





Sca TikTo QR

Scan WeChat Video

Scan WeChat Public Code Follow QKM QR Code Follow QKM QR Code Follow QKM



Head office Europe Stationsstraat 79 unit 9, Amersfoort THE NETHERLANDS Tel: +31623784453; +31642299919; Post: 3811 MH E-mail: info@qkmtech.com Web: www.qkmtech.com

Head quarter China QKM Technology (Dong Guan) Co., Ltd Tower A, Building 17, No. 1 Headquarters, No. 4 Xinzhu Road, Songshan Lake High-Tech Industrial Development Zone, Dongguan City, Guangdong Province Tel: +86 0769-27231381 Fax: +86 0769-27231381-8053 Post: 523808 E-mail: service@qkmtech.com Web: www.qkmtech.com

Version: v8.0 Release date: July 1, 2022 The pictures are for reference only and subject to the real objects. The information contained in this manual is only a brief description of products and services and shall not be viewed as a condition for solicitation, which is subject to change without notice. The data indicated in this manual is partly derived from QKM Laboratory and shall be subject to the actual use. Before installation and use of QKM robots, please carefully read the relevant instructions, which can be obtained from QKM's official website or related channels. QKM has the right to interpret the above contents to the extent permitted by law.



QKM Technology (Dong Guan) Co., Ltd



QKM is a national high-tech enterprise specializing in high-end lightweight intelligent robots. Since its establishment in 2011, QKM has the mission to provide intelligent robots, optimize labor allocation for enterprises, enhance competitiveness for independently developing software, hardware and operating systems, and break through the traditional methods of robot use. It is committed to provide customers with intelligent robot products, boost the transformation and upgrade the traditional manufacturing industry, and jointly build an ecological robot platform.

QKM has since become a frontrunner in the area of scientific and technological innovation and boasts the most complete range of lightweight products in the industry, including SCARA, Delta and Cobot. QKM aspires to spread its mission from the Guangdong-Hong Kong-Macao Greater Bay Area to South East Asia and from the Netherlands office to Europe.



QKM AIO Robot

- Floor space saving and flexible movement
- Cable length reduced and electromagnetic compatibility improved
- Guaranteed IP protection of the whole machine adapting to harsh environments
- Plug and play without complex connections





AIO design Space saving

High IP protection level



Built - in controller

Plug-and-play



configuration design



AIO Design of All Robot Series



P09

P13

SCARA Robot



P17

Co-Robot



Intelligent Craftsman and Craftsman Kits



Accessories



Delta Robot



Contents

election S Robot

AH3 SCARA ROBOT

Small and fast Sorting Assembly

■ Weighing only 17 kg

Easy installation and flexible deployment

- AIO design without separate control cabinet for space saving
- Working in a standard cycle of 0.39 s
- Repeated positioning accuracy of ± 0.01 mm
- Adopting a new generation of distributed architecture control system



AH3-0400-0204-1700 Robot appearance



Overall dimensions

Base mounting dimensions



*The screw reaches the position of the stop block



Application | Glass, new energy, 3C and other industries





laminator

inductance detection





Compressor code labeling and scanning

Loading and unloading of battery detection

Specifications

		AH3-0400		
Mod	lel	AH3-0400-0204-1700		
Number of axes		4		
Max. I	oad	3 kg		
	J1+J2	400 mm		
Arm length	J1	225 mm		
	J2	175 mm		
	J1	± 135 °		
Max. range	J2	± 145 °		
of motion	J3	170 mm		
	J4	± 360 °		
Standard	d cycle ¹	0.39 s		
Max an and	J1+J2	6020 mm/s		
of motion	J3	1200 mm/s		
	J4	3000 °/s		
Repeated	J1+J2	± 0.01 mm		
positioning	J3	± 0.01 mm		
accuracy	J4	± 0.01 °		
Allowable moment	Rated	J4:0.005 kg·m ²		
of inertia	Max	J4:0.05 kg·m ²		
Installation	method	Forward mounting		
Total w	veight	17 kg		
I/O Interface		Base panel: 28 inputs, 18 outputs; End of arm: Provide freely assignable 16-pin lines		
Communication interface		Ethernet,RS-232		
Air pipe interface		Ø6 × 1, Ø4 × 2		
Rated v	oltage	230V a.c.50/60Hz		
Rated p	power	0.5 kW		
Working en	vironment	Ambient temperature: 0 ~ 40°C; Relative humidity: 10% ~ 90% (non-condensing)		

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 1 kg (optimal travel coordinates at maximum speed).







Loading of mobile phone screen Loading and unloading of electronic Loading and unloading of PCB edge Assembling of compressor coil milling machine



Glass tracking and grasping detection



terminals



Vehicle electronic accessories lamination

AH6 SCARA ROBOT

Fast handling Precise assembly

- AIO design without separate control cabinet
- Easy installation and space saving
- Working in a standard cycle of 0.41 s
- Repeated positioning accuracy of ± 0.02 mm
- 500/600/700mm Three arm lengths to meet the needs of work in different areas
- Adopting a new generation of distributed architecture control system



AH6-0600-0204-3000 Robot appearance

Specifications

		AH6-0500 AH6-0600			AH6-0700		
Mod	lel	AH6-0500-0204-2000	AH6-0500-0204-3000	AH6-0600-0204-2000	AH6-0600-0204-3000	AH6-0700-0204-2000	AH6-0700-0204-3000
Number	of axes	4	4	4	4	4	4
Max.I	oad	6 kg	6 kg	6 kg	6 kg	6 kg	6 kg
Arm length	Total arm length	500 mm	500 mm	600 mm	600 mm	700 mm	700 mm
	J1	225 mm	225 mm	325 mm	325 mm	425 mm	425 mm
	J2	275 mm	275 mm	275 mm	275 mm	275 mm	275 mm
	J1	± 130°	± 130°	± 130°	± 130°	± 130°	± 130°
May range	J2	± 129°	± 129°	± 148°	± 148°	± 149°	± 149°
of motion	J3	200 mm	300 mm	200 mm	300 mm	200 mm	300 mm
	(Protected type) ²	(160 mm)	(260 mm)	(160 mm)	(260 mm)	(160 mm)	(260 mm)
	J4	± 360°	±360°	± 360°	±360°	± 360°	± 360°
Standard	d cycle ¹	0.41 s	0.41 s	0.42 s	0.42 s	0.43 s	0.43 s
	J1+J2	7050 mm/s	7050 mm/s	7750 mm/s	7750 mm/s	8450 mm/s	8450 mm/s
Max. speed of motion	J3	1100 mm/s	1100 mm/s	1100 mm/s	1100 mm/s	1100 mm/s	1100 mm/s
	J4	2150°/s	2150°/s	2150°/s	2150°/s	2150 °/s	2150 °/s
Repeated	J1+J2	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm
positioning	J3	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm
accuracy	J4	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°	±0.01°
Allowable moment	Rated	J4:0.01 kg•m²	J4:0.01 kg•m²	J4:0.01 kg•m²	J4:0.01 kg•m²	J4:0.01 kg•m²	J4:0.01 kg•m²
of inertia	Мах	J4:0.12 kg•m²	J4:0.12 kg•m²	J4:0.12 kg•m²	J4:0.12 kg•m²	J4:0.12 kg•m²	J4:0.12 kg•m²
Installation	method	Forward mounting	Forward mounting	Forward mounting	Forward mounting	Forward mounting	Forward mounting
Total w	veight	27 kg	27 kg	28 kg	28 kg	29 kg	29 kg
I/O Inte	erface	Base panel: 28 inputs, 18 outputs; End of arm: Provide freely assignable 16-pin lines					
Communicatio	on interface	e Ethernet,RS-232					
Air pipe	interface			Φ4 mm x1,	Ф6 mm x 2		
Rated v	oltage			230 V a.c.	50/60 Hz		
Rated p	oower			0.9	kW		
Working en	vironment		Ambient temperatur	e: 0~40°C; Relative	humidity: 10% ~ 90%	(non-condensing)	

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 1 kg (optimal travel coordinates at maximum speed). *2: For protected type, a screw protection cover assembly meeting IP65 needs to be installed.







Model	A	В	С	D	E	
AH6-0500-0204-2000	225 mm	610 mm	200 mm	424 mm	745 mm	F
AH6-0500-0204-3000	225 mm	710 mm	300 mm	424 mm	745 mm	F
AH6-0600-0204-2000	325 mm	610 mm	200 mm	492.4 mm	745 mm	F
AH6-0600-0204-3000	325 mm	710 mm	300 mm	492.4 mm	745 mm	F
AH6-0700-0204-2000	425 mm	612 mm	200 mm	559.4 mm	710 mm	F
AH6-0700-0204-3000	425 mm	712 mm	300 mm	559.4 mm	710 mm	F

Application | New energy, medical, automotive, 3C and other industries





Vehicle electronic accessories lamination

Loading and unloading of flexible vibrating plate





Loading and unloading of artificial flowers

Assembling of contact lenses

R600 mm R700 mm R700 mm



Unloading of TWS batteries



Loading and unloading of nucleic acid detection reagents



Assembling of auto parts



Display onductive fabric lamination

AH10 SCARA ROBOT

Fast handling Precise assembly

- AIO design without separate control cabinet
- Easy installation and space saving
- Load up to 10 kg, suitable for medium load handling
- 600/700/800mm Three arm lengths to meet the needs of work in different areas
- Repeated positioning accuracy of ± 0.02 mm
- Adopting a new generation of distributed architecture control system



AH10-0800-0204-4000 Robot appearance

Specifications

	AH10-0600 AH10-0700 AH10-0800		-0800					
Model		AH10-0600-0204-2000	AH10-0600-0204-4000	AH10-0700-0204-2000	AH10-0700-0204-4000	AH10-0800-0204-2000	AH10-0800-0204-4000	
Number of ax	es	4	4	4	4	4	4	
Max. load		10 kg	10 kg	10 kg	10 kg	10 kg	10 kg	
	J1+J2	600 mm	600 mm	700 mm	700 mm	800 mm	800 mm	
Arm length	J1	250 mm	250 mm	350 mm	350 mm	450 mm	450 mm	
	J2	350 mm	350 mm	350 mm	350 mm	350 mm	350 mm	
	J1	± 132°	± 132°	± 132°	± 132°	± 132°	± 132°	
	J2	± 150°	± 150°	± 150°	± 150°	± 150°	± 150°	
Max. range of motion	J3 (Protected type) ^{*2}	200 mm (180 mm)	400 mm (370 mm)	200 mm (180 mm)	400 mm (370 mm)	200 mm (180 mm)	400 mm (370 mm)	
	J4	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	
Standard cycle ¹		0.44s	0.44 s	0.43 s	0.43 s	0.43 s	0.43 s	
	J1+J2	9100 mm/s	9100 mm/s	9800 mm/s	9800 mm/s	10600 mm/s	10600 mm/s	
Max. speed of motion	J3	2400 mm/s	2400 mm/s	2400 mm/s	2400 mm/s	2400 mm/s	2400 mm/s	
	J4	2500°/s	2500°/s	2500°/s	2500 °/s	2500°/s	2500°/s	
	J1+J2	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm	
Repeated positioning	J3	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	
	J4	±0.01°	± 0.01°	± 0.01°	± 0.01°	± 0.01°	± 0.01°	
Allowable moment	Rated	J4:0.02 kg⋅m²	J4:0.02 kg⋅m²	J4:0.02 kg⋅m²	J4:0.02 kg⋅m²	J4:0.02 kg⋅m²	J4:0.02 kg⋅m²	
of inertia	Max	J4:0.25 kg ⋅ m²	J4:0.25 kg ⋅ m²	J4:0.25 kg⋅m²	J4:0.25 kg⋅m²	J4:0.25 kg⋅m²	J4:0.25 kg⋅m²	
Installation met	hod	Forward mounting	Forward mounting	Forward mounting	Forward mounting	Forward mounting	Forward mounting	
Total weight		50 kg	50 kg	50 kg	50 kg	50 kg	50 kg	
I/O Interface	•	Base panel: 28 inputs, 18 outputs; End of arm: Provide freely assignable 16-pin lines						
Communication in	terface	Ethernet,RS-232,RS-485						
Air pipe interfa	ace	Φ4×1,Φ6×2						
Rated voltage	e			230 V a.c	. 50/60 Hz			
Rated power	r			1.8	kW			
Working environ	ment		Ambient tempera	ature: 0~40°C; Relative	e humidity: 10% ~ 90%	(non-condensing)		

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 2 kg (optimal travel coordinates at maximum speed). *2: For protected type, a screw protection cover assembly meeting IP65 needs to be installed.





Model	A	В	С	D	E
AH10-0600-0204-2000	200	785.5	250	517	R600
AH10-0600-0204-4000	400	985.5	250	517	R600
AH10-0700-0204-2000	200	785.5	350	585	R700
AH10-0700-0204-4000	400	985.5	350	585	R700
AH10-0800-0304-2000	200	785.5	450	650.5	R800
AH10-0800-0304-4000	400	985.5	450	650.5	R800

Application | Food, hardware, daily chemical and other industries





Packing of food in barrels

Packing of wet tissue in boxes



Loading of lithium battery secondary sealing machine

AH20 SCARA ROBOT

Heavy load Large arm spread Fast handling

- AIO design without separate control cabinet Easy installation and space saving
- Load up to 20 kg, suitable for large load handling
- 850/1050mm Two arm lengths for wide working area coverage
- Protection grade of IP65 (equipped with a screw protection cover assembly), suitable for dusty environment with many water drops, easy to wash



Specifications

		AH20)-0850	AH20-1050		
Mode	əl	AH20-0850-0204-2000	AH20-0850-0204-4000	AH20-1050-0204-2000	AH20-1050-0204-4000	
Number of axes		4	4	4	4	
Max. Io	bad	20 kg	20 kg	20 kg	20 kg	
	Total arm length	850 mm	850 mm	1050 mm	1050 mm	
Arm length	J1	400 mm	400 mm	600 mm	600 mm	
	J2	450 mm	450 mm	450 mm	450 mm	
	J1	± 131°	± 131°	± 131°	± 131°	
	J2	± 152°	± 152°	± 152°	± 152°	
of motion	J3	200 mm	400 mm	200 mm	400 mm	
	$(Protected type)^{*2}$	(180 mm)	(370 mm)	(180 mm)	(370 mm)	
	J4	± 360°	± 360°	± 360°	± 360°	
Standard cycle ¹		0.44 s	0.44 s	0.48 s	0.48 s	
	J1+J2	11000 mm/s	11000 mm/s	12250 mm/s	12250 mm/s	
Max. speed	J3	2400 mm/s	2400 mm/s	2400 mm/s	2400 mm/s	
of motion	J4	1600 °/s	1600 °/s	1600 °/s	1600 °/s	
Repeated	J1+J2	± 0.025 mm	± 0.025 mm	± 0.025 mm	± 0.025 mm	
positioning	J3	± 0.01 mm	± 0.01 mm	± 0.01 mm	± 0.01 mm	
accuracy	J4	± 0.01°	± 0.01°	± 0.01°	± 0.01 °	
Allowable moment	Rated	J4: 0.05 kg ⋅ m²	J4: 0.05 kg ⋅ m²	J4: 0.05 kg ⋅ m²	J4: 0.05 kg ⋅ m²	
of inertia	Max	J4: 0.45 kg ⋅ m²	J4: 0.45 kg ⋅ m²	J4: 0.45 kg ⋅ m²	J4: 0.45 kg ⋅ m²	
Installation	method	Forward mounting	Forward mounting	Forward mounting	Forward mounting	
Total we	eight	56 kg	56 kg	63 kg	63 kg	
I/O Inte	rface	28 inputs, 18 outputs				
Communication	n interface	Ethernet, RS-232, RS-485				
Air pipe ir	nterface	φ4 mmx1, φ6 mmx2				
Rated vo	oltage	230 Va.c1pH 50/60 Hz				
Rated p	ower		0.8	kW		
Working env	rironment	Ambient tempe	erature: 0~40°C; Relat	tive humidity:≤ 95% (n	on-condensing)	

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 2 kg (optimal travel coordinates at maximum speed). *2: For protected type, a screw protection cover assembly meeting IP65 needs to be installed.

Base mounting dimensions











Model	A	В	С	D	E
AH20-0850-0204-2000	200	795	85	940	400
AH20-0850-0204-4000	400	795	85	940	400
AH20-1050-0204-2000	200	995	98	980	600
AH20-1050-0204-4000	400	995	98	980	600





Tracking and sorting of football pieces



Loading and unloading of metal bookshelf assembly

Loading and unloading of wheel hub stacking



Workspace

AH20-0850-0204-2000-Workspace



AH20-1050-0204-2000-Workspace



Application | Food, daily chemical, new energy, hardware, automotive, chemical and other industries

Packing of wet tissue in boxes





Tracking and sorting of emulsion explosives

HM Series Ultra high-speed 2-axis Robot

Ultra high-speed High rigidity High cost-effectiveness

- Ultra high-speed in a standard cycle of 0.17s
- Protection grade of IP65
- AIO design without separate controller
- Available options of Z/U axis and fixture positioner
- Visual accessories compatible with third-party vision are provided
- Intelligent robot operating software





Specifications

		н	М	
Model		HM3-0800-0652-0000	HM8-0500-0652-0000	
Numb	er of axes ^{*2}	2	2	
Ма	x. load	3 kg	8 kg	
	J1+J2	800 mm	500 mm	
Arm length	J1	425 mm	250 mm	
	J2	375 mm	250 mm	
Max. range	J1	± 132 °	± 135°	
of motion	J2	± 135°	± 140 °	
Stand	ard cycle ^{*1}	0.17 s	0.19s	
Max.speed of motion	J1+J2	11000 mm/s	7000 mm/s	
Repeated positioning accuracy	J1+J2	± 0.04 mm	± 0.03 mm	
Installat	tion method	Forward mounting	Forward mounting	
Tota	l weight	36 kg	35 kg	
I/O	Interface	Base panel: 28 inputs, 18 outputs;		
Communication interface		Ethernet, RS-232, RS-485		
Air pipe interface		-		
Rate	d voltage	230 V a.c. 50/60 Hz		
Rate	d power	1 kW		
Working	environment	Ambient temperature: 0~40°C; Relativ	ve humidity:10%~90% (non-condensing)	

*1: The time for back-and-forth plane motion (horizontally 305 mm) in a cycle under load of 1kg (optimal travel coordinates at maximum speed). *2: QKM provides third-axis and fourth-axis integrated options, which can be extended to the fourth-axis. All interfaces and software platforms can be employed universally. Customer-defined Z-axis + U-axis options are supported, and local sales personnel are consulted for specific technical specifications.

Overall dimensions





Application | Electronics, environmental protection, food and other industries





Screw turning

Gluing



Model	А	В	С
HM3-0800-0652-0000	425	375	1070
HM8-0500-0652-0000	250	250	770



Soldering

High-speed sorting and handling

AP3X Delta Robot

High-speed sorting expert

- Faster working rhythm, in a standard cycle of 0.27s, 23% faster than old models
- Using silent parts with lower noise by 70 dB when running
- Better heat dissipation design equipped with intelligent temperature monitor to ensure that the robot can run at high speed even at a high temperature of 40 degrees
- AIO design with built-in control cabinet, highly integrated controller and servo drive for easy installation and space saving
- Electrical control devices integrated in base with protection grade of IP65 for the whole machine



AP3X-1600 Robot appearance





Overall dimensions and workspace



Application | Food, daily chemical, 3C, environmental protection and other industries





Packing of moon cakes in boxes

Stacking of canned tuna





Sorting of mobile phone cover glass

Sorting of waste

Specifications

		AP3X	-1600	
Model		AP3X-1600-1653	AP3X-1600-1654	
Number o	of axes	3	4	
Max. I	oad	3	٨g	
	Diameter	1600) mm	
Max. range	Vertical Height	350 mm	350 mm	
	Rotation Angle	-	± 360 °	
Standard	l Cycle ¹	0.27 s	0.28 s	
Repeated positioning accuracy		± 0.1 mm		
Angular repeated positioning accuracy		-	± 0.2 °	
Allowable moment	Rated	-	0.01 kg • m²	
of inertia	Мах	-	0.03 kg • m²	
Installation	method	Inverted mounting		
Total w	reight	133 kg	138 kg	
IP protection grade		IP65		
I/O Interface		28 inputs, 18 outputs		
Communication interface		Ethernet, RS-232, RS-485		
Rated v	oltage	230 V a.c. 50/60 Hz		
Rated	power	2 kW		
Working en	vironment	Ambient temperature: 0 ~ 40°C; Relative humidity:≤ 95% (non-condensing)		

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 1 kg (optimal travel coordinates at maximum speed). *2: I/O expansion can be performed via Modbus TCP protocol.



Model	А	В	С	D	E
AP3X-1600-1653	841 mm	265 mm	85 mm	Ф1600	Φ1440
AP3X-1600-1654	859 mm	265 mm	85 mm	Ф1600	φ1440



Capping of wet tissue boxes





Feeding of plastic pipe bending



Sorting of detergent bottles Loading and unloading of PCB boards

AP8X Delta Robot

Large load sorting expert

- Fast speed with a standard cycle of 0.27s, flexibly applied to precision assembly, sorting and packaging
- AIO design with highly-integrated controller and with no separate control cabinet
- High positioning accuracy with a repeated positioning accuracy of ± 0.1 mm meeting most applications
- Complete closed structure with high protection class of IP65 suitable for cleaning with detergent and water
- Versatile extension with high openness and flexibility for secondary development



AP8X - 1600 - 1654 Robot appearance



Overall dimensions and workspace



Application | Food, daily chemical, 3C, environmental protection and other industries





Packing of moon cakes in boxes

Stacking of canned tuna





Sorting of mobile phone cover glass

Sorting of waste

Specifications

		AP8X-1130		AP8X-1600	
Model		AP8X-1130-1653	AP8X-1130-1654	AP8X-1600-1653	AP8X-1600-1654
Number of axe	es	3	4	3	4
Max. load		8 kg			
	Diameter	1130 mm		1600 mm	
Max. range of motion	Vertical Height	300 mm		350 mm	
	Rotation Angle	-	±360°	-	±360°
Standard Cycl	e ^{*1}	0.25s	0.27 s	0.26 s	0.3 s
Repeated positioning accuracy		±0.1mm			
Angular repeated positioning accuracy		-	±0.4°	-	±0.4°
Allowable moment of inertia	Rated	-	0.1 kg •m²	-	0.1 kg •m²
	Max.	-	0.15 kg •m²	-	0.15 kg •m²
Installation method		Inverted mounting			
Total weight		132 kg	137 kg	133 kg	138 kg
IP protection grade		IP65			
I/O Interface		28 inputs, 18 outputs			
Communication Interface		Ethernet, RS-232, RS-485			
Rated Voltage		230 V a.c. 50/60 Hz			
Rated Power		2 kW			
Working Environment		Ambient temperature: 0~40°C; Relative humidity:≤95% (non-condensing)			

*1: The time for back-and-forth arch motion (horizontally 305 mm and vertically 25 mm) in a cycle under load of 1 kg (optimal travel coordinates at maximum speed). *2: I/O expansion can be performed via Modbus TCP protocol.



AP8X-1600-1653 end mounting dimensions



AP8X-1600-1654 end mounting dimensions



Model	А	В	С	D	E
AP8X-1130-1653	588 m m	222 mm	78 mm	967 m m	1130 mm
AP8X-1130-1654	606 mm	222 mm	78 mm	967 mm	1130 mm
AP8X-1600-1653	841 mm	265 mm	85 mm	1440 mm	1600 mm
AP8X-1600-1654	859 mm	265 mm	85 mm	1440 mm	1600 mm







Capping of wet tissue boxes Feeding of plastic pipe bending



Sorting of detergent bottles Loading and unloading of PCB boards

Appearance size

۲

MS6MT Co-Robot Multiple degrees of freedom Human-machine collaboration ■ Weighing 21 kg with flexible deployment of mechanical arms within half a day on average to perform new tasks ■ 12 hollow wires are attached at the end of robot to prevent tools and cables from entanglement ■ A friction brake is installed, and the end will not fall when powered off ■ Dragging teaching for easy work





Workspace

Specifications

		MS6MT	
Model		MS6MT-0900-3546	
Number of axes		6	
Max. load		6 kg	
Arm lengt	h	962 mm	
	J1	± 360°	
	J2	± 360°	
Max range of motion	J3	± 360°	
Max. range or motion	J4	± 360°	
	J5	± 360°	
	J6	± 360°	
Maximum resultar	nt speed	1000 mm/s	
	J1	150°/s	
	J2	150°/s	
Man and after the	J3	100°/s	
Max. speed of motion	J4	180°/s	
	J5	180°/s	
	J6	180°/s	
Repeated positioning	g accuracy	± 0.1 mm	
Installation method		Forward mounting, Wall mounting, Inverted mounting	
Total weight		21 kg	
IP Protection class		IP54	
I/O Interface		14 inputs,14 outputs	
Communication interface		Ethernet, RS-232	
Rated voltage		DC 48V	
Rated power		0.5 kW	
Working environment		Ambient temperature: -10 ~ 50°C; Relative humidity: ≤ 95% (non-condensing)	



Application | Catering, medicaland other industries





Unattended food delivery





Horizontal workspace (Unit: mm)





Laboratory automation



Cultural performance

Intelligent Tightening Craftsman

Tobot (Task-Oriented Robot)

Fast import Quick changeover Economical and practical

- Various screwdriving faces adaptive
- Modular design
- Flexible deployment



Specifications

Basic Version				
Model	TM8-BH-060			
Electric screwdriver model1	SSW DP-SDL-900			
Electric screwdriver torque induction	Servo control			
Standard vision system	Yes			
Screw feeding mode	Hose blowing			
Screw ratio of lightcht to diameter	>2			
Suitable screw diameter	M 2~M 4			
Tightening torque range	0.1 N.m~0.9 N.m			
Standard cycle time	0.3 S			
Screw feeding efficiency	0.35 S			
Program-controlled tightening	Yes			
Torque digitally displayed	Yes			
Working range ²	Radius 600 mm			
Height of work face (from the ground) 3	700 ~1000 mm			
Power	2.2 kW			
Z-axis travel	120 mm			
Float perception	Yes			
Screw loose perception	Yes			

*1: Users can specify the brand and model of electric screwdrivers.

*2: It indicates the working radius of the electric screwdriver head based on the robot's origin.

*3: The working height can be customized.

Appearance size





Varied Options for Quick and Convenient Building of New Equipment



Flexible Deployment and Diverse Production Methods







Floor mopping robot screwdriving

Industrial camera screwdriving







Application | 3C, automotive electronics, home appliances, toys, power tools and other industries





Outdoor power enclosure screwdriving

Panel type

Flexible Vibrating Plate

Flexible vibrating plate is developed by QKM for flexible feeding of thin-sheet, shaped and silica-gel workpieces, and achieves identification and positioning of workpieces combined with vision to meet needs of feeding small-batch and multi-variety products. It has the following features:

- Flexible feeding
- Quick changeover
- Low working noise
- Integrated control with storage bin and vibrating



Hole

*Panels can be customized and replaced according to the shape of the work material

Specifications

	Storaç	je Bin Specifica	tions	
	Model	QFA-2L	QFA-3L	QFA-4L
	Bin length A	240 mm	240 mm	260 mm
<u>۵</u>	Bin width B	180 mm	210 mm	240 mm
	Bin depth C	70 mm	80 mm	80 mm
	Total length L	400 mm	400 mm	400 mm
	Total width B/W	180/200 mm	210/200 mm	240/200 mm
	Total height H	280 mm	290 mm	290 mm
	Power	120 W	120 W	120 W
	Storage volume	2 L	3 L	4 L
	Amplitude	±1 mm	±1 mm	±1 mm
	Weight	25 kg	28 kg	30 kg
0 0 0 0	Bin material	304 Stainless steel / antistatic material / PO		material / POM
	Electrical parameter	AC 15 V-2A (3-core aviation plug input)		
	Vibration frequency	10~40Hz		
	Debugging software communication method	Standard 485 serial port (Modbus-Rtu Protoco (4-core aviation plug)		us-Rtu Protocol)
	External trigger mode	Passive I/O signal trigger (12-core aviati		re aviation plug)
W	Material shortage detection	With mater	ial shortage se	ensor alarm
oduct Features				

Specifications





	Flexible V	ibrating Plate	Specification	ıs	
Model	QFF-2016	QFF-2620	QFF-3224	QFF-3929	QFF-4735
Plate length A	200 mm	260mm	320mm	390 mm	470 mm
Plate width B	160 mm	200 mm	240 mm	290 mm	350 mm
Plate depth C	20 mm	25 mm	30 mm	35 mm	40 mm
Total length L	340 mm	445 mm	505 mm	575 mm	655 mm
Total width W	185 mm	225 mm	265 mm	315 mm	375 mm
Total height H	135 mm	150 mm	150 mm	150 mm	150 mm
Power	90 W	120 W	120 W	120 W	120 W
Vibration load	0.5 kg	1.5 kg	1.5 kg	1.5 kg	1.5 kg
Amplitude	±1mm	±5mm	±5mm	±5mm	±5mm
Weight	5 kg	6 kg	8 kg	10 kg	12 kg
Customizable panel structure	Plate / Hole / Groove / Teeth / Custom				
Electrical parameter	DC input 24V-16.5 A				
Electrical parameter- Storage bin	AC 15V~20V (3-core aviation plug output)				
Backlight color	Standard white, Optional red/blue/green				
Debugging software communication method	Standard 485 serial port (Modbus-Rtu Protocol)(4-core aviation plug)				
External trigger mode	Passive I/O signal trigger (12-core aviation plug)				
/isual positioning system			Qvision		

- Fast deployment, input and output interfaces arranged at the side of vibrating plate, plug-and-play, production changeover in 5 minutes.
- Simple maintenance, friendly UI interaction, and on-site maintenance available.
- The working parameters of the flexible vibrating plate can be automatically adjusted to be optimal at production changeover.
- 2 working modes, suitable for various application scenarios.
- High performance-price ratio.

Application | 3C, hardware, acoustics, toys, injection molding and other industries



Sorting of IC components

Sorting of SIM card slots







Sorting of screws



Sorting of medical consumables

Accessories QD1 I/O Extension module

The QD1 I/O expansion module is a compact digital I/O module that can add more optocouplerisolated signals to the main controller. The QD1 module has dual network ports, with its own routing and forwarding function, and can be flexibly and freely networked with the main controller through two network structures of cascade or daisy chain topology.



QD1-01-3232 Module appearance

Accessories

Relay terminal blocks are provided, and bonding wires are not required when using robot I/O resources, for convenient operation. High-quality cables and plugs with multi-layer shielding, low impedance and good anti-interference are provided to ensure the high reliability of data transmission.

Specifications

Model	QD1-01-3232	QD1-01-1616
Dimensions	260 mm(L)*110 mm(W)*140 mm(H)	180 mm(L)*110 mm(W)*140 mm(H)
Input/output channel	32 input / 32 output	16 input / 16 output
Interface speed	10/100 M	adaptive
Interface type	RJ 45	5(X2)
Input mode	PNP / NPN configurable, default NPN	
Input signal "0"	0~5 V	
Input signal "1"	15~28 V	
Output mode	NPN	
Output drive capability	200 mA (continuous)	
Rated input voltage	24 V DC(20.4~28.8 V DC)	



Product Features

■ Various buses, support Modbus TCP bus protocol.

- Flexible extension, support multi-slave station cascaded topology.
- Stable and reliable, I/O channels are completely isolated from the system with strong anti-interference ability; each I/O channel has power protection function and is equipped with input and output indicators.

High integration, small size, easy to install and use.

*1: Requires connection to conversion module

Specifications

Model	I/O Terminal module
Dimensions (outer edge of the module)	117mm * 86mm * 32mm
Rated voltage	30VDC
Rated current	1A
Connector	D-Sub Female 62P
Terminal wiring specification (spring terminal)	Max. 1.5 mm2 (26 ~ 16 AWG)
Stripping length	9~10mm
Operating temperature	-20°C~+55°C
Storage temperature	-40°C~+70°C

DB 62 male to male cable





Product Features

Achieving the one-to-one transfer of signals between the D-sub Female connector and terminals.
Optimizing electronic control assembly, improving efficiency and saving space.
35mm U-shaped rail mounting or mounting with M4 screw.
Protection grade of IP65, suitable for dusty environment with many water drops, easy to wash.



Terminal module appearance





Conveyor Tracking

idely used in industrial manufacturing, food, pharmaceutical and other ir

Conveyor tracking refers to the process in which the robot establishes a synchronization relationship between it and the conveyor through the conveyor encoder when the conveyor does not stop, so as to support picking up workpieces from the moving conveyor.

Multiple robots or conveyors are supported simultaneously based on machine vision or sensors.



Content

1: Conveyor tracking management 2: Conveyor Tracking Management User Manual

Hardware Specifications

- 1: Encoder cable
- 2: High-speed latch cable
- 3: Encoder type: Incremental encoder
- 4: Input signal: Conveyor latch input

Conveyor Tracking Performance

Repeated positioning accuracy of tracking ¹			
Conveyor speed[mm/s]	Repeated positioning accuracy [mm]		
200	1		
350-750	1.5		

*1: The repeated positioning accuracy of each position when the conveyor moves at a constant speed depends on the accuracy of the conveyor and its calibration, and it also has strong adaptability to variable speed conveyor.

Functional Specification

1: Workpiece input method: Vision or photoelectric sensor.

2: Visual data type: Robot coordinates, communicate with third-party vision, support custom communication / interaction logic.

3: Tracking area: Customizable tracking area (upper limit, lower limit, stop line).

4: Number of conveyors equipped for each robot: 4, and 4 conveyors can be enabled at most.

5: Each conveyor can convey materials for multiple robots (output source): Up to 4 robots can be assigned.

6: Workpiece type: Multiple custom types of workpieces can be set up on the same conveyor.

7: Workpiece processing: De-duplication and sorting by itself, support custom sorting of workpieces, and support customized workpiece information.

8: Object storage queue length: 500.

Flying Shot

When the robot moves to the photographing area, its internal algorithm will trigger the camera to shot dynamically and continuously using the high-speed IO signal, and at the same time, the actual photographing position will be latched at high speed. Position correction can be achieved based on the position data returned by the camera and the high-speed latched position of the robot. Production efficiency can be improved through machine vision flying shot technology. Up to 4 visions can be used simultaneously according to the communication mode of the robot.

Diagram of QKM Swift robot flying shot system



Vision

1: Flying shot sample code

2: Flying shot management

Hardware Specifications

- 1: Encoder cable
- 2: High-speed latch cable

3: Input signal: Robot high speed IO

Functional Specifications

1: Switching between static and dynamic shots.

2: Dynamic matching of robot speed: Can be defined based on the set robot's motion speed.

3: Flying shot correction: Set a fixed trajectory to enable the robot to pass over the

flip-chip camera. When the robot passes the flip-chip camera, it will be shot. 4: A single robot supports up to 4 visual flying shots.

5: 6 workpieces are supported in a single flying shot.

Flying Shot Accuracy in the Final Application of the Process

1: Repeated positioning accuracy of ± 0.03 mm for placement after static image correction. 2: Repeated positioning accuracy of ±0.05 mm for placement after dynamic image correction.

Videly used in 3C, electronic components and other industrie



Cities reachable within half a day Dongguan, Shenzhen, Guangzhou, Shanghai, Suzhou, Ningbo, Changsha

Other areas reachable within one day