

MELFA Controller CR800-R/Q/D

CR800-R
CR800-Q
CR800-D

MELSEC iQ-R/Q compatible robot controller

Uses a multi-CPU configuration that dramatically improves its interaction with FA equipment and also offers highly precise control and fast yet simple information management.

Standalone type robot controller

Can be constructed as the control nucleus for robot controllers.



CR800-R



CR800-Q



CR800-D



Specifications

Item	Unit	CR800-R	CR800-Q	CR800-D
Robot CPU		R16RTCPU	Q172DSRCPU	Built-in
Number of axes controlled		Maximum 6 axes + additional 8 axes available		
Robot language		MELFA-BASIC V, VI		
Position teaching method		Teaching method, MDI method		
Memory capacity	Number of teaching points	39000	26000	39000
	Number of steps	78000	52000	78000
	Number of programs	512		
External input/output	General-purpose I/O	0 input/0 output (8192 input points/8192 output points with the multiple CPU common device)		0 input/0 output (Up to 256/256 when options are used)
	Dedicated I/O	Assigned to multiple CPU common device		Assigned to general-purpose I/O
	Gripper open/close	8 input / 8 output *6		
	Emergency stop input	1 (redundant)		
	Door switch input	1 (redundant)		
	Enabling device input *7	1 (redundant)		
	Emergency stop output	1 (redundant)		
	Mode output	1 (redundant)		
	Robot error output	1 (redundant)		
	Synchronization of additional axes	1 (redundant)		
Interface	Encoder input	2	Q173DPX (optional)	2
	RS-422	1 (dedicated T/B)		
	Ethernet	1 (dedicated T/B)		
	USB *5	1 (for customer) 10BASE-T/100BASE-TX/1000BASE-T Correspondence with CC-Link IE Field Basic (Ver.A1d or later)		1 (Ver. 2.0 device functions only, mini B terminal)
	Additional-axis function	1 (SSCNET III/H)		
	Extension slot *1	1 (Available only for function expansion option card)		2
	R/C communication interface	—		
	Remote I/O	1 (Ver.2)		
Power supply	Memory extension slot	—		
	Input voltage range *2	RV-2FR/4FR/7FR, RH-3FRH/3FRHR/6FRH/12FRH/20FRH: Single-phase AC 200V to 230V RV-13FR/20FR/7FRLL, RH-1FRHR: Three-phase AC 200V to 230V or Single-phase AC 230V		
	Power capacity *3	RV-2FR, RH-3FRH: 0.5 RH-3FRHR, RV-4FR, RH-6FRH: 1.0 RH-12FRH/20FRH: 1.5 RV-7FR (except RV-7FRLL): 2.0 RV-7FRLL, RV-13FR, RV-20FR: 3.0		
External dimensions (including legs)	mm	430(W) x 425(D) x 99.5(H)		
Mass	kg	Approx. 12.5		
Structure [protective specification]		Self-contained floor type/open structure (Vertical and horizontal position can be placed) [IP20]		
Grounding *4	Ω	100 or less (class D grounding)		

*1: For installing option interface.

*2: The rate of power-supply voltage fluctuation is within 10%.

*3: The power capacity indicates the rating for normal operation. Take note that the power capacity does not include the inrush current when the power is turned on. The power capacity is only a rough guide and whether or not operation can be guaranteed depends on the input power-supply voltage.

*4: Grounding works are the customer's responsibility.

*5: Recommended USB cable (USB A-to-USB mini B): MR-J3USBCBL3M (Mitsubishi Electric), GT09-C30USB-5P (Mitsubishi Electric System & Service Co., Ltd)

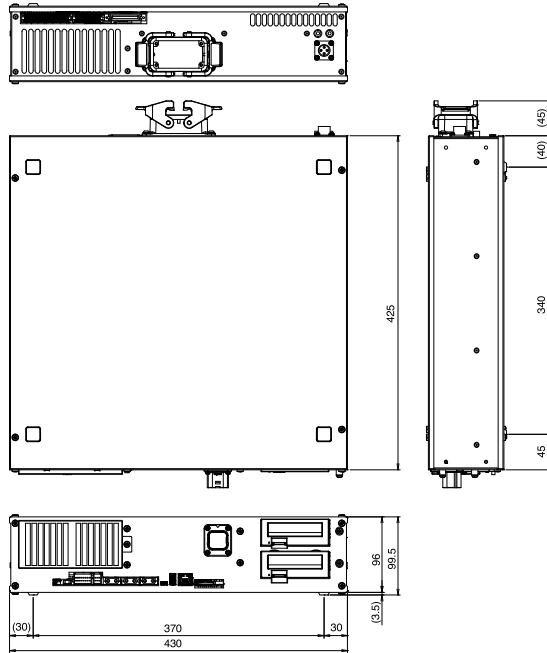
*6: RV-2FR series has 4 inputs and 4 outputs.

*7: Mode selection switch provided by the customer.

Controller

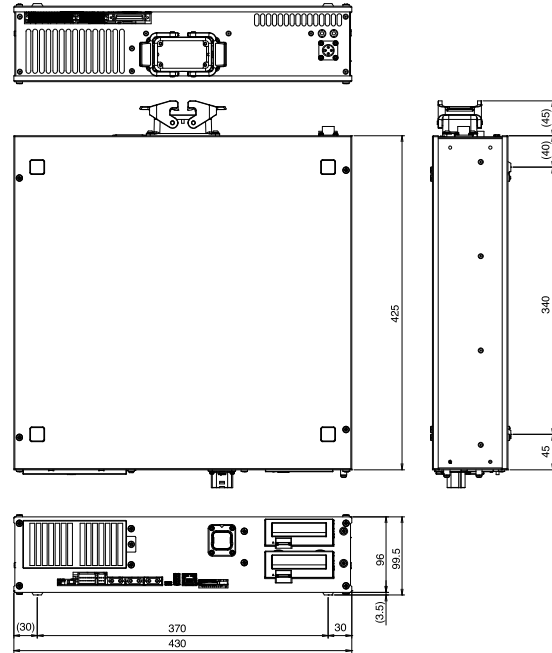
CR800-R/CR800-Q

▶ External Dimensions

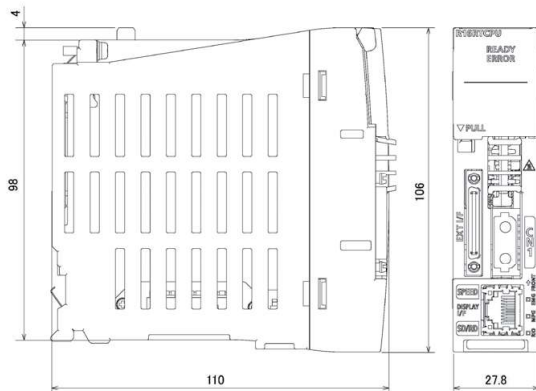


CR800-D

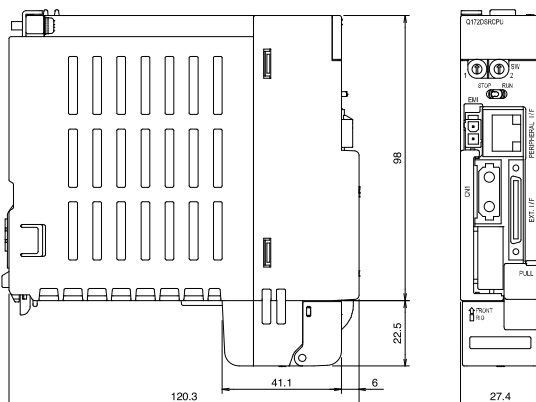
▶ External Dimensions



R16RTCPU



Q172DSRCPU



Multiple CPU environment

<CR800-R>

Unit	Item
Base	R35B 5-slot
	R38B 8-slot
	R312B 12-slot
Power supply	R61P
	R62P
	R63P
	R64P
PLC CPU	R00CPU
	R01CPU
	R02CPU
	R04CPU
	R08CPU
	R16CPU
	R32CPU
	R120CPU
Safety CPU	R08SFCPU-SET
	R16SFCPU-SET
	R32SFCPU-SET
	R120SFCPU-SET

<CR800-Q>

Unit	Item
Base	High-speed standard base between multiple CPU
	Q35DB 5-slot
	Q38DB 8-slot
Power supply	Q312DB 12-slot
	Q61P
	Q62P
	Q63P
PLC CPU	Q64PN
	Universal Model
	Q03UD(E/V)CPU
	Q04UD(E/V)HCPU
	Q06UD(E/V)HCPU
	Q10UD(E)HCPU
	Q13UD(E/V)HCPU
	Q20UD(E)HCPU
Q26UD(E/V)HCPU	
Q100UD(E)HCPU	

Note) For details of the PLC units, refer to the PLC manual or the Mitsubishi Electric FA website, etc.

MELFA Controller CR860-R/Q/D

CR860-R
CR860-Q
CR860-D



MELSEC iQ-R/Q compatible robot controller

CR860-R/Q: Uses a multi-CPU configuration that dramatically improves its interaction with FA equipment and also offers highly precise control and fast yet simple information management.

CR860-D: Can be constructed as the control nucleus for robot controllers.

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Controller Specifications

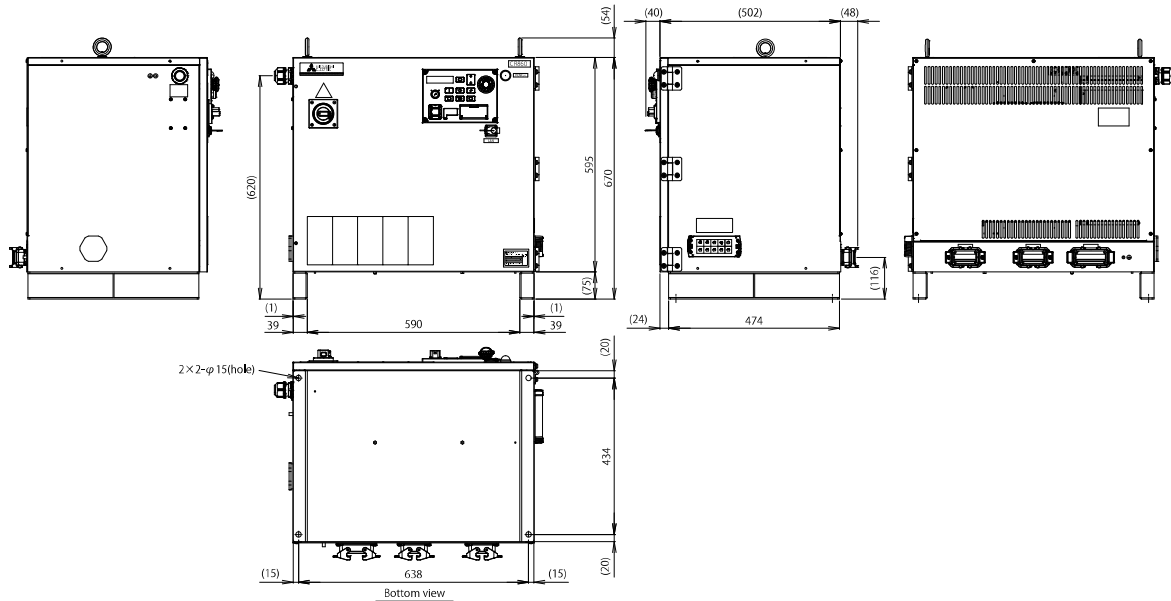
Specifications

Item		Unit	CR860-R	CR860-Q	CR860-D
Robot CPU			R16RTCPU	Q172DSRCPU	Built-in
Number of axes			Maximum 6 axes + additional 8 axes available		
Programming language			MELFA-BASIC V,VI		
Position teaching method			Teaching or MDI		
Memory capacity	Number of teaching positions	point	39000	26000	39000
	Number of steps	step	78000	52000	78000
	Number of programs	point	512		
External input / output	General-purpose I/O	point	0 input / 0 output (8192 input / 8192 output with the multiple CPU common device)		0 input / 0 output (Up to256 / 256 when options are used)
	Dedicated I/O	point	Assigned to multiple CPU common device		
	Hand I/O	point	12 input points / 8 output points		
	External emergency stop input	point	1 (redundant)		
	Emergency stop output	point	1 (redundant)		
	Enabling device input	point	1 (redundant)		
	Mode output	point	1 (redundant)		
	Robot error output	point	1 (redundant)		
	Additional axis synchronization output	point	1 (redundant)		
	Door switch input	point	1 (redundant)		
Interface	Encoder input	point	2	Q173DPX (optional)	2
	Additional axis	channel	1 (SSCNET III/H)		
	Remote I/O	channel	1		
	USB	port	-		
	Ethernet	port	1 (Dedicated T/B) 1 (1000BASE-T / 100BASE-TX / 10BASE-T)		
	Option slot	slot	2 (Available only for function extension option card)		2
	SD memory card slot	slot	1(Unusable)		
	RS-422	port	1 (Dedicated T/B)		
	Emergency stop switch		1		
	Mode selector		1		
Power supply	Input voltage range	V	Three-phase 200 to 240 (The rate of power-supply voltage fluctuation is within + 10% to -15%)		
	Power capacity	kVA	7.5 (Inrush current is not included)		
External dimensions		mm	670(W) × 500(D) × 670(H)		
Mass		kg	80		
Ambient temperature		°C	0 to 45 (Controller) / 0 to 55 (Robot CPU)		0 to 45
Ambient humidity		%RH	10 to 85		
Structure			Self-contained floor type, Enclose type IP54(FAN part : IP2X)		
Grounding		Ω	100Ω or less (Class D grounding)		

Controller

CR860-R/CR860-Q/R860-D

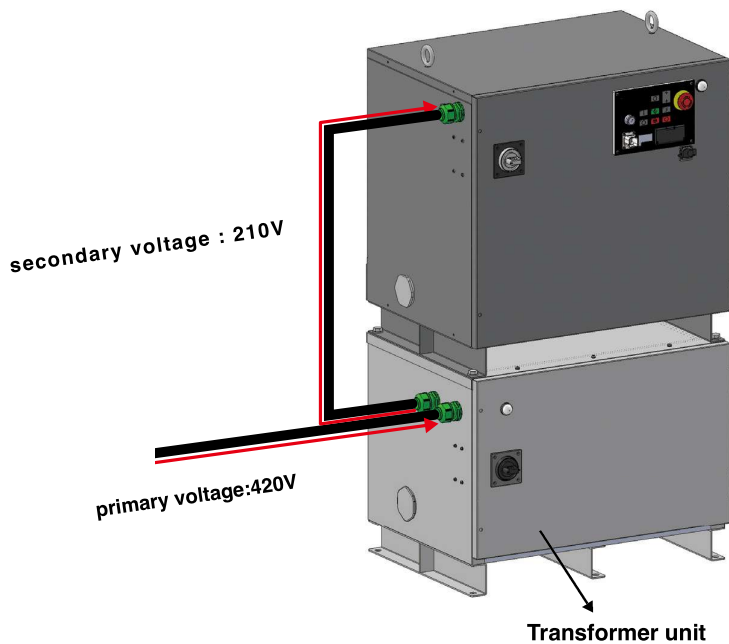
► External Dimensions



Transformer unit(option)

By using this transformer unit, the robot can be operated with 400V power supply.

This transformer unit is used to step down the voltage from 400V to 200V. This transformer unit is designed only for the CR860 controller, and is not used for other controllers.



Specification

Item	Specifications
External dimensions	670(W) × 500(H) × 515(D)
Color	Dark gray
Mass	Approx. 120kg (only the robot arm, excluding cables)
Phase	Three-phase
Capacity	10kVA
Frequency	50Hz
Rated voltage (primary side)	AC420V(± 10%)
Rated voltage (secondary side)	AC210V(± 5%)
Wiring	Delta connection
Operating temperature	0 to 45°C
Relative humidity	10 to 85%RH
Elevation	1000m or lower
Protection specifications	IP54

Multiple CPU environment

► See P.54 details.