

SANMOTION R

AC SERVO SYSTEMS

200 VAC Servo Amplifier

Analog 1-axis

EtherCAT® 1-axis

EtherCAT® 4-axis

EtherCAT®



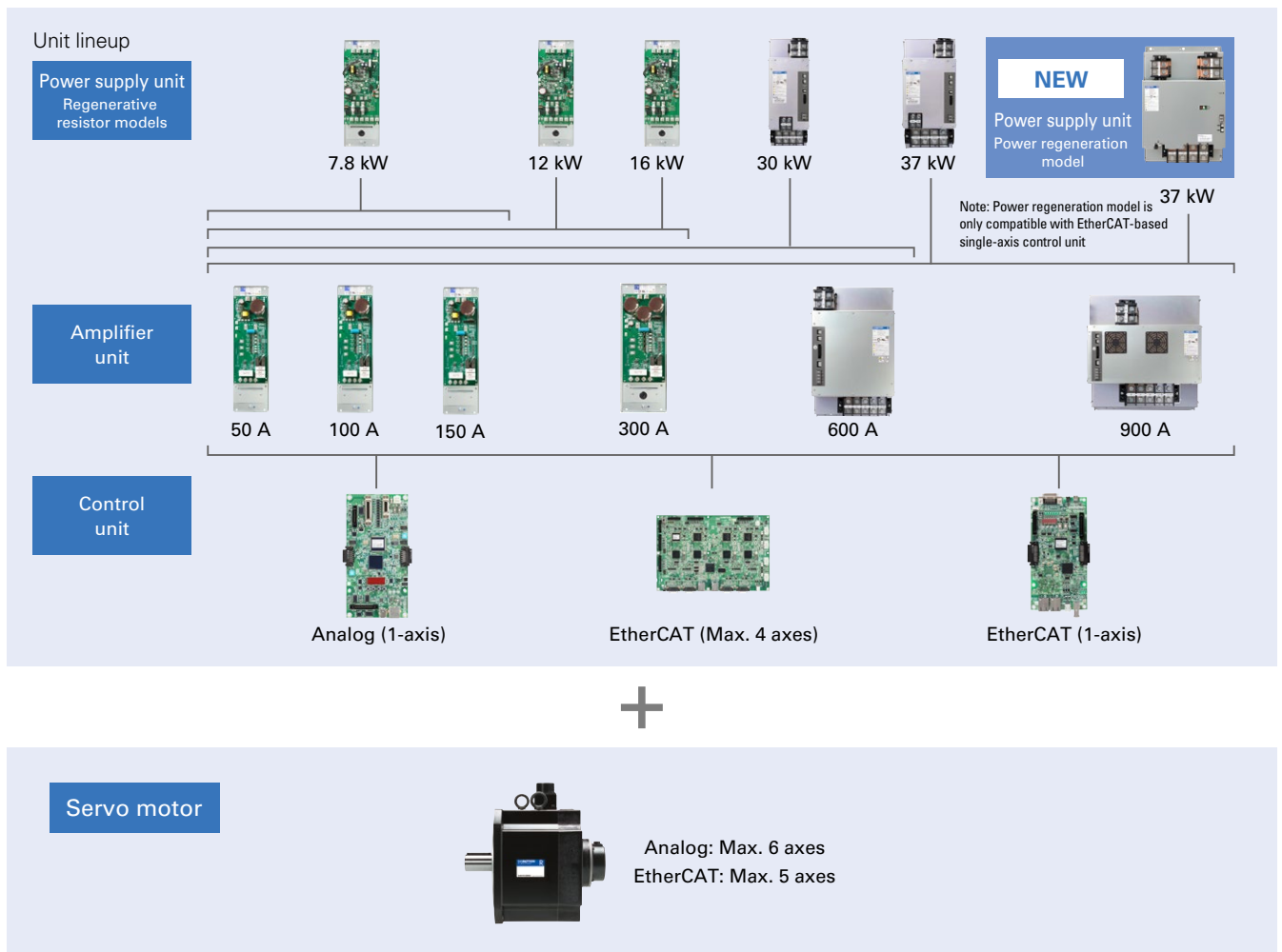
Applications

Injection molding machines, conveying robots, bending machines, presses

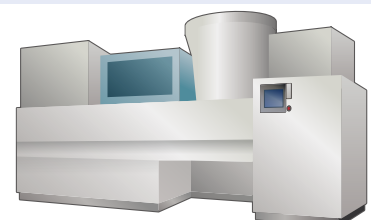
Space Saving for Flexible System Configuration

Variations of control, power supply, and amplifier units are available for configuring a multi-axis servo amplifier that best suits user requirements.

This provides a high degree of freedom, contributing to the downsizing of user equipment.



Especially in injection molding machines, where motors are not operated simultaneously, the power supply unit's capacity can be reduced, contributing to downsizing.



Energy Saving

When a rotating motor decelerates, the motor functions as a generator and produces regenerative power. This power supply unit (power regeneration model) can reuse this regenerative power by feeding it back to the power grid, reducing the power consumption of your equipment.

Compact and Lightweight

This power supply unit (power regeneration model) integrates a converter (rectifier) and power regenerative unit into a single compact unit. It contributes to the downsizing and weight reduction of equipment compared to the case using a separate converter and an external regenerative power recovery unit.

Visualize Power Conditions and Power Consumption

The power supply unit (power regeneration model) measures power supply voltage, current, and frequency, enabling users to check the power supply conditions on the amplifier unit. In addition, the power consumption of equipment can be accurately calculated, and power savings can be checked.

Smooth Motion

Compared with our current model,⁽¹⁾ the new EtherCAT-based single-axis control unit's speed frequency response has been doubled⁽²⁾ and EtherCAT communication cycle has been halved⁽³⁾ to achieve smoother motion. This contributes to shortening the cycle time of user's equipment and increasing productivity.

(1) Comparison with our current model RM2C4H4.

(2) Speed frequency response 2.2 kHz (1.2 kHz for the current model)

(3) Minimum communication cycle 62.5 μs (125 μs for the current model)

Preventive Maintenance

The EtherCAT-based single-axis control unit features monitoring of motor holding brake wear and notification of replacement timing. It also features monitoring of driving power, regenerative power,⁽¹⁾ and communication quality. These contribute to preventive maintenance and remote failure diagnosis of user equipment.

(1) Notification of regenerative power is only available for power supply unit (power regeneration model).

Control unit



EtherCAT 1-axis



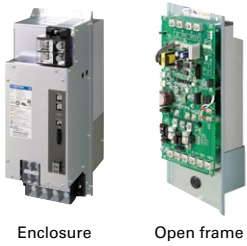
EtherCAT 4-axis



Analog 1-axis

Model no.	RM3C1H4	RM2C4H4	RM2C1A0
No. of controllable axes	1	Up to 4	1
Interface	EtherCAT	EtherCAT	Analog
Functional safety	STO (Safe Torque Off function)	STO (Safe Torque Off function)	STO (Safe Torque Off function)
Dimensions [mm]	90 (W) × 180 (H) × 21 (D)	285 (W) × 190 (H) × 18 (D)	90 (W) × 180 (H) × 17 (D)

Power supply unit (regenerative resistor model)



Input power supply	Control circuit	Single-phase 200 to 230 VAC (+10, -15%), 50/60 Hz (± 3 Hz)
	Main circuit	3-phase 200 to 230 VAC (+10, -15%), 50/60 Hz (± 3 Hz)

Model no.	RM3PAA7R8	RM3PAA120	RM3PAA160
Input power	13 kVA	20 kVA	27 kVA
Rated output power	7.8 kW	12 kW	16 kW
Compatible amplifier unit capacity	50 to 150 A	50 to 300 A	50 to 300 A
Compatible control unit	Analog, EtherCAT	Analog, EtherCAT	Analog, EtherCAT
Frame shape	Open frame	Open frame	Open frame
Dimensions [mm]	154 (W) × 460 (H) × 150 (D)	154 (W) × 460 (H) × 150 (D)	154 (W) × 460 (H) × 150 (D)

Model no.	RM3PAA270	RM3PAA370
Input power	46 kVA	64 kVA
Rated output power	30 kW	37 kW
Compatible amplifier unit capacity	50 to 600 A	50 to 900 A
Compatible control unit	Analog, EtherCAT	Analog, EtherCAT
Frame shape	Enclosure	Enclosure
Dimensions [mm]	150 (W) × 460 (H) × 294 (D)	200 (W) × 460 (H) × 305 (D)

Power supply unit (power regeneration model)



Input power supply	Control circuit	24 VDC (± 15%), 6.1 A Single-phase 200 to 230 VAC (+10, -15%), 50/60 Hz (± 3 Hz)
	Main circuit	3-phase 200 to 230 VAC (+10, -15%), 50/60 Hz (± 3 Hz)

Model no.	RM3PBR370
Input power	47 kVA*
Rated output power	37 kW
Compatible amplifier unit capacity	50 to 900 A
Compatible control unit	EtherCAT
Frame shape	Enclosure
Dimensions [mm]	300 (W) × 460 (H) × 295 (D)

* Calculated with a power factor of 90%

Amplifier unit



Enclosure



Open frame

Input power supply	Control circuit	240 to 358 VDC
	Main circuit	240 to 358 VDC

Model no.	RM3DAA050	RM3DAA100	RM3DAA150
Amplifier unit capacity	50 A	100 A	150 A
Compatible motor output	Up to 2.5 kW	Up to 5.0 kW	Up to 7.0 kW
Frame shape	Open frame	Open frame	Open frame
Dimensions [mm]	124 (W) × 460 (H) × 173 (D)	124 (W) × 460 (H) × 182 (D)	W124 × H460 × D182

Model no.	RM3DAA300	RM3DAB600	RM3DAB900
Amplifier unit capacity	300 A	600 A	900 A
Compatible motor output	Up to 15 kW	Up to 30 kW	Up to 37 kW
Frame shape	Open frame	Enclosure	Enclosure
Dimensions [mm]	164 (W) × 460 (H) × 192 (D)	260 (W) × 460 (H) × 294 (D)	450 (W) × 460 (H) × 305 (D)

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

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