

SANYO DENKI

-New Products-

SANMOTION G

SERVO SYSTEMS

48 VDC Servo Systems



Next-Level Servo System That Combines **Powerful** and **Friendly**

These are compact, lightweight 48 VDC low-voltage servo systems. Enhanced servo performance delivers fast responsiveness and precise control with reduced vibration, helping improve equipment productivity and processing quality. The low-voltage system poses little threat of electric shock, making it suitable for medical equipment and other applications that operate near people.



Lineup

Servo motor	Flange size [mm]	Rated output [W]		
	□ 40	30	50	100
□ 60	100	200	400	

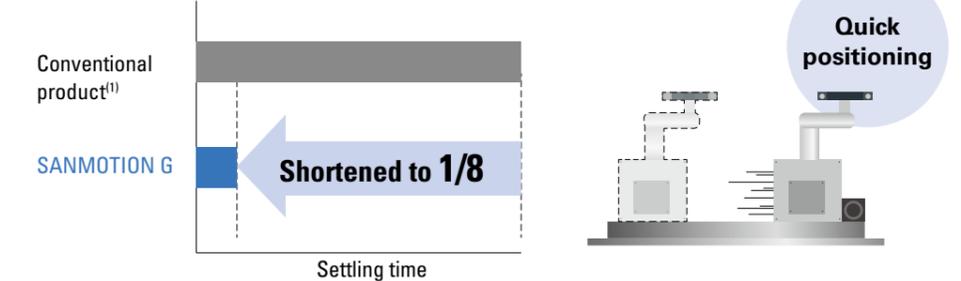
Servo amplifier	Features	Amplifier capacity [A]	Compatible motor rated output [W]
Analog/Pulse	This servo amplifier can enhance the value of combined equipment by increasing responsiveness and ensuring safety with a variety of safety functions. This general-purpose interface enables torque/speed control by analog voltage command and position control by pulse command.	40	30 to 200
		80	200 to 400
EtherCAT	EtherCAT, a high-speed fieldbus, is an open network with high versatility and widely used with high-precision industrial equipment. It can be used in combination with our SANMOTION C motion controller. For more information, see the SANMOTION C catalog.	40	30 to 200
		80	200 to 400

The Servo System That Delivers What Customers Desire

Powerful

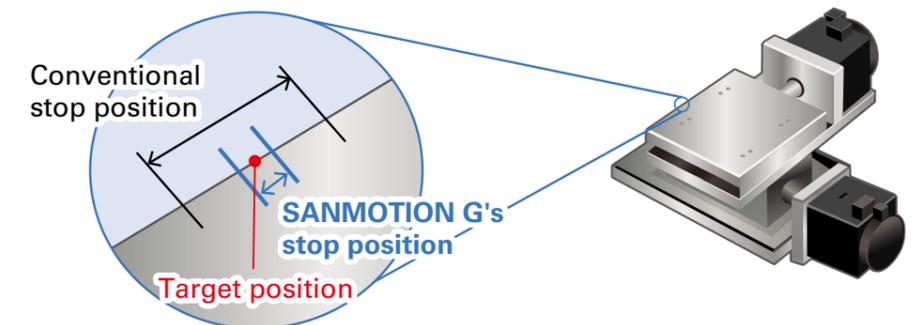
Quick positioning

By accurately detecting and compensating for Coulomb friction, viscous friction, and the force of gravity, the positioning settling time has been made **1/8** that of the conventional product.⁽¹⁾



This product comes with a **23-bit** encoder as standard (64 times that of our conventional product),⁽¹⁾ and even an encoder with a maximum of 27-bit high resolution can be selected as an option. The high-resolution encoder enables high-precision and stable positioning.

Precise and stable positioning



Conventional product⁽¹⁾
17 bit : 131,072 P/R

SANMOTION G
23 bit : 8,388,608 P/R
27 bit : 134,217,728 P/R

Enhance processing quality with highresponse control



Newly developed current control delivers **2.2-times higher** speed frequency response than our conventional product.*

This helps improve the processing quality of machinery.

* Conventional product: SANMOTION R AC servo systems (servo amplifiers: RS2K □□, servo motors: R2G □□)

Powerful

Boost productivity with vibration control

Vibration suppression stabilizes equipment operation at high speeds, shortening processing and assembly cycle times and enhancing overall productivity.



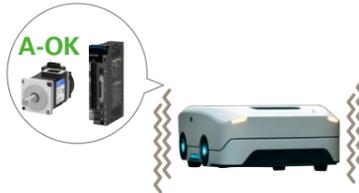
Easy to use in machines with vibration

Compared to the conventional product,⁽¹⁾ the **vibration resistance** of the servo amplifier and servo motor have been increased by approximately **20%** and **2 times**, respectively. This makes it even more suitable for equipment with high levels of vibration such as CT scanners and press machines.

Vibration resistance

4.9 m/s² → **6.0 m/s²**

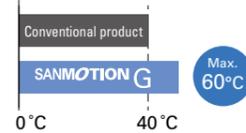
24.5 m/s² → **50.0 m/s²**



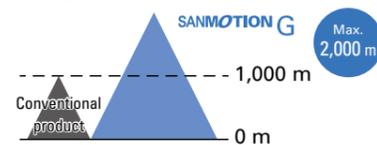
Use in high temperature/altitude environments

Compared to the conventional product,⁽¹⁾ the **operating temperature range and operating altitude have been expanded**, enabling use in severe environments in various regions.

Operating temperature range (Servo amplifiers)



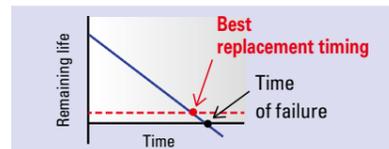
Operating altitude (Servo amplifiers and servo motors)



Note: Output values might be derated.

Enhance monitoring to prevent failures

Optimized control of the **inrush current limiting circuit** for dynamic braking events helps prevent damage to electronic components.



Friendly

Make your equipment smaller and lighter

Max. **19% Shorter**
5% Lighter



By optimizing the electromagnetic field and the brake structure, the motor length and mass have been reduced compared to the conventional product.⁽¹⁾

Motor length up to **19% shorter**
Motor mass up to **5% lighter**

Note: The values of all models averaged

Max. **9% Lighter**



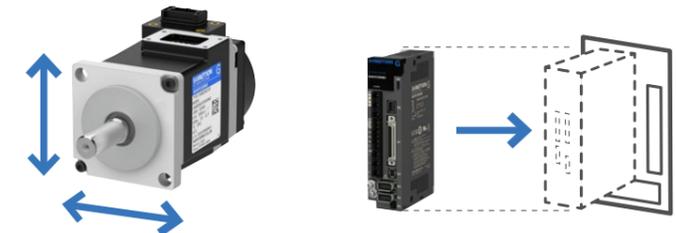
With an optimized thermal design and smaller components used, the servo amplifier has been made up to **9% lighter** than the conventional product.⁽¹⁾

Make your system more efficient

Compared to the conventional product,⁽¹⁾ power loss of servo motors and servo amplifiers have been reduced by up to **5%** and **12.8%**, respectively, aligning with SDGs. The improvement in the amplifier is attributed to the use of the latest power device and a high-efficiency LSI (largescale integrated) circuit. Also, improved energy efficiency extends equipment battery runtime.



Replace your current system without a hassle



With the motor flange size, output shaft shape, amplifier dimensions, mounting, interface, and functionality fully compatible with our conventional SANMOTION R series, **replacement can be done smoothly**.

* Conventional product: SANMOTION R AC servo systems (servo amplifiers: RS2K □□, servo motors: R2G □□)

* Conventional product: SANMOTION R AC servo systems (servo amplifiers: RS2K □□, servo motors: R2G □□)

Application Examples

The compact, lightweight, low-voltage, and energy-efficient servo systems are ideal for semiconductor manufacturing equipment, battery-powered equipment—including AGVs and agricultural machines—and medical or food processing equipment.

Semiconductor manufacturing equipment



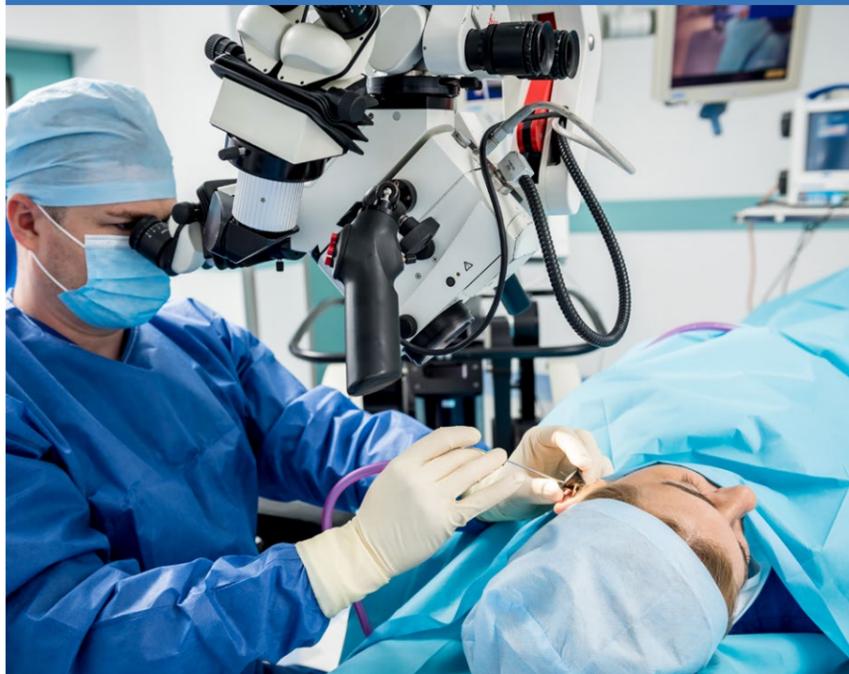
Automated guided vehicle (AGV)



Autonomous mobile robot (AMR) with robotic arm



Medical equipment



Agricultural machinery



Food processing machinery





■ ECO PRODUCTS

Eco Products are eco-friendly products designed to reduce the environmental impact of the product and its packaging materials compared to conventional products on the market. Our products are assessed over the product's life cycle against our own eco-design requirements including product size, weight, power consumption, and CO₂ emissions, and those meeting our standards and higher standards qualify as Eco Products and Eco Products Plus, respectively.

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

SANYO DENKI CO., LTD. 3-33-1 Minami-Otsuka, Toshima-ku, Tokyo 170-8451, Japan TEL: +81 3 5927 1020 <https://www.sanyodenki.com/>

The names of companies and/or their products specified in this document are the trade names, and/or trademarks and/or registered trademarks of such respective companies.

San Ace, SANUPS, and SANMOTION are registered trademarks of SANYO DENKI CO., LTD.

CATALOG No.S1070B001 '25.6

Specifications are subject to change without notice.

Product images are for illustrative purposes only. Image fusion processing or computer graphics may be used.