

Robot Controller

RC8A



Specifications

Term		Specifications									
Applicable robots		VP -5243/6242 ¹	VS -050/060 /05052	VS -068/087	VS -6556/6577	VM -6083/60B1	HSR® 048/055/065	HS 035A1/045A1 /055A1	HM -4*****	XR -43***	
Power	Power supply	1.00kVA ¹	1.15kVA	2.78kVA	1.80kVA	3.30kVA	1.80kVA	1.80kVA	2.45kVA	1.85kVA	
	Input voltage range	Three-phase 200 VAC –15% to 240 VAC +10% (100 V specification also available for the VP series.)									
	Power supply frequency	Single-phase, 230 VAC –10% to 240 VAC +10% ¹					—	Single-phase, 230 VAC –10% to 240 VAC +10%			
Power cable		50Hz / 60Hz									
Controllable axes		5 / 6				6			4		
Control method		PTP, CP 3-dimensional linear, 3-dimensional arc (PTP control only for additional axes)									
Drive method		All axes all digital AC servo									
Language used		DENS0 Robotics language (PacScript)									
Memory capacity		User area Variable area: 1.75 MB (32,766 points equivalent), file area: 400 MB (5,000 steps × 256 files)									
Teaching system		1) Remote teaching 2) Numerical entry (MDI) 3) Direct teaching (HS series, HM series HSR series)									
External signal (I/O, etc.)	Mini I/O	Standard specification, safety motion specification		Input: User open 8 points + system fix 14 points Output: User open 8 points + system fix 18 points							
		Standard/Safety I/O-less specification		Input: User open 8 points + system fix 13 / Output: User open 8 points + system fix 14 points							
	Hand I/O	Input: User open 8 points / Output: User open 8 points									
	Motion I/O (option)	Input: 30 safety circuit signals/Output: 14 safety circuit signals									
	Parallel I/O board for expansion (option)	Expansion slot: PCI Input: 40 points / Output: 48 points									
	CC-Link remote device board (option)	Expansion slot: PCI Express Input: 8192 points max. / Output: 8192 points max., Remote register, Input: 2048 words max. / Output: 2048 words ²									
	DeviceNet slave board (option)	Expansion slot: PCI Express Input: max. 256 points / Output: max. 256 points									
	DeviceNet master board (option)	Expansion slot: PCI Express Input: 1024 points / Output: 1024 points									
	EtherNet / IP adapter board (option)	Expansion slot: PCI Express Input: max. 4032 points / Output: max. 4032 points									
	PROFIBUS slave board (option)	Expansion slot: PCI Express Input: max. 256 points / Output: max. 256 points									
PROFINET I/O device board (option)	Expansion slot: PCI Express Input: max. 8129 points / Output: max. 8129 points										
EtherCAT slave board (option)	Expansion slot: PCI Express Input: max. 2048 points / Output: max. 2048 points										
External communication		RS-232C: 1 line, EtherNet: 1 line (GbE: Gigabit EtherNet), USB: 2 lines, VGA: 1 line (option)									
Expansion slot		· PCI 1 slot · PCI Express 1 slot									
External-diagnosis function		Overrun, servo error, memory error, input error, short circuit detection (user wiring part), etc.									
Environmental condition (in motion)		Temperature: 0 to 40 degree C, Humidity: 20 - 90%RH (no condensation allowed.)									
Safety function		See the "options" on the list below.									
Protect grade		IP20									
Weight		Safety I/O-less specification, Standard specification: Approx. 10kg, Safety motion specification: Approx. 11kg ³									

1: Power for the 100 VAC specification is "Single-phase 100 VAC –5% to 110 VAC +10% 50/60 Hz, 1 kVA.

2: For Ver. 2.00 3: Does not include the supplied cables.

4: Specifications must be designated when placing an order.

Specifications cannot be changed after shipment.

Additional axis specifications are available for all controllers.

5: The UL specification is also required for the robot unit.

In addition, a pendant, mini-pendant or emergency stop button

box is required.

Please note that for VS-050 / 060 / 068 / 087, a brake release

unit is required.

Compliant robot safety standards :

ISO 10218-1: 2011, ANSI/RIA R15.06-1999

UL standards UL1740, CSA 2434, etc.

Options⁴

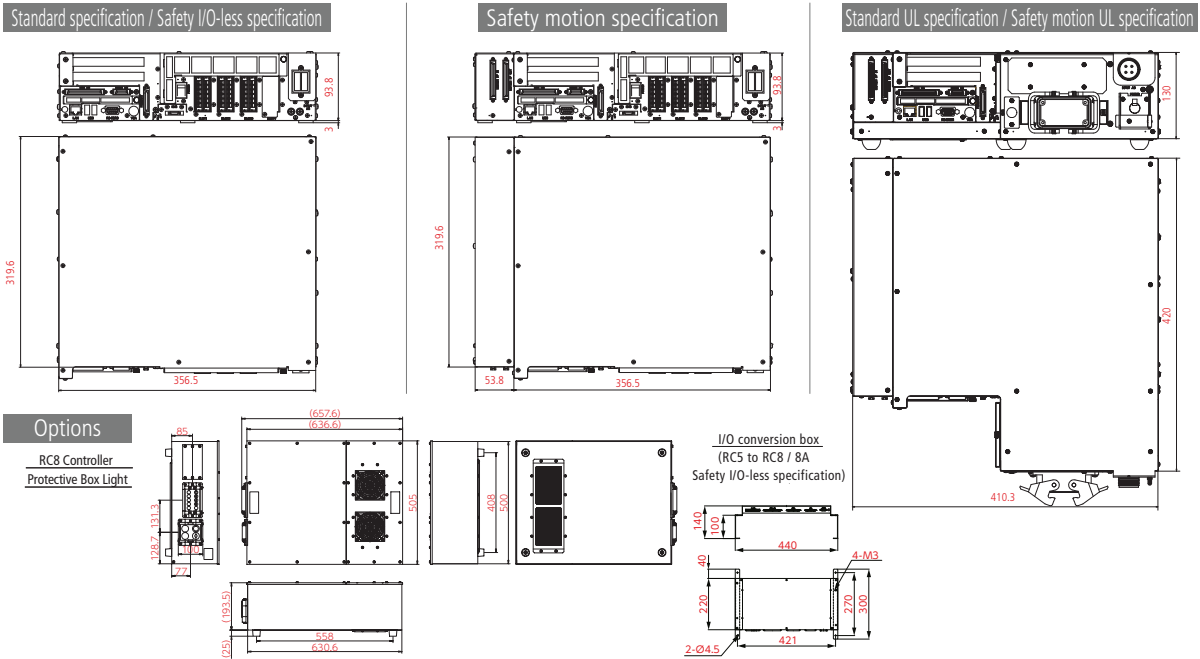
Controller Type	Safety function	Standard(s)	I/O type
Standard	Safety I/O : PL e/Cat.4, SIL3	CE, KCs	NPN /PNP
Safety motion	Safety I/O : PL e/Cat.4, SIL3 Safety motion : PL d/Cat.3, SIL2	CE, KCs	
Safety I/O-less	—	—	
UL standard (Safety I/O) ⁵	Safety I/O : PL e/Cat.4, SIL3	CE, UL	
UL safety motion ⁵	Safety I/O : PL e/Cat.4, SIL3 Safety motion : PL d/Cat.3, SIL2	CE, UL	

Legend

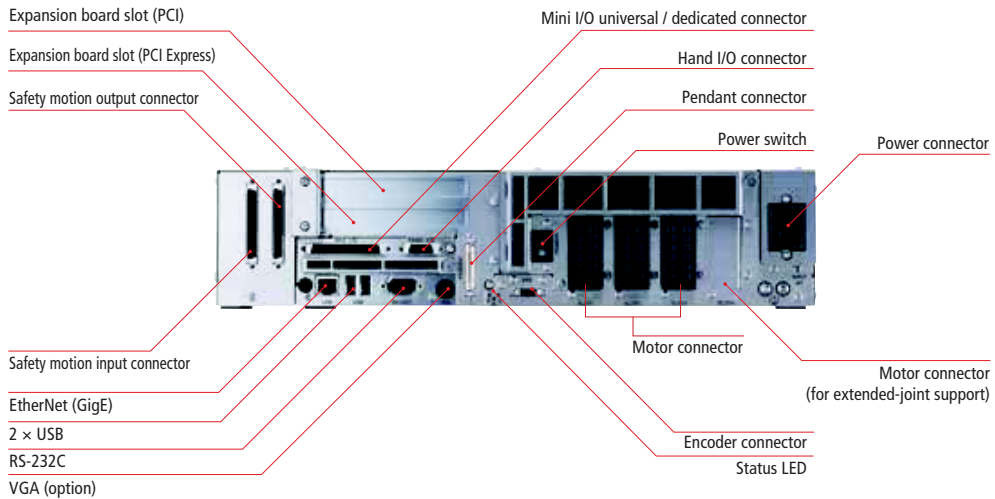
RC8A - [] [] [] [] - NN [] [] - [] [] - NNN

<p>Controller name</p> <p>Robot type format: VPA0: VP-5243 / 6242 VSA3: VS050 / 060 / 05052 VSA4: VS068 / 087 VSA0: VS-6566 / 6577 VMA0: VM series</p>	<p>HSB1: HSR series HSA1: HS-A1 series HMA0: HM series XRA0: XR series S1A1: SC series (2-axis) S2A1: SC series (3-axis, 4-axis)</p>	<p>CPU: N: Standard E: Standard (In and after June 2020) *Due to CPU change. 7: High-spec CPU</p>	<p>I/O type: M: Negative common (NPN) P: Positive common (PNP)</p>	<p>Compliant standard: NN: Safety-I/O-less specification (safety-I/O-less) *The RC8A safety I/O-less specification is selectable for the HSR/HS-A1 Series. NI: Standard specification (safety I/O) NM: Safety motion specification (safety I/O, Safety motion) UI: UL specification⁵ (safety I/O) UM: UL specification⁵ (safety I/O, Safety motion)</p>
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External dimensions Unit : mm



User interface



Optional systems diagram

