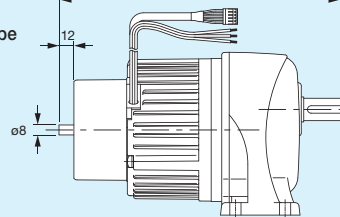


**NEW**

**Encoder-mounted Option  
Battery-powered Gear Motor**

Applicable model: Battery-powered gear motor V type

- The gear motor is shipped with the shaft and mounting tap attached to the back of the motor.
- Custom orders equipped with an encoder are also available.
- Contact your local service office for details such as usage and mounting dimensions.



■ Added length (L) to standard total length Unit: mm

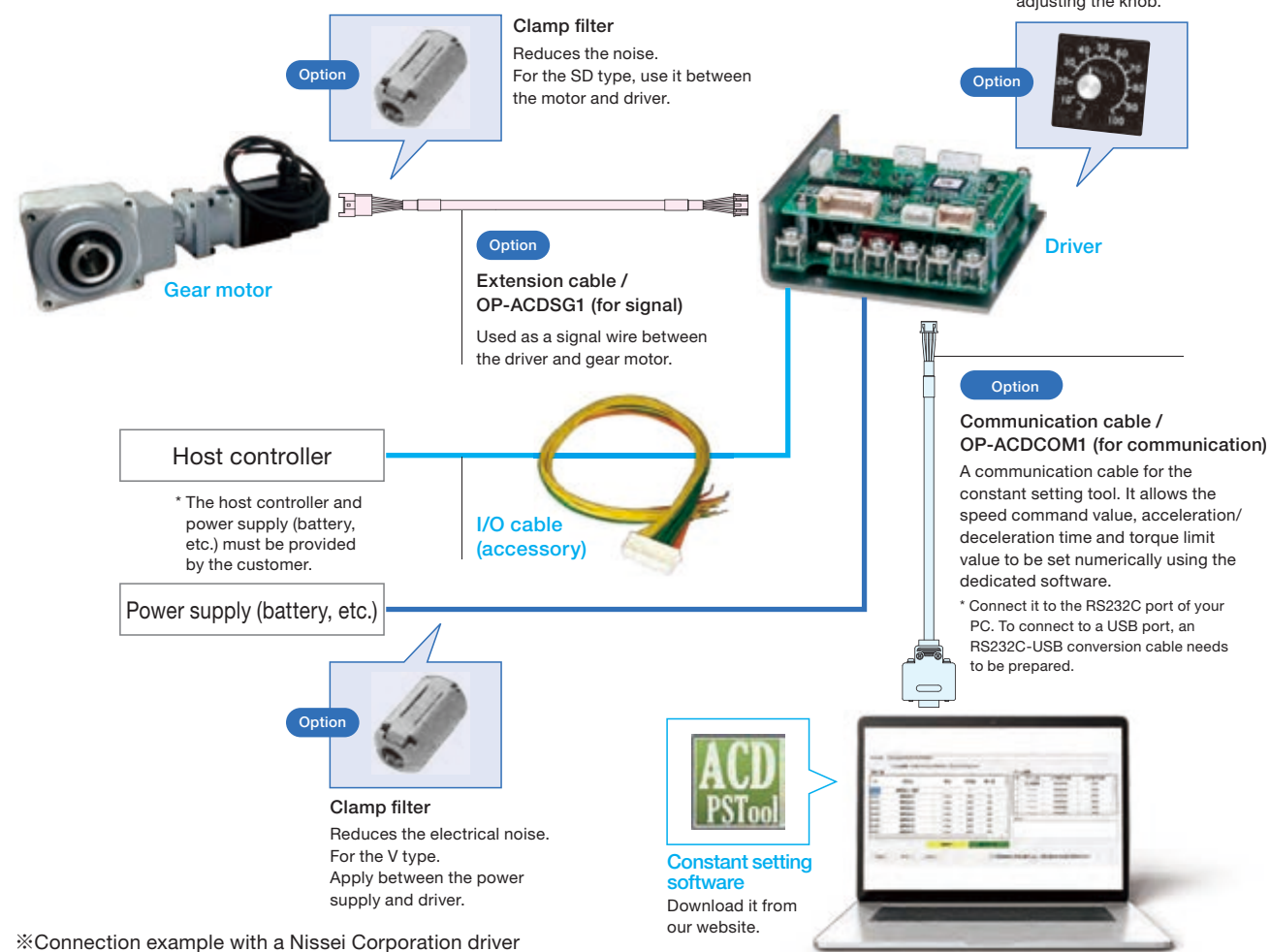
Motor capacity	No brake	With brake
0.1kW	52.5	11.5
0.2kW	52.5	11.5
0.4kW	52.5	6.5

■ Tap dimensions for fixing the encoder

Pitch	Tapped hole
ø40	M3 (2)
ø46	M3 (2)
ø46	M2.5 (2)

**System configuration**

We offer frequently used peripherals for gear motors and drivers as optional accessory items. Contact your local service office for the delivery date and price of optional items.



**Battery Powered BLDC gearmotor  
for AGV / AMR**

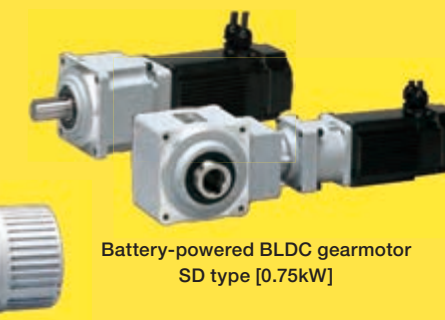


**More freedom, more flexibility**

**AGV / AMR  
development.**



Battery-powered BLDC gearmotor V type [50W to 0.4kW]



Battery-powered BLDC gearmotor SD type [0.75kW]



Dedicated driver for Nissei Corporation's battery-powered BLDC gearmotor



Encoder-mounted battery powered BLDC gearmotor

**NISSEI CORPORATION**

URL <https://english.nissei-gtr.co.jp/>

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TEL : +81-566-92-5312 FAX : +81-566-92-7002 E-Mail : [oversea@nissei-gtr.co.jp](mailto:oversea@nissei-gtr.co.jp)

**A compact, multifunctional and high-performance BLDC gearmotor supporting the development and implementation of AGV / AMR.**

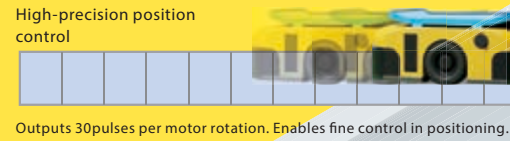
**NISSEI CORPORATION**



# Feature 1

The high-output and compact SD type enables high-speed movement and space-saving design.

A gear motor equipped with both the speed and strength to drive a high output of 0.75kW at an input voltage of 48VDC. It provides high speed, operating range and position detection accuracy (compared to our V type), allowing high accuracy and smooth movement. It is also slim and low-profile, making it ideal for AGV and AMR applications where the installation space is limited.



Precise stops  
30-pulse position detection (per motor rotation)

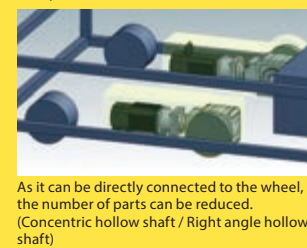
# The ideal solution for AGV/AMR development.

In recent years, it has become essential to implement AGV / AMR in factories and warehouses. Nissei Corporation offers products and services with highly accurate functions and performance such as speed stability and wide-range control that are required for unmanned vehicles. We provide the ideal solution for AGV / AMR development.

# Feature 2

The V type comes in a wide variety which be selected according to the mechanism of the device.

At 0.1kW or higher, the parallel shaft, right angle shaft, concentric hollow shaft and concentric solid shaft are available at the same capacity and reduction ratio. It can be operated with a 12, 24 or 48 VDC battery power supply, making it ideal for moving applications.



Variations by type

Capacity	Voltage		
	12 VDC	24 VDC	48 VDC
50W	Parallel shaft		
0.1kW	Parallel shaft / Right angle shaft Concentric hollow shaft / concentric solid shaft		
0.2kW	Parallel shaft / Right angle shaft Concentric hollow shaft / concentric solid shaft		
0.4kW	Parallel shaft / Right angle shaft Concentric hollow shaft / concentric solid shaft		
0.75kW	Parallel shaft / Right angle shaft Concentric hollow shaft / concentric solid shaft		

Specifications

Item	V type	SD type
Rated rotation speed	2500r/min	3000r/min
Speed control range	100 to 3000r/min	80 to 4000r/min
Speed command method	External analog command, PWM speed command, Pulse frequency speed command, Built-in trimmer 1, Speed command 1 to 8	
Instantaneous maximum torque	200% of rated torque	
Number of input points	Sequence input: 8, Analog input: 1	
Number of output points	Sequence output: 4, analog output: 1	

# Feature 3

Dedicated driver for battery-powered gear motors that's compact and easy to use.

Third party drivers dedicated driver that has been developed along with the battery-powered gear motor. It provides a compact design while achieving a wide range of speed control and improved acceleration. Its compact size is suitable for installation in tight spaces.

Driver functions

### ■ Pulse frequency speed command

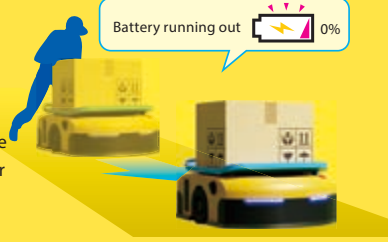
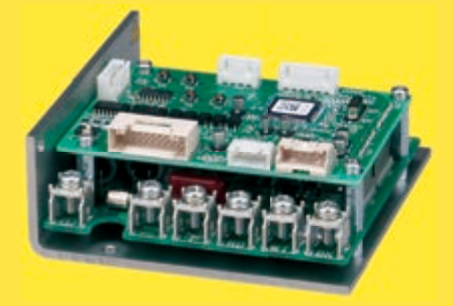
Changes the command speed according to the pulse frequency. Enables stepless gear shifting without the use of an analog output unit.

### ■ Forward/reverse pulse

Detects the position of the motor by counting the pulses of the forward and reverse rotations independently according to the direction of rotation. It accurately tells the amount of movement even in places where vibration is present such as outdoors.

### ■ DC lock function

Allows the rotation of the motor to be temporarily locked without mechanical brakes, serving as a simple brake. The application can be pushed and moved when the power is turned off. It can be used as a measure against the battery of the vehicle running out and as a brake for vehicles such as AGV with conveyor while transporting workpieces.



Minimal installation space

Compact design

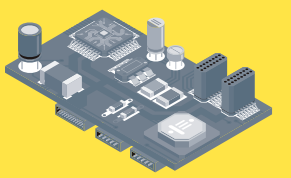
Stable speed control

# Feature 4

Can be driven by a third party drivers. Enables in-house production and cost reduction for implementation.

### Customer-made driver

It's possible to be selective with the functions to make it more compact, customize the desired functions, and drive it with a customer-made driver. The motor characteristics, specifications of the Hall integrated circuit and the like can be easily found in the catalog and instruction manual.



Commercially available third party drivers  
It can be used in conjunction with a commercially available driver from another manufacturer that supports communication function, etc. Nissei Corporation can also provide information on drivers (CAN-compatible) that are confirmed to be compatible. Please contact your local service office for details.



# Feature 5

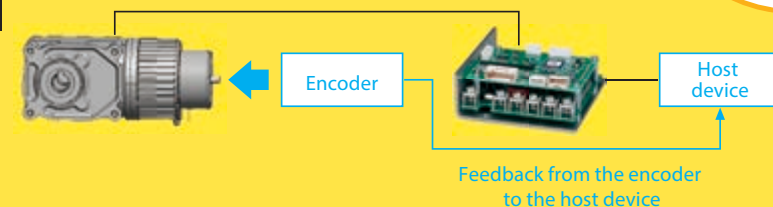
Encoder-mounted battery-powered gear motor that enables more accurate feedback control.

The encoder-mounted option allows the motor shaft to stick out from the back of the product. The customer can then mount an encoder to the motor shaft.



### Configuration example 1

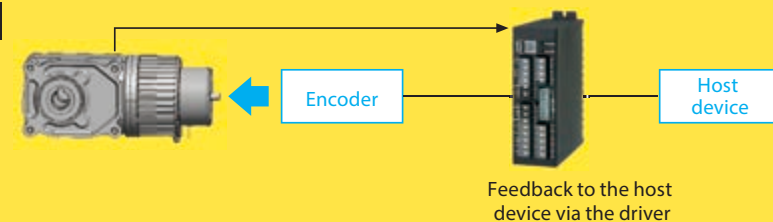
Encoder-mounted battery powered gear motor + Dedicated driver



Simple positioning (adjustment, etc.) can be done by feeding back the encoder signal to the host device.

### Configuration example 2

Encoder-mounted battery powered gear motor + Customer-made drivers and commercially available third party drivers



Improves the speed controllability (stability at low-speed and uneven rotation) by feeding back the encoder signal to the driver. It can also provide position control depending on the selected driver.

\* See the next page for the total length of the gear motor with the encoder installed.