

RV-4FR/4FRL series

Type		Unit	RV-4FR(M)(C)	RV-4FRL(M)(C)
Outside dimensions			RV-4FR	RV-4FRL
Environmental specifications Protection degree			IP40 (standard)/ IP67 (oil mist) *1/ ISO class3(Clean) *7	
Installation			Floor type, ceiling type, (wall-mounted type *2)	
Structure			Vertical multiple-joint type	
Degrees of freedom			6 *9	
Drive system			AC servo motor	
Position detection method			Absolute encoder	
Maximum load capacity		kg	maximum 4 (Rated 4) *8	
Maximum reach radius		mm	515	649
Operating range	J1	deg	480 (-240 to +240)	
	J2		240 (-120 to +120)	
	J3		161 (-0 to +161)	164 (-0 to +164)
	J4		400 (-200 to +200)	
	J5		240 (-120 to +120)	
	J6		720 (-360 to +360)	
Maximum speed	J1	deg/sec	450	420
	J2		450	336
	J3		300	250
	J4		540	
	J5		623	
	J6		720	
Maximum composite speed *3		sec	9027	9048
Cycle time *4		sec	0.36	0.36
Position repeatability		mm	-0.02 to +0.02	
Ambient temperature		°C	0 to 40	
Mass		kg	39	41
Tolerable moment	J4	Nm	6.66	
	J5		6.66	

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	J6			3.96
Tolerable amount of inertia	J4	kgm ²		0.2
	J5			0.2
	J6			0.1
Tool wiring			Gripper: 8 input points/8 output points Signal cable for the multi-function gripper and sensors LAN x 1 [100 BASE-TX] *5	
Tool pneumatic pipes			Primary: ø6 x 2 Secondary: ø4 x 8, ø4 x 4 (from base portion to forearm)	
Machine cable			5m (connector on both ends)	
Connected controller *6			CR800-D, CR800-R	
*1)	Please contact Mitsubishi Electric dealer since the environmental resistance may not be secured depending on the characteristics of oil you use. Air will need to be purged from the lines. For details, refer to the specifications sheet.			
*2)	The wall-mounted specification is a custom specification where the operating range of the J1-axis is limited.			
*3)	This is the value at the surface of the mechanical interface when all axes are composited.			
*4)	The cycle time is based on back-and-forth movement over a vertical distance of 25 mm and horizontal distance of 300 mm when the load is 1 kg.			
*5)	Can also be used as a spare line (0.13 sq. mm, 4-pair cable) for conventional models.			
*6)	Select either controller according to your application. CR800-D: Standalone type, CR800-R: MELSEC iQ-R compatible type.			
*7)	Preservation of cleanliness levels depends on conditions of a downstream flow of 0.3 m/s in the cleanroom and internal robot suctioning. A ø8-mm coupler for suctioning is provided at the back of the base.			
*8)	The maximum load capacity indicates the maximum payload when the mechanical interface is facing downward (±10° to the perpendicular).			
*9)	Please contact our sales offices if you request a five axes long arm model.			