



Digitized Automation for a Changing World

Delta Industrial Robots



www.deltaww.com



Delta Industrial Robots

Delta's industrial robots can easily combine peripheral devices to build a quick, flexible, and highly precise automated production line. The robots' work significantly lowers labor and time cost, while optimizing production quality and efficiency.

To fulfill the needs of various industry applications and production processes, Delta continues to provide integrated and competitive solutions as part of our "Automation for a Changing World".

SCARA Robot

DRS Series

- Excellent precision, linearity and verticality
- Sensor-less compliance control
- Multiple teaching methods and intuitive guidance

Applications

Consumer Electronics
Electronics/Electric | Food Processing
Rubber & Plastics | Metal Fabrication



Glue Dispensing



Screw Driving



Soldering



Inspection



Assembly/Pick-and-Place

Articulated Robot

DRV Series

- High flexibility
- Hollow wrist
- Multiple installations
- User-friendly interface

Applications

Consumer Electronics
Electronics/Electric | Food Processing
Rubber & Plastics | Metal Fabrication



Insertion



Screw Driving



Soldering



Inspection





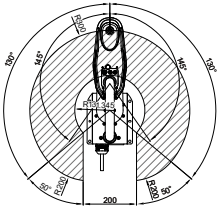
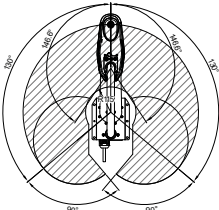
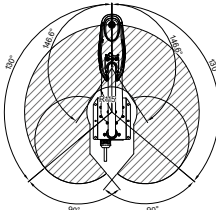
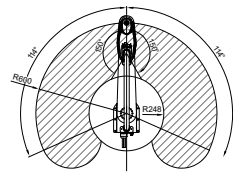


Pick-and-Place





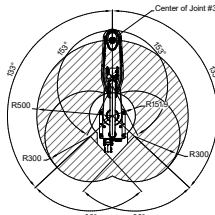
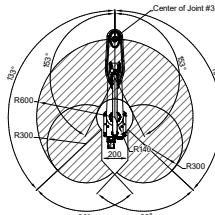
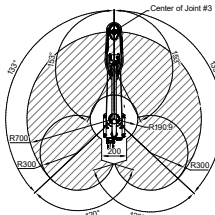
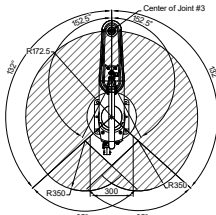


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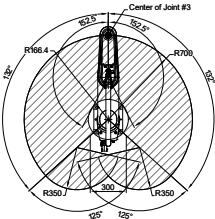
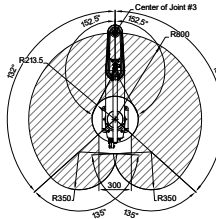
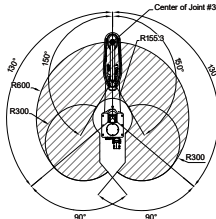
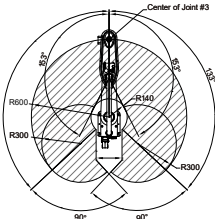
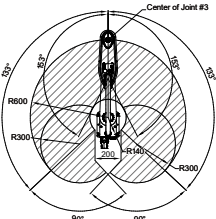
SCARA Robots

Model Name	DRS30L3SS1BN002	DRS40L3SS1BN002	DRS40C4SS1BN002	DRS60L3SS1BN002
Image				
Range of Motion	 J1 axis mechanical stopper position: $\pm 133^\circ$ J2 axis mechanical stopper position: $\pm 146.5^\circ$	 J1 axis mechanical stopper position: $\pm 133^\circ$ J2 axis mechanical stopper position: $\pm 148.3^\circ$	 J1 axis mechanical stopper position: $\pm 133^\circ$ J2 axis mechanical stopper position: $\pm 148.3^\circ$	 J1 axis mechanical stopper position: $\pm 114^\circ$ J2 axis mechanical stopper position: $\pm 150^\circ$
Number of Axis	4			
Max. Working Range	300 mm	400 mm		600 mm
Rated/Max. Payload	1 kg / 3 kg		1 kg / 4 kg	1 kg / 3 kg
Motion Range	J1	$\pm 130^\circ$		$\pm 114^\circ$
	J2	$\pm 145^\circ$	$\pm 146.6^\circ$	$\pm 148^\circ$
	J3	150 mm		
	J4	$\pm 360^\circ$		
	J5	-		
Max. Speed	J1	4,058 mm/s	4,710 mm/s	4,050 mm/s
	J2	1,250 mm/s		1,250 mm/s
	J3	1,250 mm/s		1,110 mm/s
	J4	1,875° / s		
	J5	-		
Standard Cycle Time	0.39 s*1	0.42 s*1	0.5 s*1	0.72 s*1
Tolerant Inertia	Rated	0.0091 kg·m ²		0.0091 kg·m ²
	Max.	0.075 kg·m ²		0.075 kg·m ²
Repeatability (J1 + J2)	± 0.010 mm		± 0.015 mm	
Rating	IP20			
Weight	16 kg			22 kg
Controller	DCS-1D00			

SCARA Robots


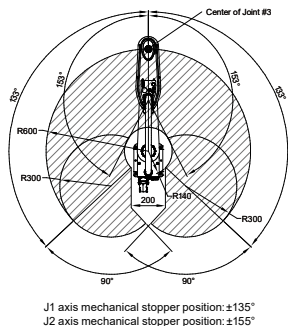
Model Name	DRS50L6SS1BN002	DRS60L6SS1BN002	DRS70L6SS1BN002	DRS60LCSS1BN002
Image				
Range of Motion	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 155^\circ$	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 155^\circ$	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 155^\circ$	 J1 axis motion range: $\pm 132^\circ$ mechanical stopper position: $\pm 135^\circ$ J2 axis motion range: $\pm 152.5^\circ$ mechanical stopper position: $\pm 155^\circ$
Number of Axes	4			
Max. Working Range	500 mm	600 mm	700 mm	600 mm
Rated/Max. Payload	2 kg / 6 kg			5 kg / 12 kg
Motion Range	J1	$\pm 133^\circ$		$\pm 132^\circ$
	J2	$\pm 153^\circ$		$\pm 152.5^\circ$
	J3	200 mm (300 mm)* ³		200 mm (420 mm)* ³
	J4	$\pm 360^\circ$		
	J5	-		
Max. Speed	J1	4,400 mm/s	5,000 mm/s	5,500 mm/s
	J2			7,100 mm/s
	J3	1,100 mm/s		1,180 mm/s
	J4	2,000°/s (600°/s)* ⁴		1,025°/s
	J5	-		
Standard Cycle Time	0.39 s* ¹		0.40 s* ¹	0.43 s* ²
Tolerant Inertia	Rated	0.01 kg-m ² (0.07 kg-m ²)* ⁴		0.02 kg-m ²
	Max.	0.023 kg-m ² (0.5 kg-m ²)* ⁴		0.25 kg-m ²
Repeatability (J1 + J2)	± 0.015 mm		± 0.025 mm	
Rating	IP20			
Weight	18.5 kg	20 kg		42 kg
Controller	DCS-1D00			DCS-1M00

Notes: *1. When carrying a payload of 1 kg and reciprocating 25 mm in vertical and 300 mm in horizontal directions under an operating temperature of 25°C and within a
*2. When carrying a payload of 2 kg and reciprocating 25 mm in vertical and 300 mm in horizontal directions under an operating temperature of 25°C and within a
*3. Models with specific z-axis length
*4. High inertia models





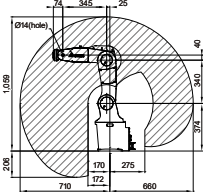
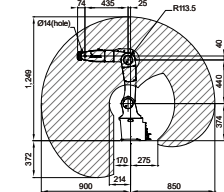
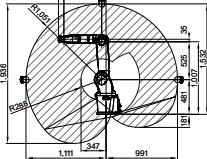
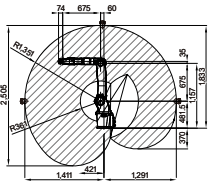
DRS70LCSS1BN002	DRS80LCSS1BN002	DRS60H6SS1BN002	DRS60L3SS1BN502	DRS60L6SN1BN302
				
 J1 axis motion range: $\pm 132^\circ$ mechanical stopper position: $\pm 135^\circ$ J2 axis motion range: $\pm 152.5^\circ$ mechanical stopper position: $\pm 155^\circ$	 J1 axis motion range: $\pm 132^\circ$ mechanical stopper position: $\pm 135^\circ$ J2 axis motion range: $\pm 152.5^\circ$ mechanical stopper position: $\pm 155^\circ$	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 153^\circ$	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 155^\circ$	 J1 axis mechanical stopper position: $\pm 135^\circ$ J2 axis mechanical stopper position: $\pm 155^\circ$
4			5	3
700 mm	800 mm		600 mm	
5 kg/12 kg		2 kg/6 kg	1 kg/3 kg	2 kg/6 kg
$\pm 132^\circ$		$\pm 130^\circ$	$\pm 133^\circ$	
$\pm 152.5^\circ$		$\pm 150^\circ$	$\pm 153^\circ$	
200 mm (420 mm)*3			200 mm	
$\pm 360^\circ$				
-			$\pm 360^\circ$	-
7,700 mm/s	8,300 mm/s		5,000 mm/s	
1,180 mm/s			1,100 mm/s	
1,025°/s			2,000°/s	
-			600°/s	-
0.45 s*2	0.47 s*2	0.39 s*1	0.45 s*1	0.39 s*1
0.02 kg-m ²		0.01 kg-m ²		NA
0.25 kg-m ²		0.023 kg-m ²		NA
± 0.025 mm		± 0.015 mm		
IP20				
42 kg	43 kg	23 kg	21 kg	20 kg
DCS-1M00		DCS-1D00		

humidity of 45~65% RH (non-condensing).
 humidity of 45~65% RH (non-condensing).

Screw Driving Robots

Model Name		RS-AFS60L _01	RS-AFS60L _02	RS-AFS60L _04	RS-AFS60L _05	RS-AFS60L _06	
		_ = Number of axis, A=3 axis, B=4 axis,					
Image							
Range of Motion							
Delta SCARA Robot	Max. Working Range		600 mm				
	Max. Speed	J1 + J2	5,000 mm/sec				
		J3	1,100 mm/sec				
		J4	600°/s (4-axis models only)				
	Range of Motion	J1	± 133°				
		J2	± 153°				
		J3	200 mm				
		J4	± 105° (4-axis models only)				
Repeatability	J1 + J2	± 0.015 mm					
	J3	± 0.01 mm					
	J4	± 0.01 mm (4-axis models only)					
Net Weight		20 kg					
Screw Driving Robot Module	Torque (kgf·cm)		0.5~1.8	1.50~9	6~25	10~43	
	Torque (N·m)		0.05~0.17	0.15~0.88	0.58~2.45	0.98~4.2	
	Max. Speed (rpm)	3-axis	2,000			1,200	1,000
		4-axis	1,200			1,000	600
	Dimensions (L×W×H, mm)		250×57×63			318×57×63	
	Weight (kg)		1	1.2	1.7		
	Screw Size	Diameter	M1.2-M2	M2-M3		M2.5-M4	M3-M5
Bit		Ø4	Ø5	Hex 1/4"			
Ambient Temperature		5°C~40°C					
Storage Temperature		-20°C~55°C					
Humidity		0~90%RH (non-condensing)					

Articulated Robots

Model Name	DRV70L7A6313N	DRV90L7A6313N	DRVA1L7B6113N	DRVA4L7B6113N	
Image					
Range of Motion					
Number of Axes	6				
Max. Working Range	710 mm	900 mm	1,111 mm	1,411 mm	
Max. Payload	7 kg				
Motion Range	J1	± 170°			
	J2	+ 133° / - 105°	+ 135° / - 105°		
	J3	+ 65° / - 205°		+ 62° / - 205°	
	J4	± 190°			
	J5	± 120°			
	J6	± 360°			
Max. Speed	J1	450°/sec	370°/sec	240°/sec	200°/sec
	J2	340°/sec	260°/sec	220°/sec	165°/sec
	J3	510°/sec	410°/sec	295°/sec	220°/sec
	J4	550°/sec		465°/sec	
	J5	550°/sec		480°/sec	
	J6	820°/sec		705°/sec	
Max. Resultant Speed	11,000 mm/sec	10,600 mm/sec	9,400 mm/sec	9,100 mm/sec	
Standard Cycle Time	0.32 sec	0.35 sec	0.48 sec	0.54 sec	
Max. Tolerant Inertia	J4	0.47 kg·m ²			
	J5	0.47 kg·m ²			
	J6	0.15 kg·m ²			
Tolerant Torque	J4	16.6 N.m			
	J5	16.6 N.m			
	J6	9.4 N.m			
Repeatability	± 0.02 mm	± 0.03 mm	± 0.04 mm	± 0.05 mm	
IP Rating	IP40 (IP65 Optional)		IP65 (Standard)		
Weight	37 kg	39 kg	76 kg	82 kg	
Controller	DCV-2J00-AA		DCV-2J01-AA		

Robot Controllers

DCS-1D00



- For Delta SCARA robots-general models
- IP20
- Single-phase : 200 - 230V_{AC} + PE, 5A
- 22 - 26V_{DC}, 5A
- Ethernet, DMCNET, RS-232, RS-485, I/O, Encoder, USB, Ext. Encoder
- W175 × H300 × D159 mm/5.6 kg

DCS-1M00



- For Delta SCARA robots-high payload models
- IP20
- Single-phase : 200 - 230V_{AC} + PE, 10A
- 22 - 26V_{DC}, 5A
- Ethernet, DMCNET, RS-232, RS-485, I/O, Encoder, USB, Ext. Encoder
- W175 × H300 × D159 mm/5.6 kg

DCS-1B00-CA



- For Delta SCARA robots-CE / CR / KCs certified models
- IP20
- Single-phase : 200 - 230V_{AC} + PE, 10A
- Ethernet, DMCNET, RS - 232, RS - 485, I/O, Ext. Encoder
- W381 × H453 × D268 mm/20 kg

DCV-2J00-AA DCV-2J01-AA



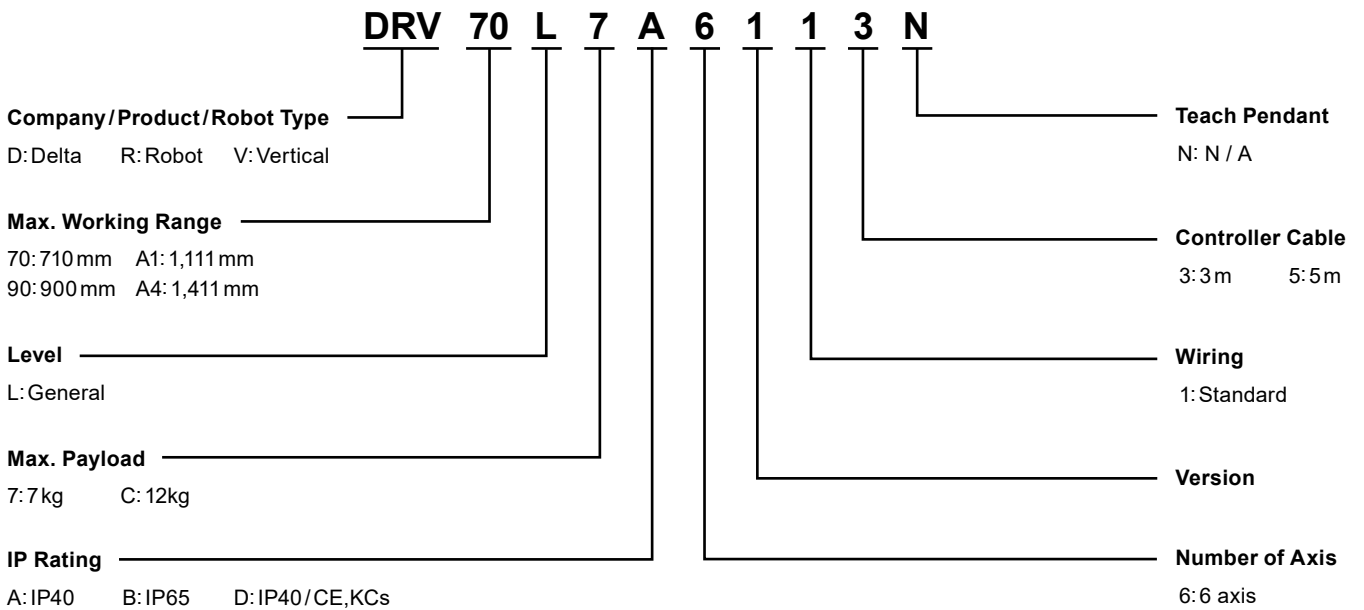
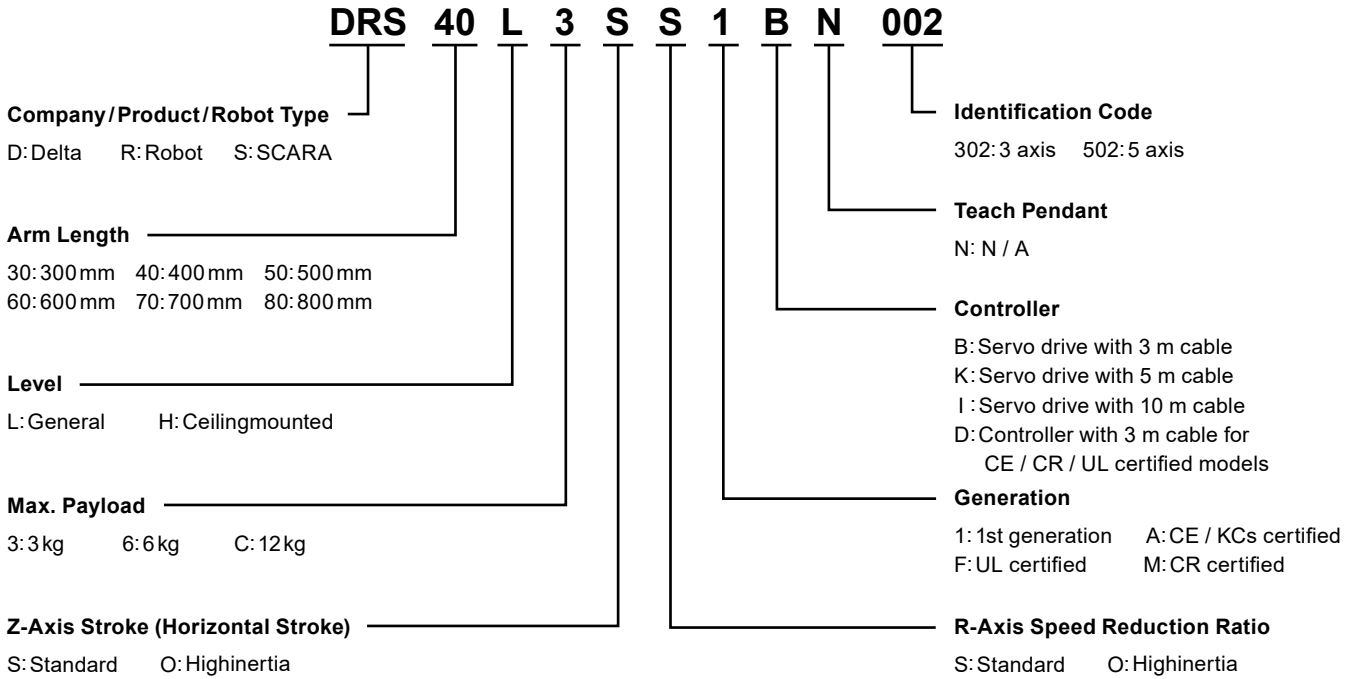
- For Delta articulated robots
- IP20
- Single-phase : 200 - 230V_{AC} + PE, 15A
- Ethernet, DMCNET, RS - 232, RS - 485, I/O, Ext. Encoder
- W383 × H223 × D406 mm/22 kg

Ordering Information

Model Name	Description	Note
SCARA Robot DRS Series		
DRS40L3SS1BN002	4-axis, 400 mm arm length, 3 kg	Optional models with 5/10m cable, CE/UL/CR/KCs certifications*1
DRS40L3SO1BN002	4-axis, 400 mm arm length, 3 kg, high inertia	Optional models with 5/10m cable
DRS60L3SS1BN002	4-axis, 600 mm arm length, 3 kg	
DRS50L6SS1BN002	4-axis, 500 mm arm length, 6 kg	Optional models with 5/10m cable, 200/300 mm Z-axis, high inertia, CE/UL/CR/KCs certifications*1
DRS60L6SS1BN002	4-axis, 600 mm arm length, 6 kg	
DRS70L6SS1BN002	4-axis, 700 mm arm length, 6 kg	
DRS60H6SS1BN002	4-axis, 600 mm arm length, 6 kg, ceiling type	Optional models with 5/10m cable
DRS60L6SN1BN302	3-axis, 600 mm arm length, 6 kg	
DRS60L3SS1BN502	5-axis, 600 mm arm length, 3 kg	
DRS60LCSS1BN002	4-axis, 600 mm arm length, 12 kg	Optional models with 5/10m cable, 200/420 mm z-axis
DRS70LCSS1BN002	4-axis, 700 mm arm length, 12 kg	
DRS80LCSS1BN002	4-axis, 800 mm arm length, 12 kg	
Articulated Robot DRV Series		
DRV70L7A6313N	6-axis, 710 mm arm length, 7 kg, IP40	Optional models with 5 m cable, CE/KCs certifications*1
DRV70L7B6213N	6-axis, 710 mm arm length, 7 kg, IP65	
DRV90L7A6313N	6-axis, 900 mm arm length, 7 kg, IP40	
DRV90L7B6213N	6-axis, 900 mm arm length, 7 kg, IP65	
DRVA1L7B6113N	6-axis, 1,100 mm arm length, 7 kg, IP65	Optional models with 5 m cable
DRVA4L7B6113N	6-axis, 1,400 mm arm length, 7 kg, IP65	
Screw Driving Robot RS Series		
RS-AFS60LA01	3-axis SCARA, 600 mm arm length, torque 0.5~1.8 kgf.cm	Screwdriver Bit: Wing Ø4
RS-AFS60LA02	3-axis SCARA, 600 mm arm length, torque 1.5~9 kgf.cm	Screwdriver Bit: Wing Ø5
RS-AFS60LA04	3-axis SCARA, 600 mm arm length, torque 1.5~9 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LA05	3-axis SCARA, 600 mm arm length, torque 6~25 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LA06	3-axis SCARA, 600 mm arm length, torque 10~43 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB01	4-axis SCARA, 600 mm arm length, torque 0.5~1.8 kgf.cm	Screwdriver Bit: Wing Ø4
RS-AFS60LB02	4-axis SCARA, 600 mm arm length, torque 1.5~9 kgf.cm	Screwdriver Bit: Wing Ø5
RS-AFS60LB04	4-axis SCARA, 600 mm arm length, torque 1.5~9 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB05	4-axis SCARA, 600 mm arm length, torque 6~25 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB06	4-axis SCARA, 600 mm arm length, torque 10~43 kgf.cm	Screwdriver Bit: Hex 1/4"
Handheld Teaching Pendants		
DTS-3FD	TP for SCARA robots, 5m cable, 21 keys	
DTS-2FM	TP for CE/CR certified SCARA robots, 5m cable, 21 keys	
DTV-2FM	TP for articulated robots, 5m cable, 21 keys	
Robot Applications		
DRSW-CVS1D01	Conveyor tracking software package for robots	
DRSW-OFS1D01	On-the-fly software package for robots	
DRSW-SCS1D01	Delta Robotic Simulation Platform DRASimuCAD	
Optional Accessories		
Optional expansion DI/O modules, connection cables, and expansion servo drives are available. Please refer to the catalogues of Delta SCARA Robot and Articulated Robot for detailed information.		

*Please contact regional distributors for optional models
*1: For the certification type model, only support 3M cable

Model Explanation





Smarter. Greener. Together.

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