·m	16.9N·m	20.45N·m
	J5	8.86N·m	8.86N·m	16.9N·m	16.9N·m	20.45N·m
	J6	4.9N·m	4.9N·m	9.4N·m	9.4N·m	10.8N·m
Allowable load inertia at wrist	J4	0.2kg·m ²	0.2kg·m ²	0.49kg·m ²	0.49kg·m ²	0.6kg·m ²
	J5	0.2kg·m ²	0.2kg·m ²	0.49kg·m ²	0.49kg·m ²	0.6kg·m ²
	J6	0.067kg·m ²	0.067kg·m ²	0.15kg·m ²	0.15kg·m ²	0.2kg·m ²
Customer connections	Wires	12 Pin 30V 0.5A	12 Pin 30V 0.5A	17 Pin 30V 0.5A	17 Pin 30V 0.5A	12 Pin 30V 0.5A
	Air tubes	Φ4mm×4, 0.59MPa				
Ambient conditions	Ambient Temperature ^[1]	0°C ~45°C				
	Ambient Humidity	5% RH~95%RH (Non-condensing)				
	Maximum Temperature Gradient	1.5°C /min				
Weight		24kg	24.5kg	31kg	33kg	45kg
Input supply power (average power consumption)		2kVA (0.5kW)	2kVA (0.5kW)	2kVA (0.5kW)	2kVA (0.5kW)	3kVA (0.6kW)
Controller		IRCB501-6LD-INT	IRCB501-6LD-INT	IRCB501-6LD-INT	IRCB501-6LD-INT	IRCB501-6FD-INT
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m				
Mounting mode		Floor mounted		Floor mounted,Ceiling Mounted		Floor mounted
Noise ^[2]		LAeq ≤ 75dB(A)		LAeq ≤ 80dB(A)		LAeq ≤ 75dB(A)
Mounting dimensions of the base		138mm×138mm (4×Φ11mm)		160mm×160mm(4×Φ11mm)		165mm×165mm (4×Φ11mm)
Certification		CE, cSGSus, FCC, Functional Safety, KCs, KC		CE, cSGSus, FCC, KCs, Function Safety(SGS-TUV Saar)		CE, cSGSus, FCC, Functional Safety, KCs, KC

[1] Ambient temperature: If the product is used in a low temperature environment close to the minimum temperature of the product specification, or suspended for a long time due to holidays and nights, it is recommended to preheat for 10 minutes before operation.

[2] Noise level: This value is the A-load equivalent noise level measured according to ISO11201 (EN31201).
(Measurement conditions: operation at rated load and maximum speed)

List of Robot Models

6-Axis Robot

Model		IR-R10 -110S-INT	IR-R10H -120S-INT	IR-R10 -140S-INT	IR-R25 -178S-INT	IR-R16 -210S-INT
Structure		Articulated robot				
Number of axes		6				
Maximum reach		1101.6mm	1201.2mm	1422mm	1783mm	2107mm
Repeatability		±0.02mm	±0.025mm	±0.05mm	±0.03mm	±0.03mm
Maximum load		10kg	10kg	10kg	25kg	16kg
IP rating		IP40	IP40	Base IP65, Wrist IP67		
Maximum Speed	J1	240° /s	240° /s	200° /s	190° /s	190° /s
	J2	180° /s	180° /s	200° /s	175° /s	175° /s
	J3	330° /s	330° /s	200° /s	200° /s	200° /s
	J4	450° /s	470° /s	375° /s	400° /s	400° /s
	J5	420° /s	438° /s	375° /s	360° /s	360° /s
	J6	720° /s	764.7° /s	600° /s	610° /s	610° /s
Maximum motion range	J1	-170° ~+170°	-170° ~+170°	-170° ~+170°	-170° ~+170°	-170° ~+170°
	J2	-135° ~+100°	-135° ~+100°	-160° ~+60°	-155° ~+80°	-155° ~+80°
	J3	-66° ~+210°	-66° ~+210°	-80° ~+160°	-75° ~+160°	-75° ~+160°
	J4	-190° ~+190°	-190° ~+190°	-180° ~+180°	-180° ~+180°	-180° ~+180°
	J5	-125° ~+125°	-120° ~+120°	-140° ~+140°	-140° ~+140°	-140° ~+140°
	J6	-360° ~+360°	-360° ~+360°	-360° ~+360°	-360° ~+360°	-360° ~+360°
Allowed wrist torque	J4	18.59N·m	18.59N·m	22N·m	50N·m	25N·m
	J5	18.59N·m	18.59N·m	22N·m	50N·m	25N·m
	J6	9.8N·m	9.8N·m	9.8N·m	30N·m	12N·m
Allowable load inertia at wrist	J4	0.6kg·m ²	0.6kg·m ²	0.63kg·m ²	2.2kg·m ²	0.78kg·m ²
	J5	0.6kg·m ²	0.6kg·m ²	0.63kg·m ²	2.2kg·m ²	0.78kg·m ²
	J6	0.2kg·m ²	0.2kg·m ²	0.2kg·m ²	1.5kg·m ²	0.3kg·m ²
Customer connections	Wires	12 Pin 30V 0.5A			18 Pin 30V 0.5A	
	Air tubes	Φ4mm×4, 0.59MPa	Φ4mm×4, 0.59MPa	Φ8mm×1, 0.59MPa	Φ8mm×1, 0.59MPa	Φ8mm×1, 0.59MPa
Ambient conditions	Ambient Temperature ^[1]	0°C ~45°C				
	Ambient Humidity	5% RH~95% RH (Non-condensing)				
	Maximum Temperature Gradient	1.5°C /min				
Weight		48kg	50kg	130kg	255kg	260kg
Input supply power (average power consumption)		3kVA (0.6kW)	3kVA (0.6kW)	3kVA (0.6kW)	5kVA (1kW)	5kVA (1kW)
Controller		IRCB501-6FD-INT	IRCB501-6FD-INT	IRCB501-6ND-INT	IRCB501-6ND-INT	IRCB501-6FD-INT
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m		Standard: 3m/5m/10m/15m	Standard:3m/5m/10m/15m High Flexible:5m/10m/15m	
Mounting mode		Floor mounted				
Noise ^[2]		LAeq ≤ 75dB(A)	LAeq ≤ 80dB(A)			
Mounting dimensions of the base		165mm×165mm(4×Φ11mm)		290mm×280mm (4×Φ18mm)	290mm×280mm(4×Φ20mm)	
Certification		CE, cSGSus, FCC, Functional Safety, KCs, KC				

[1] Ambient temperature: If the product is used in a low temperature environment close to the minimum temperature of the product specification, or suspended for a long time due to holidays and nights, it is recommended to preheat for 10 minutes before operation.

[2] Noise level: This value is the A-load equivalent noise level measured according to ISO11201 (EN31201).
(Measurement conditions: operation at rated load and maximum speed)

List of Robot Models

SCARA Robot

Model		IR-S4 -40Z15S-INT	IR-S7 -50Z20S-INT	IR-S7 -60Z20S-INT	IR-S7 -70Z20S-INT	IR-S10 -60Z20S-INT	IR-S10 -70Z20S-INT	IR-S10 -80Z20S-INT	IR-S20 -80Z42S-INT	
Arm length	Arm1+Arm2	400mm	500mm	600mm	700mm	600mm	700mm	800mm	800mm	
	Arm1	225mm	225mm	325mm	425mm	225mm	325mm	425mm	350mm	
	Arm2	175mm	275mm	275mm	275mm	375mm	375mm	375mm	450mm	
Maximum speed	J1+J2	7200mm/s	7120mm/s	7850mm/s	8590mm/s	9100mm/s	9800mm/s	10500mm/s	9550mm/s	
	J3	1300mm/s	1600mm/s	1600mm/s	1600mm/s	1600mm/s	1600mm/s	1600mm/s	1010mm/s	
	J4	2600° /s	2000° /s	2000° /s	2000° /s	2700° /s	2700° /s	2700° /s	705° /s	
Repeat-ability	J1+J2	±0.01mm	±0.02mm	±0.02mm	±0.02mm	±0.02mm	±0.02mm	±0.025mm	±0.04mm	
	J3	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	
	J4	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	
Load	Rated	2kg	3kg	3kg	3kg	5kg	5kg	5kg	10kg	
	Maximum	4kg	7kg	7kg	7kg	10kg	10kg	10kg	20kg	
Allow-able load inertia of J4	Rated	0.005kg·m ²	0.01kg·m ²	0.01kg·m ²	0.01kg·m ²	0.02kg·m ²	0.02kg·m ²	0.02kg·m ²	0.5kg·m ²	
	Maximum	0.05kg·m ²	0.12kg·m ²	0.12kg·m ²	0.12kg·m ²	0.3kg·m ²	0.3kg·m ²	0.3kg·m ²	1kg·m ²	
Mounting holes		120mm ×120mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	150mm ×150mm (4×Φ9mm)	200mm ×200mm (4×Φ16mm)	
Body weight (excluding cable)		12kg	17kg	17.5kg	19kg	18.5kg	19kg	20.5kg	53kg	
Press-in force of J3		100N	150N	150N	150N	200N	200N	200N	250N	
Appli- cation cables	Wires	15Pin 30V 0.5A							15Pin 30V 0.5A ; 9Pin 30V 0.5A	
	Network port	CAT5E	CAT5E	CAT5E	CAT5E	CAT5E	CAT5E	CAT5E	-	
Air tubes		Φ4mm×1 Φ6mm×2, 0.59MPa							Φ4mm×2 Φ6mm×2, 0.59MPa	
Ambient condi- tions	Ambient Tempera- ture ^[1]	5° C~40° C	5° C~40° C	5° C~40° C	5° C~40° C	5° C~40° C	5° C~40° C	5° C~40° C	5° C~40° C	
	Ambient Humidity	10% RH~80% RH								
Noise ^[2]		LAeq ≤ 70dB(A)							LAeq ≤ 75dB(A)	
Maxi- mum motion range	J1	±132°	±132°	±132°	±132°	±132°	±132°	±132°	±132°	
	J2	±141°	±150°	±150°	±150°	±150°	±150°	±150°	±152°	
	J3	150mm	200mm	200mm	200mm	200mm	200mm	200mm	420mm	
	J3	±360°	±360°	±360°	±360°	±360°	±360°	±360°	±360°	
Cycle Time ^[3]		0.342s	0.351s	0.36s	0.375s	0.361s	0.386s	0.416s	0.36s	
Input supply power (average power consumption)		2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	
Controller		IRCB501- 4AD-INT	IRCB501-4CD-INT						IRCB501-4ED-INT	
Cable		Standard: 3m/5m/10m/15m High Flexible: 3m/5m/10m/15m								
Mounting mode		Floor mounted								
Certification		CE, cSGSUS, FCC, Functional Safety, KCs, KC								

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface

[3] Standard cycle time for 4kg SCARA: 1kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Standard cycle time for 7/10/20/35kg SCARA : 2kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Standard cycle time for 50/60kg SCARA : 5kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically).

List of Robot Models

SCARA Robot

Model		IR-S20 -100Z42S-INT	IR-GS20 -80Z42S-INT	IR-GS20 -100Z42S-INT	IR-S35 -80Z42S-INT	IR-S35 -100Z42S-INT	IR-GS60 -120Z40S-INT	IR-TS4 -35Z15S-INT	IR-TS5 -55Z15S-INT
Arm length	Arm1+Arm2	1000mm	800mm	1000mm	800mm	1000mm	1200mm	350mm	550mm
	Arm1	550mm	350mm	550mm	350mm	550mm	600mm	175mm	275mm
	Arm2	450mm	450mm	450mm	450mm	450mm	600mm	175mm	275mm
Maximum speed	J1+J2	10800mm/s	9550mm/s	10800mm/s	8100mm/s	9400mm/s	7400mm/s	6180mm/s	9712mm/s
	J3	1010mm/s	1010mm/s	1010mm/s	2100mm/s	2100mm/s	1500mm/s	1300mm/s	1300mm/s
	J4	705° /s	705° /s	705° /s	705° /s	705° /s	600° /s	2600° /s	2000° /s
Repeat-ability	J1+j2	±0.04mm	±0.04mm	±0.04mm	±0.05mm	±0.05mm	±0.07mm	±0.01mm	±0.015mm
	J3	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.01mm	±0.02mm	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	±0.005°	±0.01°	±0.01°
Load	Rated	10kg	10kg	10kg	20kg	20kg	30kg	2kg	2kg
	Maximum	20kg	20kg	20kg	35kg	35kg	60kg	4kg	5kg
Allowable load inertia of J4	Rated	0.5kg·m ²	0.5kg·m ²	0.5kg·m ²	0.6kg·m ²	0.6kg·m ²	1.20kg·m ²	0.005kg·m ²	0.1kg·m ²
	Maximum	1kg·m ²	1kg·m ²	1kg·m ²	1.2kg·m ²	1.2kg·m ²	2.45kg·m ²	0.05kg·m ²	0.12kg·m ²
Mounting holes		200mm ×200mm (4×Φ16mm)	200mm ×200mm (4×Φ16mm)	200mm ×200mm (4×Φ16mm)	200mm ×200mm (4×Φ16mm)	200mm ×200mm (4×Φ16mm)	200mm×200mm ×60mm (6×Φ14mm)	95mm×95mm ×160mm (6×Φ6.6mm)	95mm×95mm ×160mm (6×Φ6.6mm)
Body weight (excluding cable)		56kg	54kg	57kg	70.5kg	74.5kg	136kg	18.5kg	20kg
Press-in force of J3		250N	250N	250N	250N	250N	/	100N	150N
Application cables	Wires	15Pin 30V 0.5A ; 9Pin 30V 0.5A			25Pin 30V 0.5A		25 Pin 30V 0.5A	15Pin 30V 0.5A	
	Network port	-	-	-	CAT5E	CAT5E	CAT5E	CAT5E	CAT5E
Air tubes		Φ4mm×2 Φ6mm×2, 0.59MPa			Φ6mm×2 Φ8mm×2, 0.59MPa		Φ6mm×2 Φ8mm×2, 0.59MPa	Φ4mm×1 Φ6mm×2, 0.59MPa	
Ambient conditions	Ambient Temperature ^[1]	5° C~40° C							
	Ambient Humidity	10% RH~80% RH							
Noise ^[2]		LAeq ≤ 75dB(A)			LAeq ≤ 80dB(A)		LAeq ≤ 80dB(A)	LAeq ≤ 70dB(A)	
Maximum motion range	J1	±132°	±132°	±132°	±139°	±139°	±135°	±225°	±225°
	J2	±152°	±152°	±152°	±151°	±151°	±150°	±225°	±225°
	J3	420mm	420mm	420mm	420mm	420mm	400mm	150mm	150mm
	J4	±360°	±360°	±360°	±360°	±360°	±360°	±720°	±720°
Cycle Time ^[3]		0.38s	0.36s	0.38s	0.31s	0.33s	0.67s	0.306s	0.351s
Input supply power (average power consumption)		2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)	7 kVA (0.6 kW)	2 kVA (0.3 kW)	2 kVA (0.3 kW)
Controller		IRCB501-4ED-INT					IRCB501-4MD	IRCB501-4CD-INT	
Cable		Standard:3m/5m/10m/15m High Flexible:3m/5m/10m/15m							
Mounting mode		Floor mounted							
Certification		CE, cSGSUS, FCC, Functional Safety, KCs, KC					CE, cSGSUS, FCC, Functional Safety, KCs, KC		

[1] If this product is used in a low temperature environment close to the lowest temperature of the product specification, or if it is suspended for a long time due to holidays and nights, it is recommended to warm up for 10 minutes before running

[2] Noise test conditions: 4 joint linkage, 100% speed and acceleration, duty cycle 50%, measurement position: the front of the robot, 1000mm away from the action area, and more than 50mm from the base mounting surface

[3] Standard cycle time for 4kg SCARA: 1kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Standard cycle time for 7/10/20/35kg SCARA : 2kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically)

Standard cycle time for 50/60kg SCARA : 5kg load, the time required for the robot to go back and forth with a gate command (300 mm horizontally, 25 mm vertically).

List of Robot Models

Accessories

Type	Code	Description
I/O Arm cable (90°)	01660006	Used by the fork lift for handling IR-R10 and IR-R20 series 6-axis robots
	15050817	Used for wiring of the aviation connector on the upper end of the forearm in IR-R4series 6-axis robots,12 pin, with 1m cable
	1504WU81	Used for wiring of the aviation connector on the upper end of the forearm in IR-R4 series 6-axis robots,12 pin, with 2m cable
	15051387	Used for wiring of the aviation connector on the upper end of the forearm in IR-R7H, IR-R10H series 6-axis robots,17 pin, with 1m cable
	15050930	Used for wiring of the aviation connector on the upper end of the forearm in IR-R10 and IR-R25 series 6-axis robots, without cable
	15051215	Used for wiring of the aviation connector on the upper end of the forearm in IR-R10 and IR-R25 series 6-axis robots,with1.5m high flexible cable
	1504WU82	Used for wiring of the aviation connector on the upper end of the forearm in IR-R10-140S-INT and IR-R25 series 6-axis robots,19 Pin with 3m high flexible cable
	1504WW97	Used for wiring of the aviation connector on the upper end of the forearm in IR-R10-140S-INT and IR-R25 series 6-axis robots,19 Pin with 5m high flexible cable
	15051627	Used for wiring of the aviation connector on the upper end of the forearm in IR-R7H, IR-R10H series 6-axis robots,8 pin, with 2m cable
	15310429	Used for wiring of the aviation connector on the upper end of the forearm in IR-R7H, IR-R10H series 6-axis robots,17 pin, with 2m cable
I/O body cable : Flexible (8pin) , 5m	15310427	Used for wiring between, IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O body cable : FlexibleFlexible (8pin) , 10m	15310428	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O body cable : Non-Flexible (8pin) , 10m	1504WN06	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O cable Non-Flexible (5 m)	1504B978	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O cable 5 m - Flexible (19pin))	1504RP67	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O body cable : Flexible (19pin) ,10 m	1504RP68	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
I/O body cable : Flexible (19pin) ,15 m	1504RP69	Used for wiring between , IR-R4/4H/7H/10H/10/11/16/25 series 6-axis robots and the controller (180°).
Handheld break release box	01660004	Used to manually release the break of the robot in emergencies, applicable to all series of 6-axis robots.
Homing tool - Homing column 1	32020626	Used for homing calibration of IR-S4/7/10 and IR-TS-4/5 series SCARA robots
Homing tool - Homing column 2	32020627	Used for homing calibration of IR-S4/7/10 and IR-TS-4/5 series SCARA robots
Homing tool - Positioning block	32040084	Used for homing calibration of IR-S4/7/10 and IR-TS-4/5 series SCARA robots
Homing tool	32022076	Used for homing calibration of IR-R4/4H/7H/11/R10 (1100mm) /R10H 6Axis robots
Homing tool	32022638	Used for homing calibration of IRS311-7 6Axis robots
IR-TP200-L5-INT	01640055	Robot teach pendant (5 m)
IR-TP200-L10-INT	01640056	Robot teach pendant (10 m)
IR-TP200-L20-INT	01640057	Robot teach pendant (20 m)
IR-TP200-L30-INT	01640058	Robot teach pendant (30 m)
Robot teach pendant adapter	1504R443	TP2.0 adapter to IRCB501controller
Encoder Battery	98051002	Encoder Battery for Scara and 6Axis robots
NT100-RE-CC/CTT	72100937	CC-LINK Gateway

* If you want to buy the homing tool, homing column 1, homing column 2, positioning block are needed to buy at the same time

Teach Pendant Model

Code	Model	Description
01640055	IR-TP200-L5-INT	Robot teach pedant 2.0, 5m cable
01640056	IR-TP200-L10-INT	Robot teach pedant 2.0, 10m cable
1504R442	Adaptor	Teach Pendant Adapter, Robot teach pedant 1.0 connector to Robot teach pedant 2.0 connector

Expansion Card

Type	Code	Model	Description
IRCB501 Series IRCB501 High-Protection Series	01650025	IRCB501-2ENID-BD	2-channel differential input incremental encoder expansion card
	01650026	IRCB501-1600END-BD	General I/O expansion card with 16 inputs
	01650027	IRCB501-0016ETND-BD	General I/O expansion card with 16 NPN outputs
	01650028	IRCB501-2PN-BD	PROFINET slave expansion card
	01650030	IRCB501-FS-01-BD	Safety function expansion card
	01441093	GL20-RTU-ECT32-INT	IO Module-GL20-RTU-ECT32-INT-GL20 series EtherCAT (auto scan) communication module-PI new color
	01441085	GL20-1600END-INT	IO Module-GL20-1600END-INT-GL20 series 16-channel digital input module-PI new color
	01441069	GL20-0016ETP-INT	IO Module-GL20-0016ETP-INT-GL20 series 16-channel digital transistor PNP output module-PI new color
	01441063	GL20-0016ETN-INT	IO Module-GL20-0016ETN-INT-GL20 series 16-channel digital transistor NPN output module-PI new color
	01441089	GL20-4DA-INT	IO Module-GL20-4DA-INT-GL20 series 4-channel analog output module-PI new color IO
	01441075	GL20-4AD-INT	IO Module-GL20-4AD-INT-GL20 series 4-channel analog input module-PI new color

Naming Rules

IR - G S 4 - 40 Z15 S - * - INT

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Product Family IR: INOVANCE Robot	④ Load(kg) 4: 4kg 50: 50kg	⑦ Environment S: Standard P: High-Protection(IP67)
② Series Identification Empty: Standard Version G: High Performance Version (When Choose High Performance Version, Please contact INOVANCE technical support)	⑤ Arm length(mm) 40: Arm length 400mm 200: Arm length 2000mm	
③ Product Class S: SCARA robot TS: Inverted SCARA robot R: 6-axis robot	⑥ Maximum travel of Z-axis Empty: Without screw, 6Axis Robots Z15: The maximum stroke value is 150mm Z42: The maximum stroke value is 420mm	⑧ Customized Content Other letters: Other customization



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