

New Function

# Dual-arm Control

Enables centralized control of two robots from a single controller. This feature allows high-speed operation and reduces adjustment time, installation footprint, and installation costs.



Scan here for video introducing the dual-arm control function.

Compatible robots	HSR Series/HS-A1 Series
Compatible controller	RC8A



## Smaller installation footprint and lower installation costs

A single controller can be used to control two robot arms, eliminating the space and cost associated with a second controller.



## Faster adjustments

Performing operations and programming from a single controller cuts the time required for software design and adjustments.



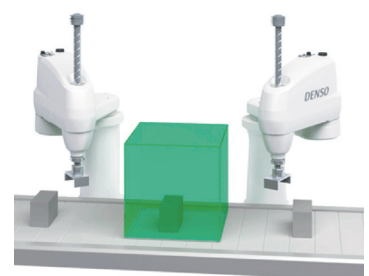
## Can be freely combined with high-performance robots

Compatible with high-speed, high-precision HSR and HS-A1 robot arms, making it ideal for facilities with tight cycle times. Allows various combinations of arm length and Z-axis stroke to suit a wide range of facilities and processes.

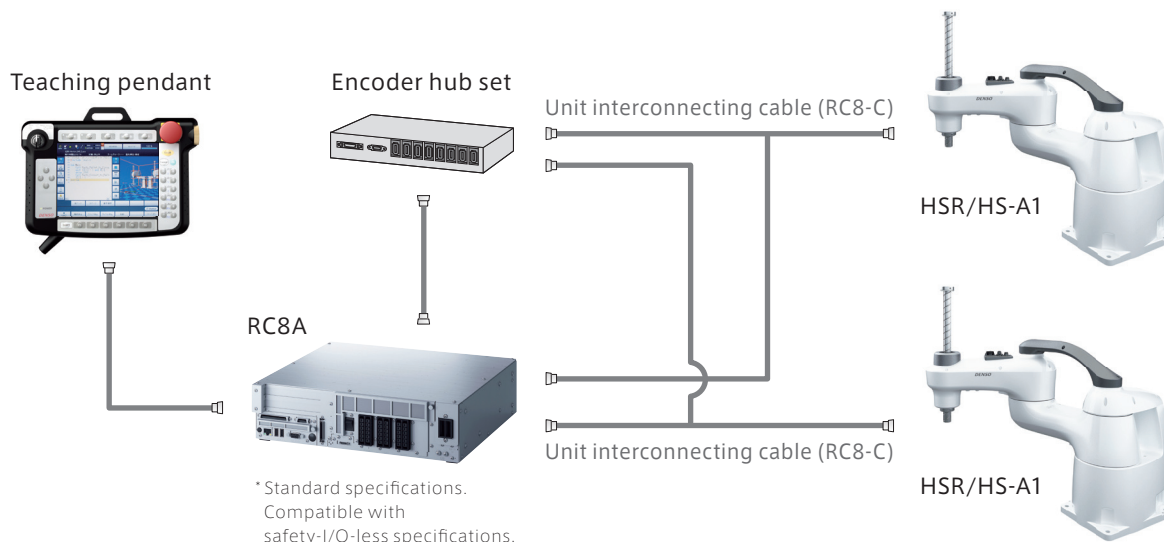


## Expandable functionality to support a wide range of processes

Exclusive control and virtual fence functions prevent collisions in confined areas. Coordinated control function is available for long or heavy objects.



## System configuration



## Compatible robot specifications

### HSR Series

Item	Specifications		
Robot model <sup>1</sup>	HSR <sup>®</sup> 048A1-N/S*	HSR <sup>®</sup> 055A1-N/S*	HSR <sup>®</sup> 065A1-N/S*
Total arm length (J1: Arm 1 + J2: Arm 2)	205+275=480 mm	275+275=550 mm	375+275=650 mm
Angular range and stroke	J1 (axis 1)	±130°	
	J2 (axis 2)	±143.5°	
	Z (axis 3) <sup>1</sup>	*±10:100 mm, *±20:200 mm, *±32:320 mm	
	T (axis 4)	±360°	
Axis combination	J1 (axis 1) + J2 (axis 2) + Z (axis 3) + T (axis 4)		
Maximum lifting load	8 kg		
Standard cycle time <sup>2</sup>	0.28 sec	0.31 sec	
Speed	J1	450 deg/sec	
	J2	785 deg/sec	
	Z	10:1,700 mm/sec, 20:2,300 mm/sec, 32:2,475 mm/sec	
	T	2,500 deg/sec	
Positional repeatability <sup>3</sup> (tool mounting face center)	J1+J2	±0.01 mm	±0.012 mm
	Z	±0.01 mm	
	T	±0.004°	
	Maximum pressure input (downward)	98 N (for no more than 1 sec)	
Maximum allowable inertia moment	0.12 kgm <sup>2</sup>		
Position detection method	Absolute encoder		
Drive motors/brakes	AC servo motors on all axes, with brakes on Z and T axes		
User air pipes	Four circuits (φ4 x 2, φ6 x 2)		
User signal line	19-core (signal line for proximity sensors, etc.) Ethernet (8) (option)		
Air supply	Normal pressure	0.05–0.35 MPa	
	Maximum allowable pressure	0.59 MPa	
Airborne noise	80 dB or less		
Weight	Approx. 31 kg	Approx. 31.5 kg	Approx. 32 kg

### HS-A1 Series

Item	Specifications		
Robot model <sup>1</sup>	HS035A1-N*	HS045A1-N/S*	HS055A1-N/S*
Number of axes	4		
Position detection method	Absolute encoder		
Drive motors/brakes	AC servo motors on all axes, with brakes on Z and T axes		
Total arm length (Arm 1 + Arm 2)	350 (125+225) mm	450 (225+225) mm	550 (325+225) mm
Angular range and stroke	J1 (axis 1)	±155°	
	J2 (axis 2)	±145°	
	Z (axis 3) <sup>1</sup>	*±10:100 mm, *±15:150 mm, *±20:200 mm, *±32:320 mm	
	T (axis 4)	±360°	
Maximum lifting load	5 kg		
Combined maximum speed (tool mounting face center)	Arm tip	7,200 mm/sec	6,300 mm/sec
	T	2,400°/sec	
Speed	J1	720 deg/sec	450 deg/sec
	J2	720 deg/sec	
	Z	2,000 mm/sec	
	T	2,400 deg/sec	
Standard cycle time <sup>2</sup>	0.29 sec		
Positional repeatability <sup>3</sup> (tool mounting face center)	J1+J2	±0.015 mm	±0.02 mm
	Z	±0.01 mm	
	T	±0.005°	
	Maximum pressure input (downward for no more than 1 sec)	98N	
Maximum allowable inertia moment	0.1 kgm <sup>2</sup>		
User air pipes	Four circuits (φ4 x 2, φ6 x 2)		
User signal line	19-core (signal line for proximity sensors or other device)		
Air supply	Normal pressure	0.05–0.35 MPa	
	Maximum allowable pressure	0.59 MPa	
Airborne noise (weighted equivalent continuous perceived noise level)	80 dB or less		
Protection class	Dust-proof, splash-proof: IP65 (option) Clean type: ISO Class 3 (option)		
Weight	Approx. 25 kg		

<sup>1</sup>: The "\*" in the model code indicates the Z-axis stroke. <sup>2</sup>: Time required for out-and-back operation between two points 300 mm apart with 2 kg load lifted by robot to a height of 25 mm. <sup>3</sup>: Positional repeatability assumes constant ambient temperatures.



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