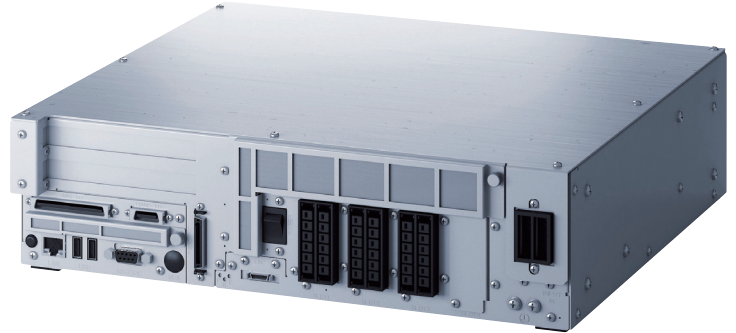# RC8A ROBOT CONTROLLER

DENSO robotics

The DENSO RC8A is 19 percent smaller and 17 percent lighter than the previous model, yet offers even higher performance levels.

Outstanding features include:

❚ World's smallest robot controller in the 3 kW output class

❚ Compact size saves valuable floor space, facilitates integration

❚ Footprint only 12.5 x 14 in (320 x 357 mm)*

❚ Weighs only 22 lbs (10 kg)**

❚ New Safety Motion function allows creation of virtual fences around robot, facilitating human-robot collaboration

❚ Built-in ORiN open-resource interface allows communication with more than 100 different types of devices

❚ Gigabyte Ethernet, mini/hand I/O, RS-232C and USB standard

❚ CC-Link, DeviceNet, EtherCAT, EtherNet/IP, parallel discrete I/O, Profibus, Profinet and more cards available***

❚ Microsoft Windows-based graphical user interface reduces robot setup time

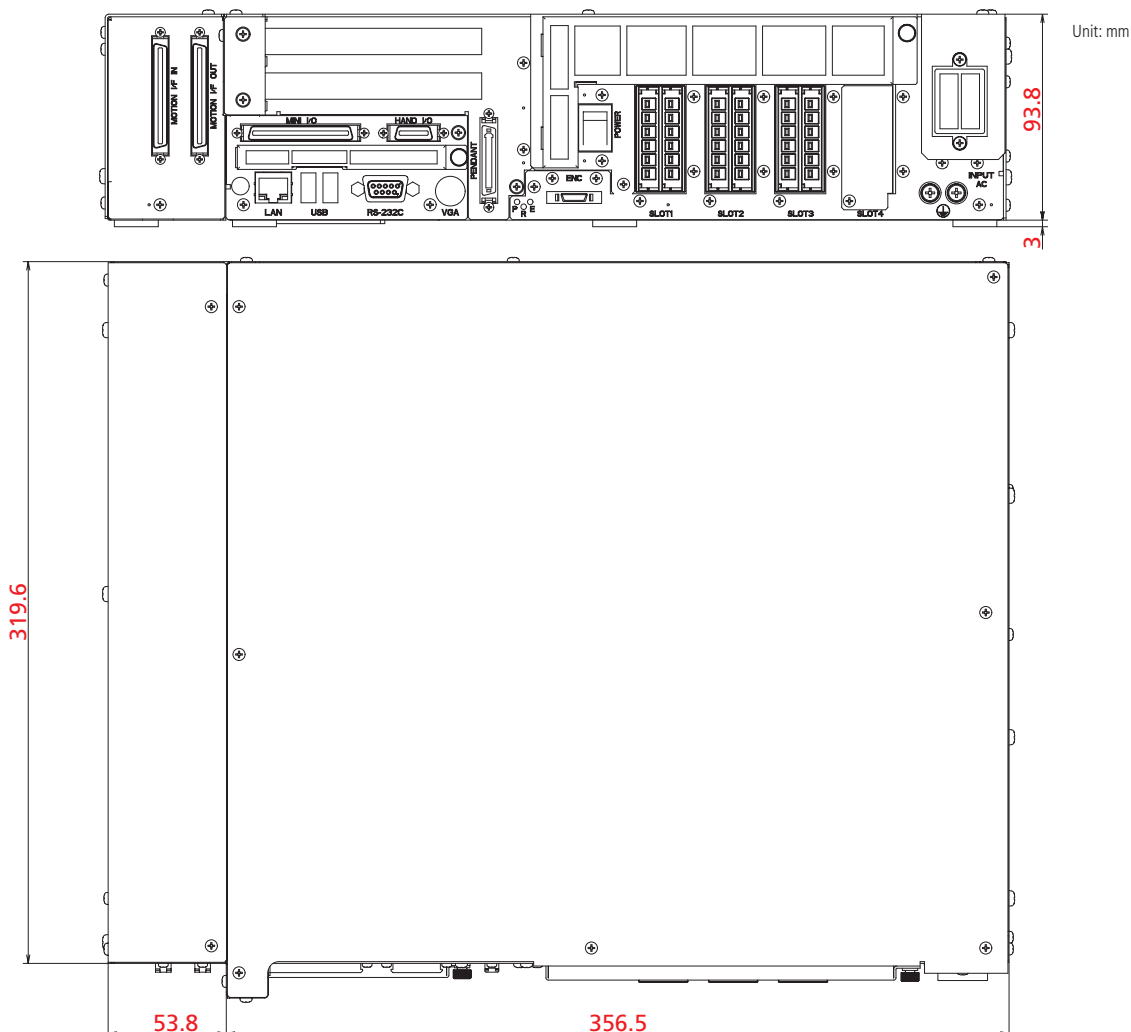❚ ISO and UL safety compliance allows global deployment

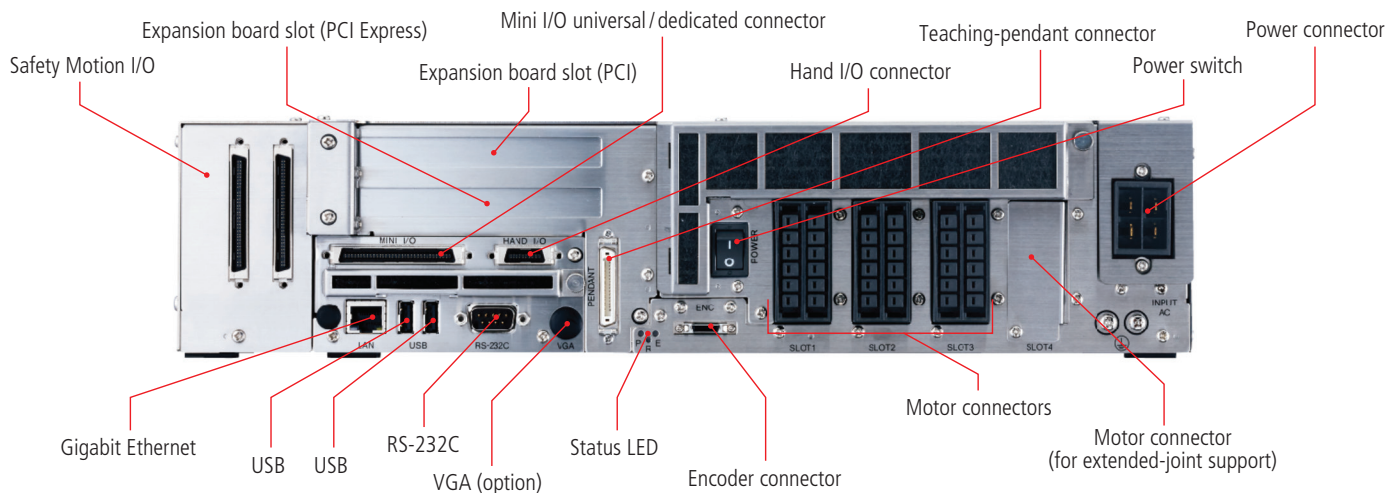*RC8A Safety Motion type footprint 12.5 x 16 in (320 x 410 mm).
**RC8A Safety Motion type weighs 24 lbs (11 kg).
***Contact your local sales representative for a full list of cards available.

External Dimensions

Unit: mm

93.8

3

319.6

53.8

356.5

www.densorobotics.com

RC8A ROBOT CONTROLLER

Safety Motion I/O
Expansion board slot (PCI Express)
Expansion board slot (PCI)
Mini I/O universal / dedicated connector
Hand I/O connector
Teaching-pendant connector
Power switch
Power connector

Gigabit Ethernet
USB
USB
RS-232C
VGA (option)
Status LED
Encoder connector
Motor connectors
Motor connector (for extended-joint support)

Specifications

		VP -5243/6242	VP -6242G2	VS -050/060	VS -068/087	VM -6083/60B1	HS -45***	HM -4*****	XR -43***1	HSR	HS-A1
Power	Power supply (kVA)	1.001	1.001	1.15	2.78	3.30	1.80	2.45	1.80	1.80	1.80
	Input voltage range	Three-phase, 200 VAC -15% to 240 VAC +10% (100 V specification also available for VP series1)									
		Single-phase, 230 VAC -10% to 240 VAC +10%			N/A	Single-phase, 230 VAC -10% to 240 VAC +10%					
	Power supply frequency	50/60 Hz									
Power cable		5 m									
Controllable axes		5/62		62				42			
Control method		PTP, CP 3-dimensional linear, 3-dimensional arc (PTP control only for additional axes)									
Drive method		Digital AC servo on all axes									
Language used		DENSO Robotics language (PacScript)									
Memory capacity, user area		User area-Variable area: 1.75 MB (equivalent to 32,766 points); File area : 400 MB (5,000 steps × 256 files)									
Teaching system		Remote teaching, Numerical entry (MDI), Direct teaching (HS, HM, HSR and HS-A1 Series only)									
External signals (I/O, etc.)	Mini I/O — Standard type/Safety motion type	Input: User open 8 points + system fix 14 points / Output: 8 open user points + 17 fixed system points									
	Mini I/O — Safety I/O less type	Input: User open 8 points + system fix 13 points / Output: 8 open user points + 14 fixed system points									
	Hand I/O	Input: User open 8 points / Output: User open 8 points									
	Motion I/O (Option)	Input: Safety circuit signal: 30 points / Output: Safety circuit signal: 14 points									
	Parallel I/O Expansion Board (Option)	Expansion slot: PCI / Input: 40 points / Output: 48 points									
	CC-Link Remote Device Board (Option)	Expansion slot: PCI Express / Input: 8,192 points max. / Output: 8,192 points max. Remote register input: 2,048 words max. / Output: 2,048 words3									
	DeviceNet Slave Board (Option)	Expansion slot: PCI Express / Input: 256 points max. / Output: 256 points max.									
	DeviceNet Master Board (Option)	Expansion slot: PCI Express / Input: 1,024 points / Output: 1,024 points									
	EtherNet / IP Adapter Board (Option)	Expansion slot: PCI Express / Input: 4,032 points max. / Output: 4,032 points max.									
	PROFIBUS Slave Board (Option)	Expansion slot: PCI Express / Input: 256 points max. / Output: 256 points max.									
	PROFINET I/O Device Board (Option)	Expansion slot: PCI Express / Input: 8,192 points max. / Output: 8,192 points max.									
	EtherCAT Slave Board (Option)	Expansion slot: PCI Express / Input: 2,048 points max. / Output: 2,048 points max.									
External communication		RS-232C: 1 line; Gigabit Ethernet: 1 line; USB: 2 lines; VGA: 1 line (Option)									
Expansion slot		PCI: 1 slot; PCI Express: 1 slot									
Self-diagnosis function		Overrun, servo error, memory error, input error, short-circuit detection (user wiring), etc.									
Environmental requirements (when operating)		Temperature: 0 to 40 ºC; Humidity: 90% or less RH (no condensation)									
Safety category		Standard type: (Safety I/O) Category 4, PL e Safety motion type: (Safety I/O) Category 4, PL e / (Motion I/O) Category 3 PL d									
Protection class		IP20									
Weight		Safety I/O less type, standard type: approx. 10 kg, safety motion type: approx. 11 kg4									

1. Power for 100 VAC specification: Single phase 100 VAC -10% to 110 VAC +10% 50/60 Hz, 1 kVA.
2. Up to two additional axes optional. Power modules, motors and cabling not included.
3. For Version 2.00.
4. Does not include supplied cables.

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