

## Robot Controllers

### DCS-1D00



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

### DCS-1M00



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

### DCS-1B00-CA



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

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



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

## Ordering Information

Model Name	Description	Note
<b>SCARA Robot DRS Series</b>		
DRS40L3SS1BN002	4-axis, 400 mm arm length, 3 kg	Optional models with 5 m / 10 m cable, CE / UL / CR / KCs certifications
DRS40L3SO1BN002	4-axis, 400 mm arm length, 3 kg, high inertia	Optional models with 5 m / 10 m cable
DRS60L3SS1BN002	4-axis, 600 mm arm length, 3 kg	
DRS50L6SS1BN002	4-axis, 500 mm arm length, 6 kg	Optional models with 5 m / 10 m cable, 200 mm / 300 mm Z-axis, high inertia, CE / UL / CR / KCs certifications
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	
DRS60L6SN1BN302	3-axis, 600 mm arm length, 6 kg	Optional models with 5 m / 10 m cable
DRS60L3SS1BN502	5-axis, 600 mm arm length, 3 kg	
DRS60LCS1BN002	4-axis, 600 mm arm length, 12 kg	Optional models with 5 m / 10 m cable, 200 mm / 420 mm z-axis
DRS70LCS1BN002	4-axis, 700 mm arm length, 12 kg	
DRS80LCS1BN002	4-axis, 800 mm arm length, 12 kg	
<b>Articulated Robot DRV Series</b>		
DRV70L7A6313N	6-axis, 710 mm arm length, 7 kg, IP40	Optional models with 5 m cable, CE / KCs certifications
DRV70L7B6213N	6-axis, 710 mm arm length, 7 kg, IP65	
DRV90L7A6313N	6-axis, 900 mm arm length, 7 kg, IP40	Optional models with 5 m cable
DRV90L7B6213N	6-axis, 900 mm arm length, 7 kg, IP65	
DRVA1L7B6113N	6-axis, 1,100 mm arm length, 7 kg, IP65	
DRVA4L7B6113N	6-axis, 1,400 mm arm length, 7 kg, IP65	
<b>Screw Driving Robot RS Series</b>		
RS-AFS60LA01	3-axis SCARA, 600 mm arm length, torque 0.32~1.8 kgf.cm	Screwdriver Bit: Wing Ø4
RS-AFS60LA02	3-axis SCARA, 600 mm arm length, torque 1.5~9.0 kgf.cm	Screwdriver Bit: Wing Ø5
RS-AFS60LA04	3-axis SCARA, 600 mm arm length, torque 1.5~9.0 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LA05	3-axis SCARA, 600 mm arm length, torque 6.0~25.0 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LA06	3-axis SCARA, 600 mm arm length, torque 10.0~43.0 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB01	4-axis SCARA, 600 mm arm length, torque 0.32~1.8 kgf.cm	Screwdriver Bit: Wing Ø4
RS-AFS60LB02	4-axis SCARA, 600 mm arm length, torque 1.5~9.0 kgf.cm	Screwdriver Bit: Wing Ø5
RS-AFS60LB04	4-axis SCARA, 600 mm arm length, torque 1.5~9.0 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB05	4-axis SCARA, 600 mm arm length, torque 6.0~25.0 kgf.cm	Screwdriver Bit: Hex 1/4"
RS-AFS60LB06	4-axis SCARA, 600 mm arm length, torque 10.0~43.0 kgf.cm	Screwdriver Bit: Hex 1/4"
<b>Handheld Teaching Pendants</b>		
DTS-1FD	TP for SCARA robots, 5m cable, 15 keys	
DTS-2FM	TP for CE / CR certified SCARA robots, 5m cable, 21 keys	
DTV-2FM	TP for articulated robots, 5m cable, 21 keys	
<b>Robot Applications</b>		
DRSW-CVS1D01	Conveyor tracking software package for robots	
DRSW-OFS1D01	On-the-fly software package for robots	
DRSW-SCS1D01	Delta Robotic Simulation Platform DRASimucAD	
<b>Optional Accessories</b>		
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

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Automation for a Changing World

## Delta Industrial Robots



## 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".

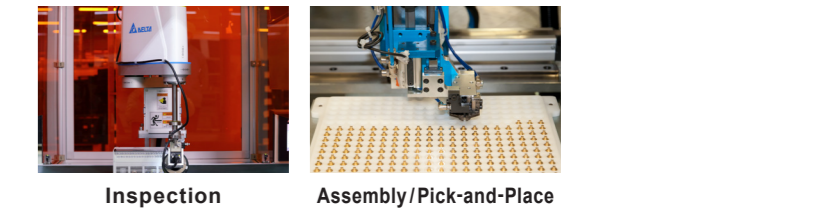
### SCARA Robot DRS Series

- 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



### Articulated Robot DRV Series

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



### Applications

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



## SCARA Robots

Model Name	DRS30L3SS1BN002	DRS40L3SS1BN002	DRS40C4SS1BN002	DRS60L3SS1BN002	DRS50L6SS1BN002	DRS60L6SS1BN002	DRS70L6SS1BN002	DRS60L6SS1BN002	DRS70L6SS1BN002	DRS80L6SS1BN002	DRS60H6SS1BN002	DRS60L3SS1BN502	DRS60L6SN1BN302
Image													
Range of Motion													
Number of Axis	4	4	4	4	4	4	4	4	4	4	4	5	3
Max. Working Range	300mm	400mm	400mm	600mm	500mm	600mm	700mm	600mm	700mm	800mm	600mm	600mm	600mm
Rated/Max. Payload	1 kg/3kg	1 kg/3kg	1 kg/4kg	1 kg/3kg	2 kg/6 kg	2 kg/6 kg	2 kg/6 kg	5kg/12kg	5kg/12kg	5kg/12kg	2 kg/6 kg	1 kg/3 kg	2kg/6kg
Motion Range	J1	± 130°	± 130°	± 130°	± 114°	± 133°	± 133°	± 133°	± 132°	± 132°	± 130°	± 133°	± 133°
	J2	± 145°	± 146.6°	± 146.6°	± 148°	± 153°	± 153°	± 153°	± 152.5°	± 152.5°	± 150°	± 153°	± 153°
	J3	150mm	150mm	150mm	150mm	200mm (300mm) <sup>*3</sup>	200mm (300mm) <sup>*3</sup>	200mm (300mm) <sup>*3</sup>	200mm (420mm) <sup>*3</sup>	200mm (420mm) <sup>*3</sup>	200mm (420mm) <sup>*3</sup>	200mm	200mm
	J4	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	± 360°	-
	J5	-	-	-	-	-	-	-	-	-	-	± 360°	-
Max. Speed	J1	4,058mm/s	4,710mm/s	4,000mm/s	4,050mm/s	4,400mm/s	5,000mm/s	5,500mm/s	7,100mm/s	7,700mm/s	8,300mm/s	5,000mm/s	5,000mm/s
	J2	1,250mm/s	1,250mm/s	1,110mm/s	1,250mm/s	1,100mm/s	1,100mm/s	1,100mm/s	1,180mm/s	1,180mm/s	1,180mm/s	1,100mm/s	1,100mm/s
	J3	1,875°/s	1,875°/s	1,875°/s	1,875°/s	2,000°/s, 600°/s	2,000°/s, 600°/s	2,000°/s, 600°/s	2,025°/s	2,025°/s	2,025°/s	2,000°/s	2,000°/s
	J4	-	-	-	-	-	-	-	-	-	-	600°/s	-
	J5	-	-	-	-	-	-	-	-	-	-	-	-
Standard Cycle Time	0.39s <sup>*1</sup>	0.42s <sup>*1</sup>	0.5s <sup>*1</sup>	0.72s <sup>*1</sup>	0.39s <sup>*1</sup>	0.39s <sup>*1</sup>	0.40s <sup>*1</sup>	0.43s <sup>*2</sup>	0.45s <sup>*2</sup>	0.47s <sup>*2</sup>	0.39s <sup>*1</sup>	0.45s <sup>*1</sup>	0.39s <sup>*1</sup>
Tolerant Inertia	Rated	0.0091kg-m <sup>2</sup>	0.0091kg-m <sup>2</sup>	0.005kg-m <sup>2</sup>	0.0091kg-m <sup>2</sup>	0.01kg-m <sup>2</sup> (0.07kg-m <sup>2</sup> ) <sup>*4</sup>	0.01kg-m <sup>2</sup> (0.07kg-m <sup>2</sup> ) <sup>*4</sup>	0.01kg-m <sup>2</sup> (0.07kg-m <sup>2</sup> ) <sup>*4</sup>	0.02kg-m <sup>2</sup>	0.02kg-m <sup>2</sup>	0.02kg-m <sup>2</sup>	0.01kg-m <sup>2</sup>	0.01kg-m <sup>2</sup>
	Max.	0.075kg-m <sup>2</sup>	0.075kg-m <sup>2</sup>	0.05kg-m <sup>2</sup>	0.075kg-m <sup>2</sup>	0.023kg-m <sup>2</sup> (0.5kg-m <sup>2</sup> ) <sup>*4</sup>	0.023kg-m <sup>2</sup> (0.5kg-m <sup>2</sup> ) <sup>*4</sup>	0.023kg-m <sup>2</sup> (0.5kg-m <sup>2</sup> ) <sup>*4</sup>	0.25kg-m <sup>2</sup>	0.25kg-m <sup>2</sup>	0.25kg-m <sup>2</sup>	0.023kg-m <sup>2</sup>	0.023kg-m <sup>2</sup>
Repeatability (J1+J2)	± 0.010mm	± 0.010mm	± 0.015mm	± 0.015mm	± 0.015mm	± 0.015mm	± 0.015mm	± 0.025mm	± 0.025mm	± 0.025mm	± 0.015mm	± 0.015mm	± 0.015mm
Rating	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Weight	16kg	16kg	16kg	22kg	18.5kg	20kg	20kg	42kg	42kg	43kg	23kg	21kg	20kg
Controller	DCS-1D00	DCS-1D00	DCS-1D00	DCS-1D00	DCS-1D00	DCS-1D00	DCS-1D00	DCS-1M00	DCS-1M00	DCS-1M00	DCS-1D00	DCS-1D00	DCS-1D00

Notes: \*1. When carrying a payload of 1kg and reciprocating 25mm in vertical and 300mm in horizontal directions under an operating temperature of 25°C and within a humidity of 45%~65% RH (non-condensing).  
 \*2. When carrying a payload of 2kg and reciprocating 25mm in vertical and 300mm in horizontal directions under an operating temperature of 25°C and within a humidity of 45%~65% RH (non-condensing).  
 \*3. Models with specific z-axis length  
 \*4. High inertia models

## Screw Driving Robots

Model Name	RS-AFS60L □ 01	RS-AFS60L □ 02	RS-AFS60L □ 04	RS-AFS60L □ 05	RS-AFS60L □ 06	
Image						
Range of Motion						
Number of Axis	□ = Number of axis, ▣ = 3-axis, ▢ = 4-axis					
Delta SCARA Robot	Max. Working Range	600mm				
	Max. Speed	J1+J2	5,000mm/sec			
		J3	1,100mm/sec			
		J4	600°/s (4-axis models only)			
		J5	± 133°			
Range of Motion	J1	± 133°				
	J2	± 153°				
	J3	200mm				
	J4	± 105° (4-axis models only)				
Repeatability	J1+J2	± 0.015mm				
	J3	± 0.01mm				
Net Weight	20kg					
Screw Driving Robot Module	Torque (kgf-cm)	0.32~1.80	1.50~9.00	1.50~9.00	6.00~25.00	
	Torque (N-m)	0.03~0.17	0.15~0.88	0.15~0.88	0.58~2.45	
	Max. Speed (rpm)	3-axis	2,000	2,000	2,000	1,000
		4-axis	1,200	1,200	1,200	600
	Dimensions (LxWxH, mm)	250x57x63	250x57x63	250x57x63	318x57x63	318x57x63
Weight (kg)	1	1.2	1.2	1.7	1.7	
Screw Size	Diameter	M1.2-M2	M2-M3	M2-M3	M2.5-M4	
	Bit	Ø4	Ø5	Hex 1/4"	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 Axis	6			
Max. Working Range	710mm	900mm	1,111mm	1,411mm
Max. Payload	7kg			
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
	J2	340°/sec	260°/sec	220°/sec
	J3	510°/sec	410°/sec	295°/sec
	J4	550°/sec		465°/sec
	J5	550°/sec		480°/sec
	J6	820°/sec		705°/sec
Max. Resultant Speed	11,000mm/sec	10,600mm/sec	9,400mm/sec	9,100mm/sec
Standard Cycle Time	0.32sec	0.35sec	0.48sec	0.54sec
Max. Tolerant Inertia	J4	0.47kg-m <sup>2</sup>		
	J5	0.47kg-m <sup>2</sup>		
	J6	0.15kg-m <sup>2</sup>		
Tolerant Torque	J4	16.6N.m		
	J5	16.6N.m		
	J6	9.4N.m		
Repeatability	± 0.02mm	± 0.03mm	± 0.04mm	± 0.05mm
IP Rating	IP40 (IP65 Optional)		IP65 (Standard)	
Weight	37kg	39kg	76kg	82kg
Controller	DCV-2J00-AA			