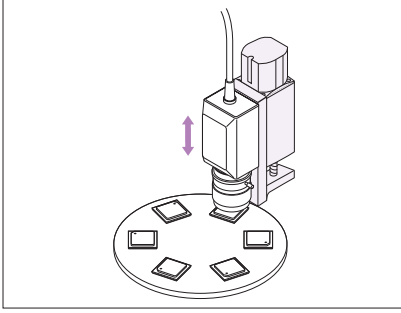
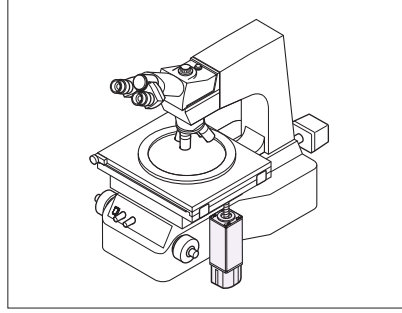


Applications

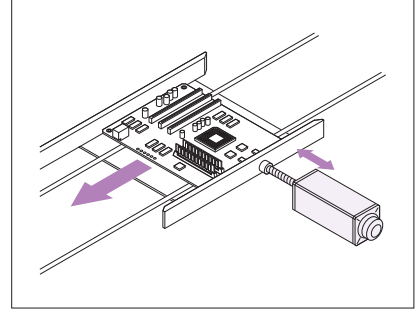
Focusing of a CCD Camera



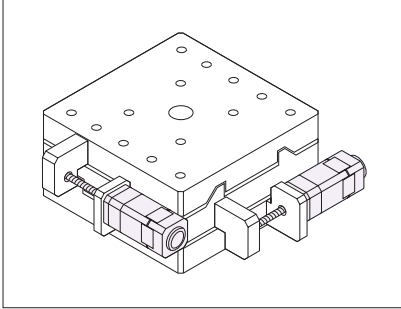
Vertical Fine-Tuning of Table Position



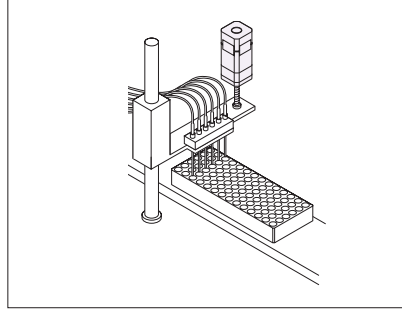
Centring of a Board



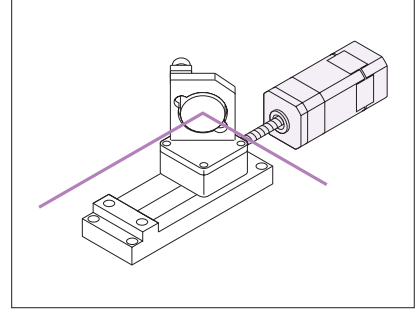
Drive Mechanism for a Micrometer Head X-Y Stage
(Automation of micrometer head)



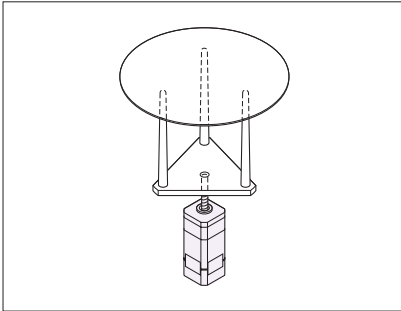
Automatic Micro-Plate Dispensing



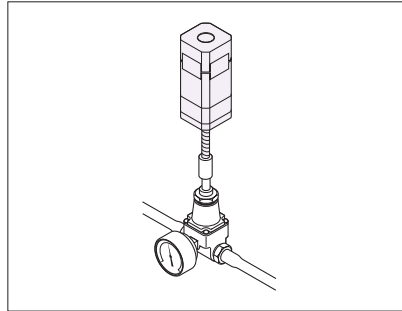
Adjusting a Mirror Positioning Device



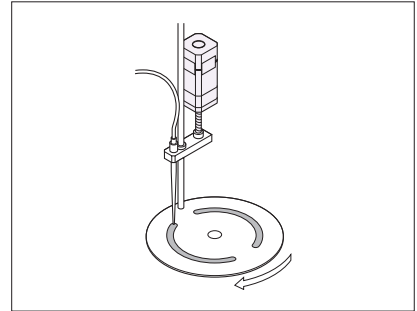
Pin Lifter



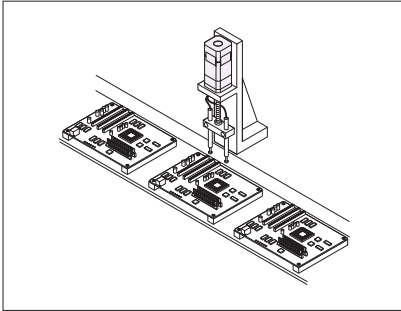
Fine-Tuning of Flow-Rate Regulator Valve Setting



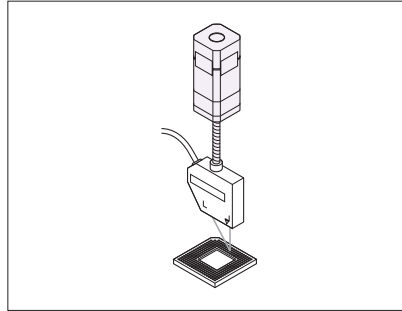
Fine-Tuning of Nozzle Position



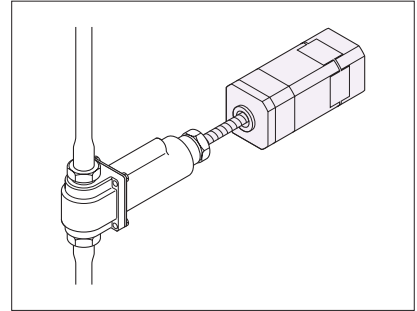
Vertical Movement of Probes



Fine-Tuning of Sensor Position



Driving a Pump Actuator Device



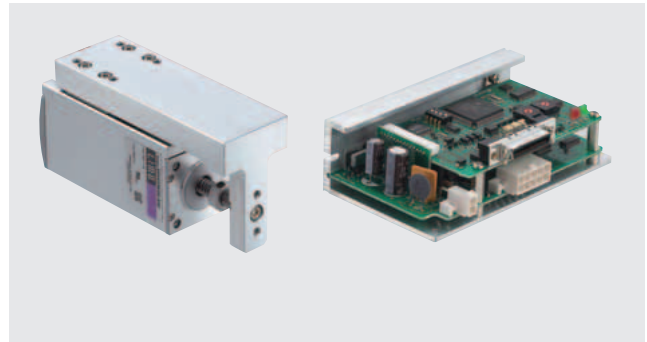
Compact Linear Actuators DRS Series

● Connection Information ●
 Technical reference → Page G-1
 Safety standards → Page H-2

These compact motorized linear actuators are integrally designed with a stepping motor adopting α STEP technology and a linear motion mechanism. They achieve high-resolution, highly accurate multi-point positioning and variable speed operation, while saving installation space.



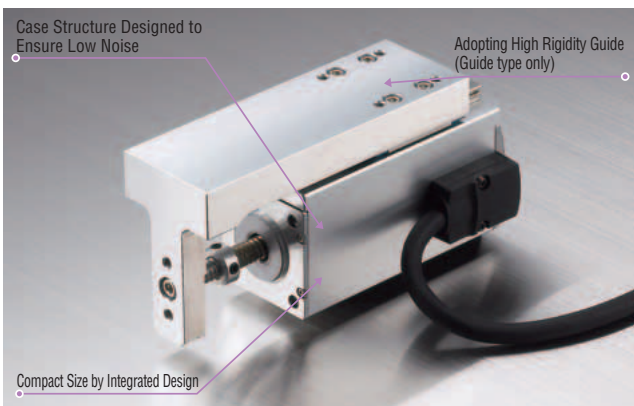
● For detailed product safety standard information including standards, file number and certification body, please visit www.orientalmotor.eu.



Features

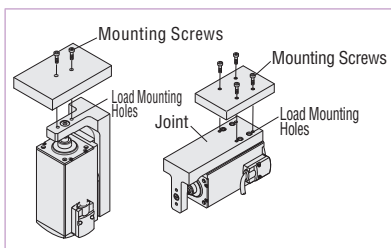
● Incorporating Stepping Motor α STEP Technology

Incorporating stepping motor α STEP technology, these models can maintain positioning operation even during abrupt load fluctuations and accelerations. The rotor position detection sensor monitors the rotation speed and amount. When an overload condition is detected, it will instantaneously regain control using the closed loop mode. When an overload condition continues it will output an alarm signal, thereby providing reliability equal to that of a servo motor.



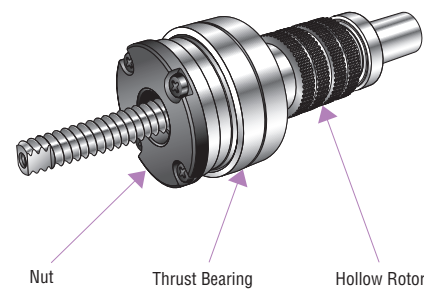
● Adopting High Rigidity Guides (Guide type only)

High rigidity guide, utilizing the actuator width at a maximum, is adopted. The high transportable mass and high load moment allow a load to be installed directly on the joint. The joint also has mounting holes for installing a load. The standard type (without a guide) is also available. (For the standard type, a ball screw anti-spin mechanism must be provided.)

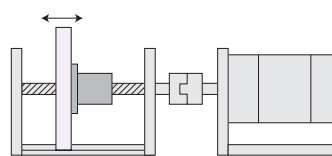


● Compact Size by Integrated Design

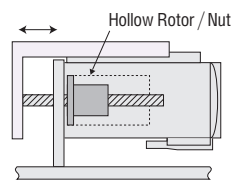
The hollow rotor and ball screw nut have been integrated. Since no connecting parts are necessary, the compact, high-accuracy mechanism can be used with ease.



● Ball Screw + Motor



● DRS Series



● Lineup of Rolled Ball Screw Type and Ground Ball Screw Type

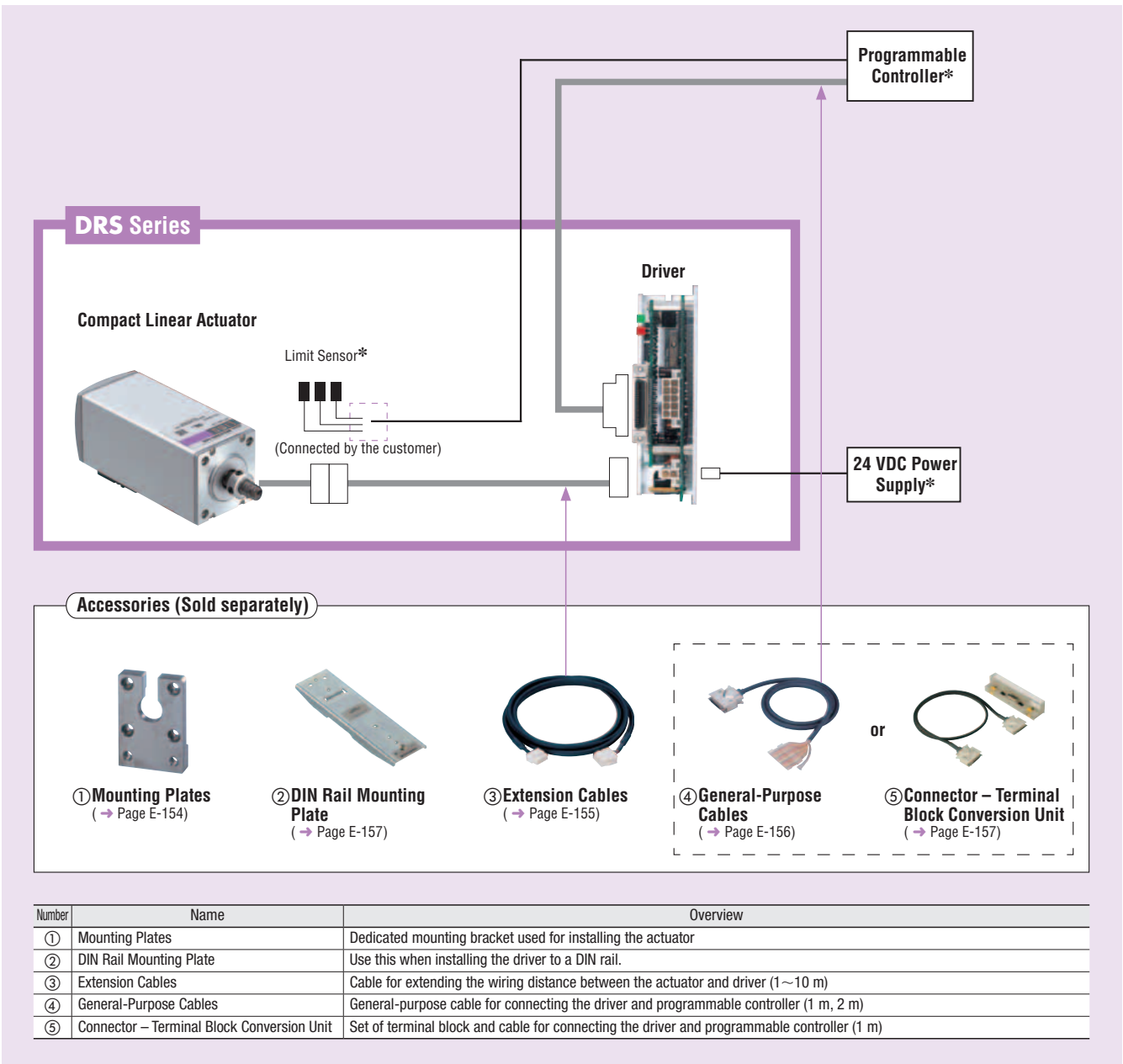
Rolled Ball Screw Type Repetitive Positioning Accuracy: ± 0.02 mm

Ground Ball Screw Type Repetitive Positioning Accuracy: ± 0.005 mm

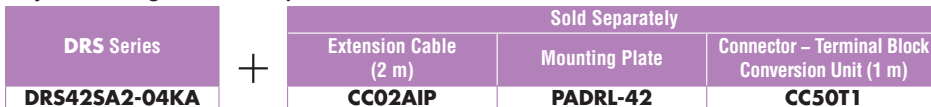
● If you are interested in the ground ball screw type, please contact the nearest Oriental Motor sales office.

System Configuration

*Not supplied



System Configuration Example



●The system configuration shown above is an example. Other combinations are available.

Product Number Code

DRS 42 S A 2 G - 04 M K A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series Name	DRS: DRS Series
②	Frame Size	28: □28 mm 42: □42 mm
③	Motor Type	S: <i>QSTEP</i>
④	Drive System	A: Rolled Ball Screw Type B: Ground Ball Screw Type
⑤	Lead	1: 1 mm 2: 2 mm
⑥	Type	Blank: Standard Type G: Guide Type
⑦	Stroke	03: 30 mm (□28 mm) 04: 40 mm (□42 mm) 06: 60 mm (□28 mm) 10: 100 mm (□42 mm)
⑧	Additional Function	Blank: Without Additional Function M: With Electromagnetic Brake N: With Adjusting Knob
⑨	Power Supply Voltage	K: 24 VDC
⑩	Driver Type	A: DRSD□□A-KA

Product Line

● Rolled Ball Screw Type

Frame Size (mm)	Type	Additional Function	Without Additional Function	With Electromagnetic Brake	With Adjusting Knob
			Product Name	Product Name	Product Name
□28	Standard Type		DRS28SA1-03KA	—	DRS28SA1-03NKA
			DRS28SA1-06KA	—	—
□28	Guide Type		DRS28SA1G-03KA	—	DRS28SA1G-03NKA
			DRS28SA1G-06KA	—	—
□42	Standard Type		DRS42SA2-04KA	DRS42SA2-04MKA	DRS42SA2-04NKA
			DRS42SA2-10KA	—	—
□42	Guide Type		DRS42SA2G-04KA	DRS42SA2G-04MKA	DRS42SA2G-04NKA
			DRS42SA2G-10KA	—	—

● Ground Ball Screw Type

Frame Size (mm)	Type	Additional Function	Without Additional Function	With Electromagnetic Brake	With Adjusting Knob
			Product Name	Product Name	Product Name
□28	Standard Type		DRS28SB1-03KA	—	DRS28SB1-03NKA
			DRS28SB1-06KA	—	—
□28	Guide Type		DRS28SB1G-03KA	—	DRS28SB1G-03NKA
			DRS28SB1G-06KA	—	—
□42	Standard Type		DRS42SB2-04KA	DRS42SB2-04MKA	DRS42SB2-04NKA
			DRS42SB2-10KA	—	—
□42	Guide Type		DRS42SB2G-04KA	DRS42SB2G-04MKA	DRS42SB2G-04NKA
			DRS42SB2G-10KA	—	—

— The following items are included in each product.

Actuator, Surge Suppressor*, Driver, Control I/O Connector, Power Supply Connector, Operating Manual

*Electromagnetic brake type only

Specifications

● Actuator

◇ Standard Type (RoHS)



Product Name	DRS28S□1-03KA DRS28S□1-03NKA DRS28S□1-06KA		DRS42S□2-04KA DRS42S□2-04NKA DRS42S□2-10KA		DRS42S□2-04MKA	
	Without Electromagnetic Brake		Without Electromagnetic Brake		With Electromagnetic Brake	
Electromagnetic Brake						
Maximum Vertical Transportable Mass*1	kg	4	3	15	10	15
Maximum Speed*2	mm/s	~12	~24	~15	~30	~15
Maximum Acceleration	m/s ²	0.2		0.4		0.4
Maximum Thrust Force*3	N	40	30	150	100	150
Maximum Holding Force	Power ON*4	40		150		150
	Power OFF	N		0		N
	Electromagnetic Brake	N		-		150
Repetitive Positioning Accuracy	mm	Rolled Ball Screw Type: ±0.02		Ground Ball Screw Type: ±0.005		
Lost Motion	mm	Rolled Ball Screw Type: 0.1		Ground Ball Screw Type: 0.05		
Resolution*5	mm	0.001		0.002		0.002
Lead	mm	1		2		2
Stroke	mm	03 : 30	06 : 60	04 : 40	10 : 100	40
Mass (With adjusting knob)	kg	0.2 (0.21)		0.6 (0.61)		0.73

◇ Guide Type (RoHS)



Product Name	DRS28S□1G-03KA DRS28S□1G-03NKA		DRS42S□2G-04KA DRS42S□2G-04NKA		DRS42S□2G-04MKA	
	Without Electromagnetic Brake		Without Electromagnetic Brake		With Electromagnetic Brake	
Electromagnetic Brake						
Maximum Horizontal Transportable Mass	kg	3		10		10
Maximum Vertical Transportable Mass*1	kg	3		10		10
Maximum Speed*2	mm/s	~12	~24	~15	~30	~15
Maximum Acceleration	m/s ²	0.2		0.4		0.4
Maximum Thrust Force*3	N	40	30	150	100	150
Maximum Holding Force	Power ON*4	40		150		150
	Power OFF	N		0		N
	Electromagnetic Brake	N		-		150
Maximum Load Moment	N·m	Mr: 0.30	Mv: 0.24	Mr: 1.5	Mr: 1.3	Mv: 1.0
Repetitive Positioning Accuracy	mm	Rolled Ball Screw Type: ±0.02		Ground Ball Screw Type: ±0.005		
Lost Motion	mm	Rolled Ball Screw Type: 0.1		Ground Ball Screw Type: 0.05		
Resolution*5	mm	0.001		0.002		0.002
Lead	mm	1		2		2
Stroke	mm	30		40		40
Mass (With adjusting knob)	kg	0.35 (0.36)		1 (1.01)		1.13

● Either **A** or **B** indicating the drive system is entered where the box □ is located within the product name.

*1 When the power is turned off, or when in an all windings off situation, the actuator loses its thrust force or holding force. As such, it can no longer keep the load in position or withstand an external force.

*2 Use each actuator at or below the following maximum speed in a operating temperature range of 0 to +10°C: **DRS28**: 20 mm/s

*3 The maximum thrust is measured during constant-speed operation in the horizontal direction with no load applied to the moving parts (joint). Thrust force varies with load mass and acceleration.

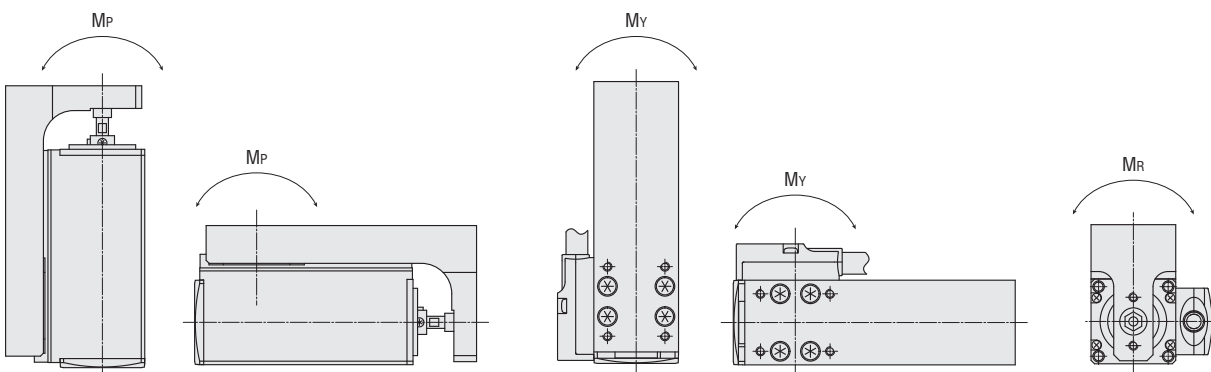
*4 The holding force is the value when the automatic current cutback function is ON (**DRS28**: 40%, **DRS42**: 50%).

*5 A desired resolution can be set from among four levels.

Note

● Use the actuator in conditions where its surface temperature will not exceed 90°C. The repetitive positioning accuracy is measured at a constant temperature under a constant load.
How to read specifications table → Page E-120

Load Moment



● Electromagnetic Brake

Type of Electromagnetic Brake	Power Off Activated Type
Power Supply Input Voltage/Current	24 VDC ±5% 0.08 A
Brake Activation/Release Time	Activate Time: 20 ms Release Time: 30 ms
Time Rating	Continuous

● Driver

Product Name	DRSD07A-KA	DRSD18A-KA
Power Supply Voltage	24 VDC ±10%	
Input Current	0.8 A	1.6 A
Speed and Positioning Control Command	Pulse Input	
Maximum Input Pulse Frequency	250 kHz (When the pulse duty is 50%)	
Protective Functions	When the protective functions are activated, an alarm signal is output and the motor will coast to a stop. Overload, Overvoltage, Speed Error, Overspeed, EEPROM Data Error, Sensor Error, System Error	
Input Signals	Photocoupler Input, Input Resistance: 220 Ω Input current 7~20 mA Forward (CW) Pulse and Backward (CCW) Pulse (Negative logic pulse input), Pulse and Traveling Direction Switching (Negative logic pulse input), All Windings Off, Alarm Clear, Resolution Select	
Output Signals	Photocoupler and Open-Collector Output External Use Condition: 30 VDC, 15 mA max. (Positioning completion signal, alarm signal, timing signal) Transistor and Open-Collector Output External Use Condition: 30 VDC, 15 mA max. (Feedback pulse A/B-phase signal)	
Mass	0.25 kg	

■ General Specifications

These are the values after rated operation under normal ambient temperature and humidity.

Item	Actuator (Motor)	Driver
Thermal Class	130 (B) [Recognized as 105 (A) under the UL and CSA Standards]	—
Insulation Resistance	The measured value is 100 MΩ min. when a 500 VDC megger is applied between the following places: · Case – Motor and Sensor windings	The measured value is 100 MΩ min. when a 500 VDC megger is applied between the following places: · Heat sink – Power input terminal
Dielectric Strength	No abnormality is judged even with application between the following places for 1 minute: · Case – Motor and sensor windings 0.5 kVAC 50 Hz or 60 Hz	No abnormality is judged even with application between the following places for 1 minute: · Heat sink – Power input terminal 0.5 kVAC 50 Hz or 60 Hz
Operating Environment (In operation)	Ambient Temperature	0~+40°C (non-freezing)
	Ambient Humidity	85% max. (non-condensing)
	Atmosphere	Use in an area without corrosive gases or dust. The product should not be exposed to water, oil or other liquids.

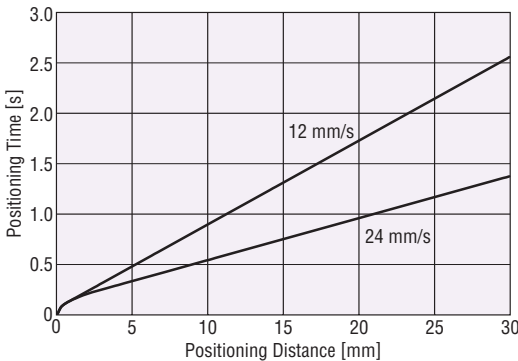
Note

● Do not measure insulation resistance or perform the dielectric strength test while the actuator and driver are connected.

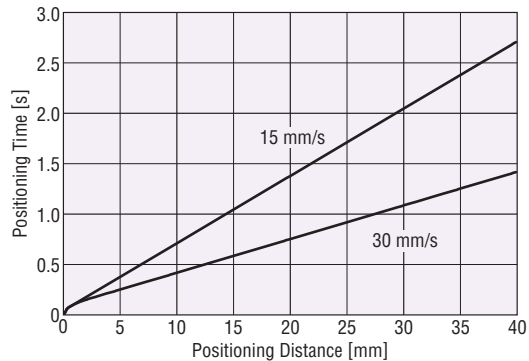
■ Positioning Distance – Positioning Time (Reference)

The positioning time (reference) can be checked from the positioning distance. The graphs below show the characteristics when operated at maximum speed and maximum acceleration. (Velocity Filter: "0")

DRS28



DRS42



● Use each actuator at the following starting speed:

DRS28: 0.2 mm/s or less

DRS42: 0.4 mm/s or less

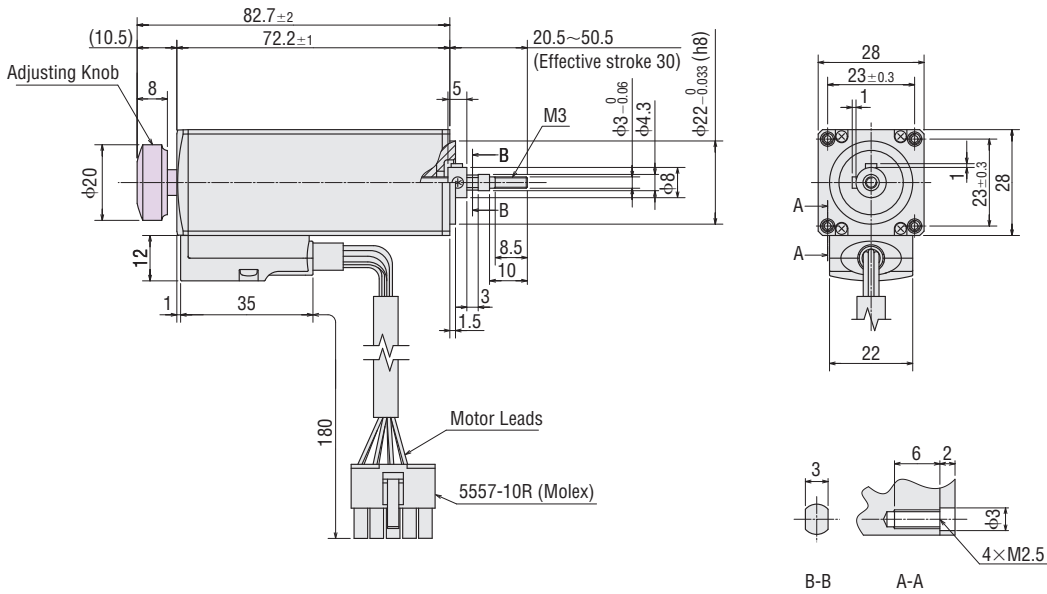
Dimensions (Unit = mm)

● Actuator

◇ Rolled Ball Screw Type Standard Type

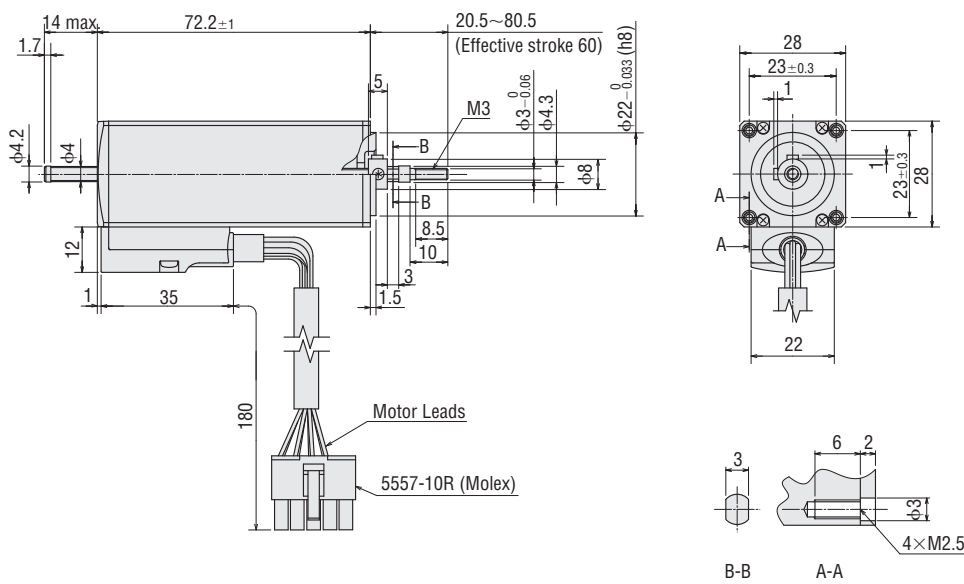
1 Frame Size 28 mm

Product Name	Actuator Product Name	Mass kg
DRS28SA1-03KA	DRS28SA1-03K	0.2
DRS28SA1-03NKA	DRS28SA1-03NK	0.21



2 Frame Size 28 mm

Product Name	Actuator Product Name	Mass kg
DRS28SA1-06KA	DRS28SA1-06K	0.2

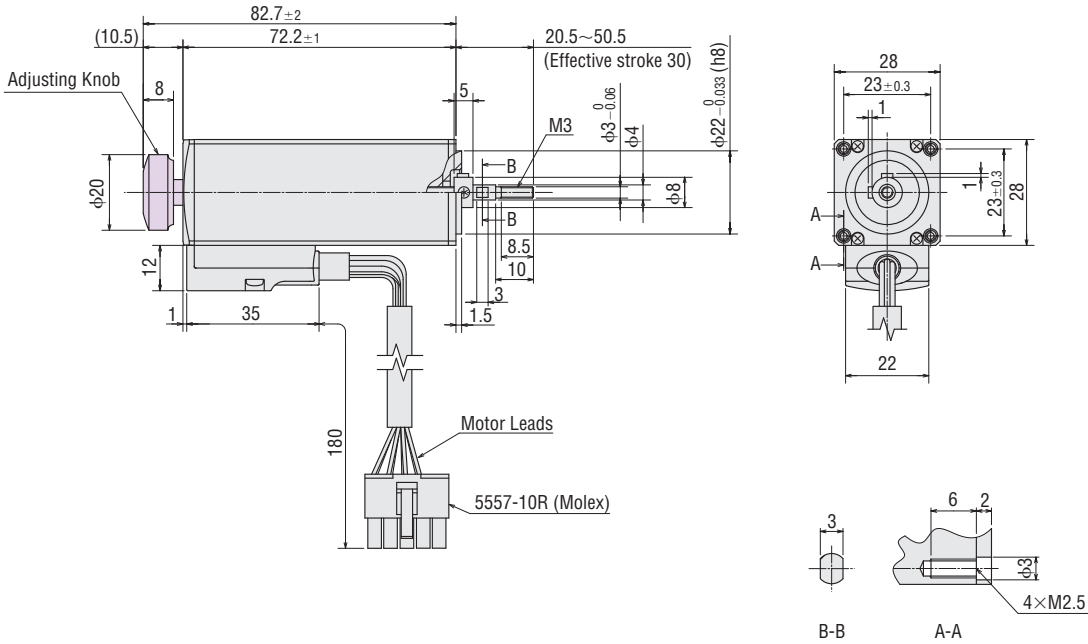


● The dimensions of 1 apply to a configuration with an adjusting knob. For products without additional functions, the shaft and adjusting knob shown in [] areas should be ignored.

◇ Ground Ball Screw Type Standard Type

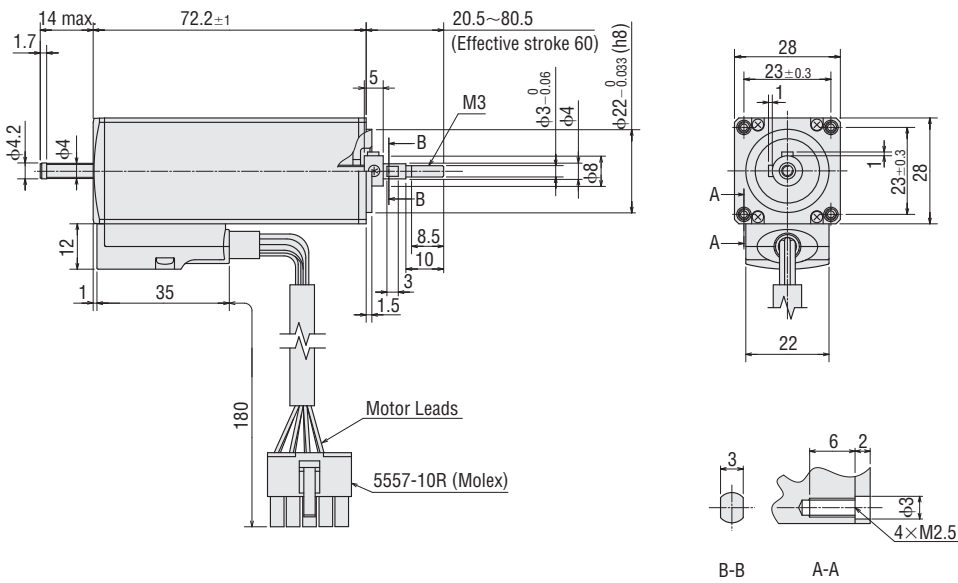
3 Frame Size 28 mm

Product Name	Actuator Product Name	Mass kg
DRS28SB1-03KA	DRS28SB1-03K	0.2
DRS28SB1-03NKA	DRS28SB1-03NK	0.21



4 Frame Size 28 mm

Product Name	Actuator Product Name	Mass kg
DRS28SB1-06KA	DRS28SB1-06K	0.2

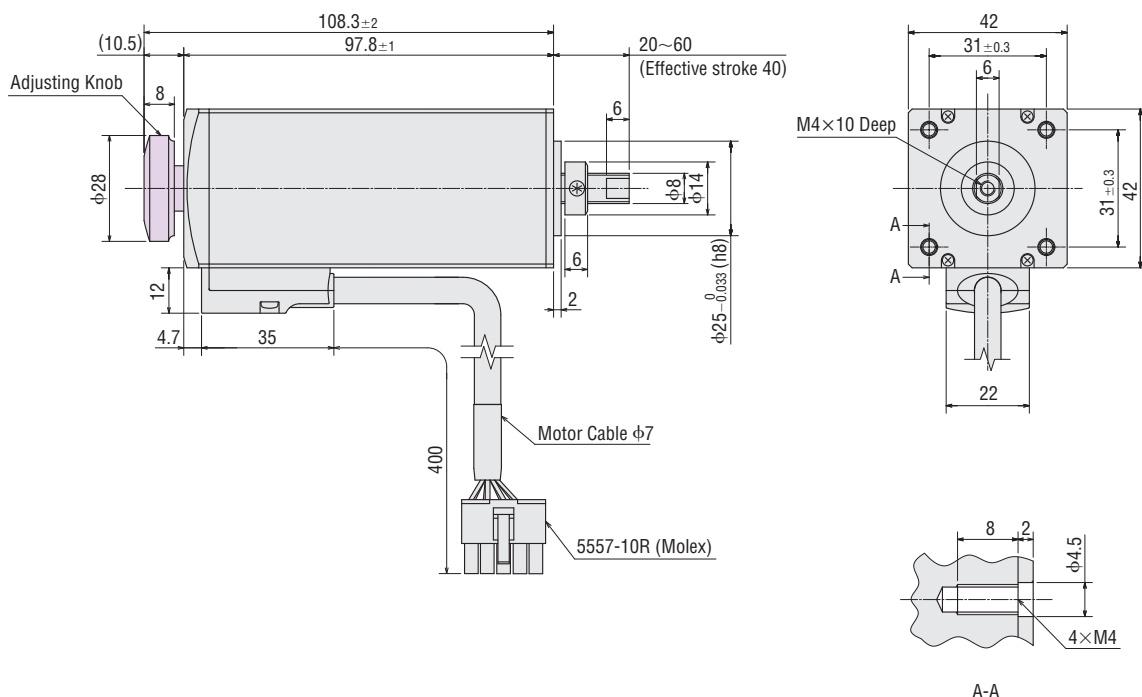


● The dimensions of 3 apply to a configuration with an adjusting knob. For products without additional functions, the shaft and adjusting knob shown in [] areas should be ignored.

◇ Rolled Ball Screw Type/Ground Ball Screw Type Standard Type

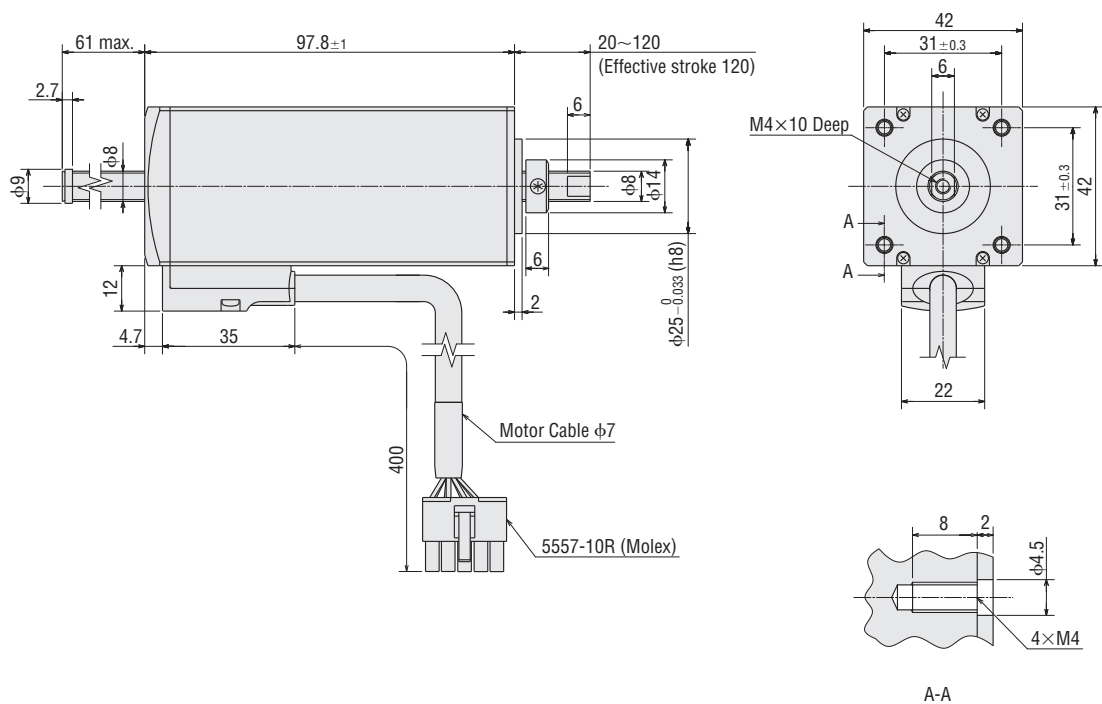
5 Frame Size 42 mm

Product Name	Actuator Product Name	Mass kg
DRS42SA2-04KA	DRS42SA2-04K	0.6
DRS42SB2-04KA	DRS42SB2-04K	0.6
DRS42SA2-04NKA	DRS42SA2-04NK	0.61
DRS42SB2-04NKA	DRS42SB2-04NK	0.61



6 Frame Size 42 mm

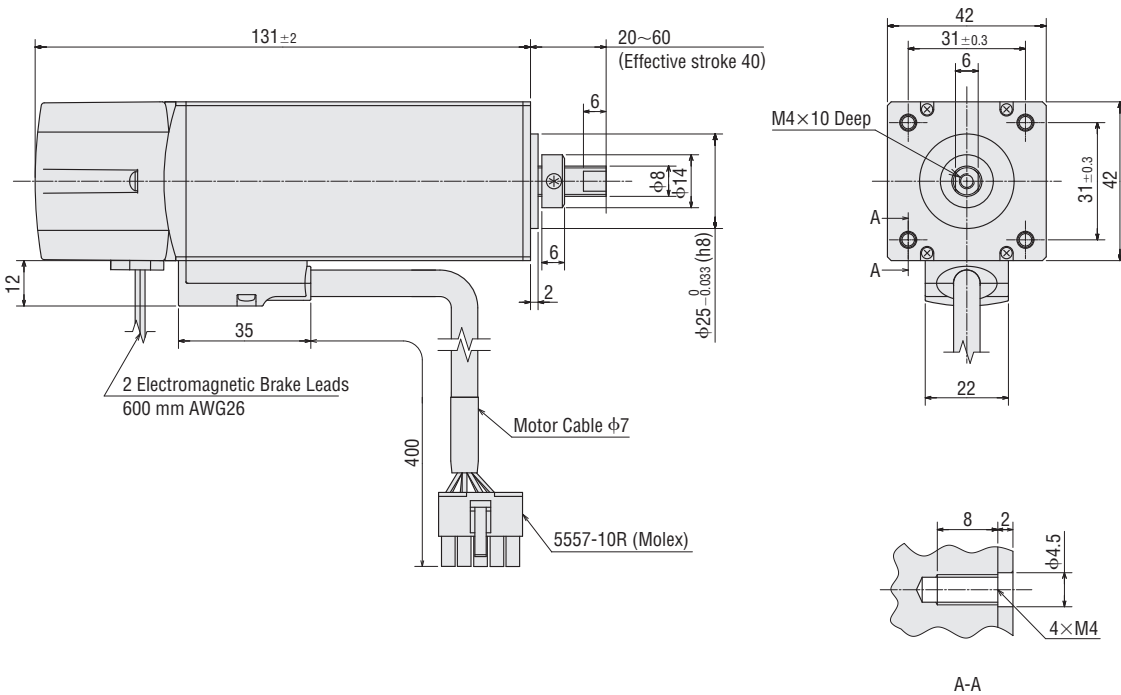
Product Name	Actuator Product Name	Mass kg
DRS42SB2-10KA	DRS42SB2-10K	0.63
DRS42SA2-10KA	DRS42SA2-10K	0.63



● The dimensions of 5 apply to a configuration with an adjusting knob. For products without additional functions, the shaft and adjusting knob shown in [] areas should be ignored.

7 Frame Size 42 mm

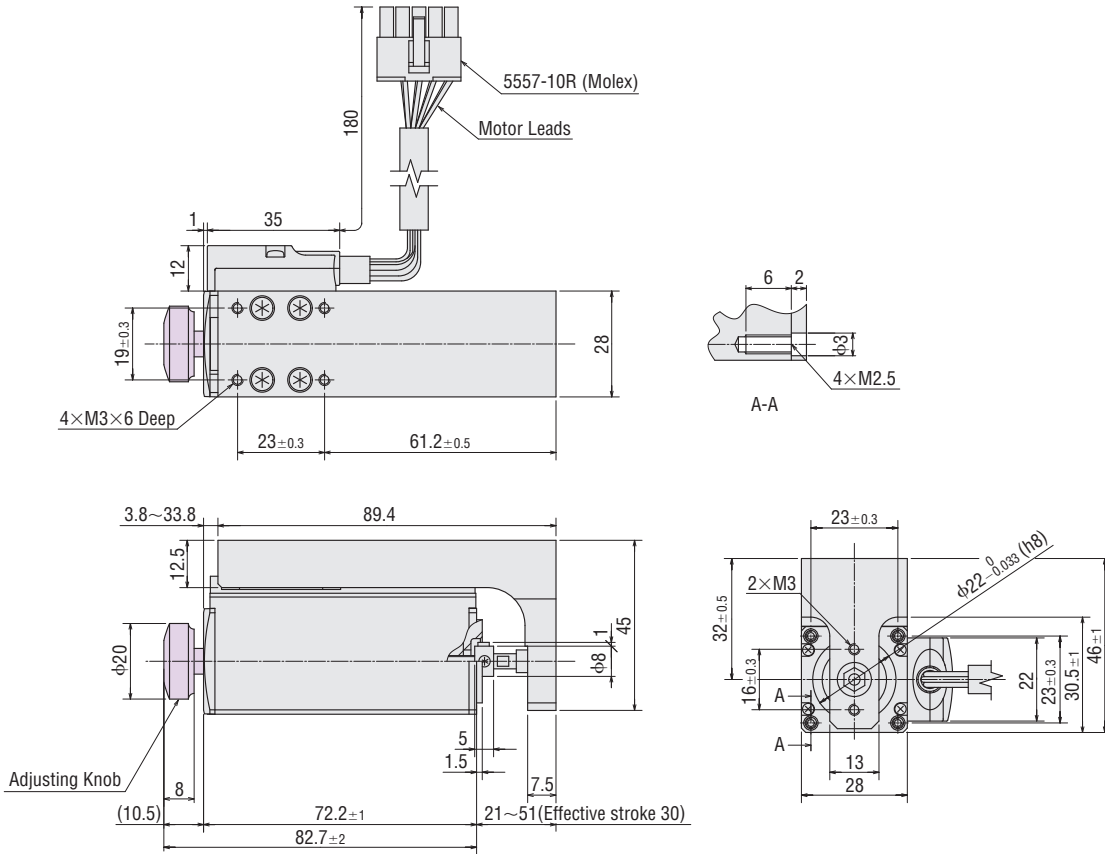
Product Name	Actuator Product Name	Mass kg
DRS42SA2-04MKA	DRS42SA2-04MK	0.73
DRS42SB2-04MKA	DRS42SB2-04MK	0.73



◇ Rolled Ball Screw Type Guide Type

8 Frame Size 28 mm

Product Name	Actuator Product Name	Mass kg
DRS28SA1G-03KA	DRS28SA1G-03K	0.35
DRS28SA1G-03NKA	DRS28SA1G-03NK	0.36

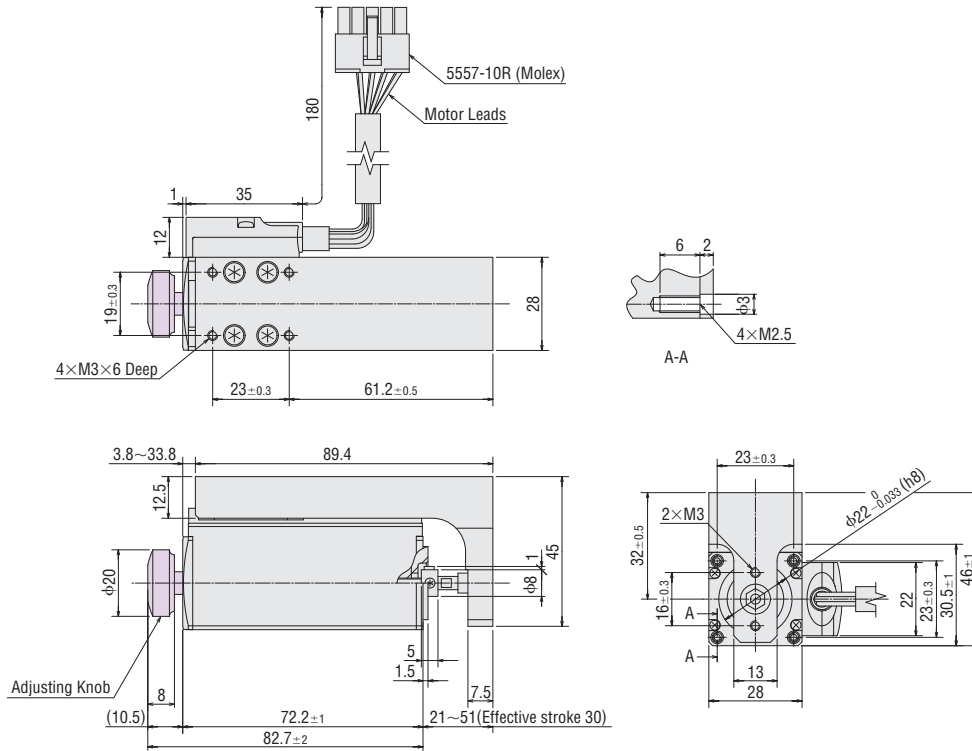


● The dimensions of 8 apply to a configuration with an adjusting knob. For products without additional functions, the shaft and adjusting knob shown in shaded areas should be ignored.

◇ Ground Ball Screw Type Guide Type

9 Frame Size 28 mm

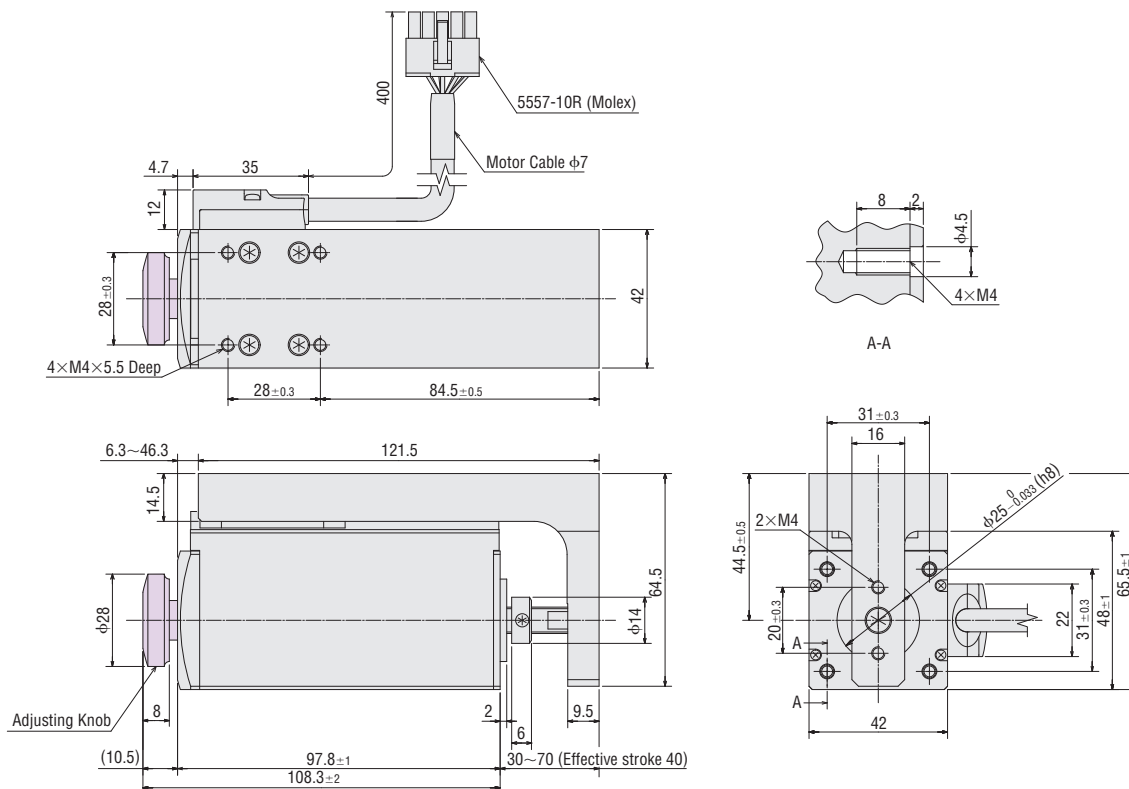
Product Name	Actuator Product Name	Mass kg
DRS28SB1G-03KA	DRS28SB1G-03K	0.35
DRS28SB1G-03NKA	DRS28SB1G-03NK	0.36



◇ Rolled Ball Screw Type/Ground Ball Screw Type Guide Type

10 Frame Size 42 mm

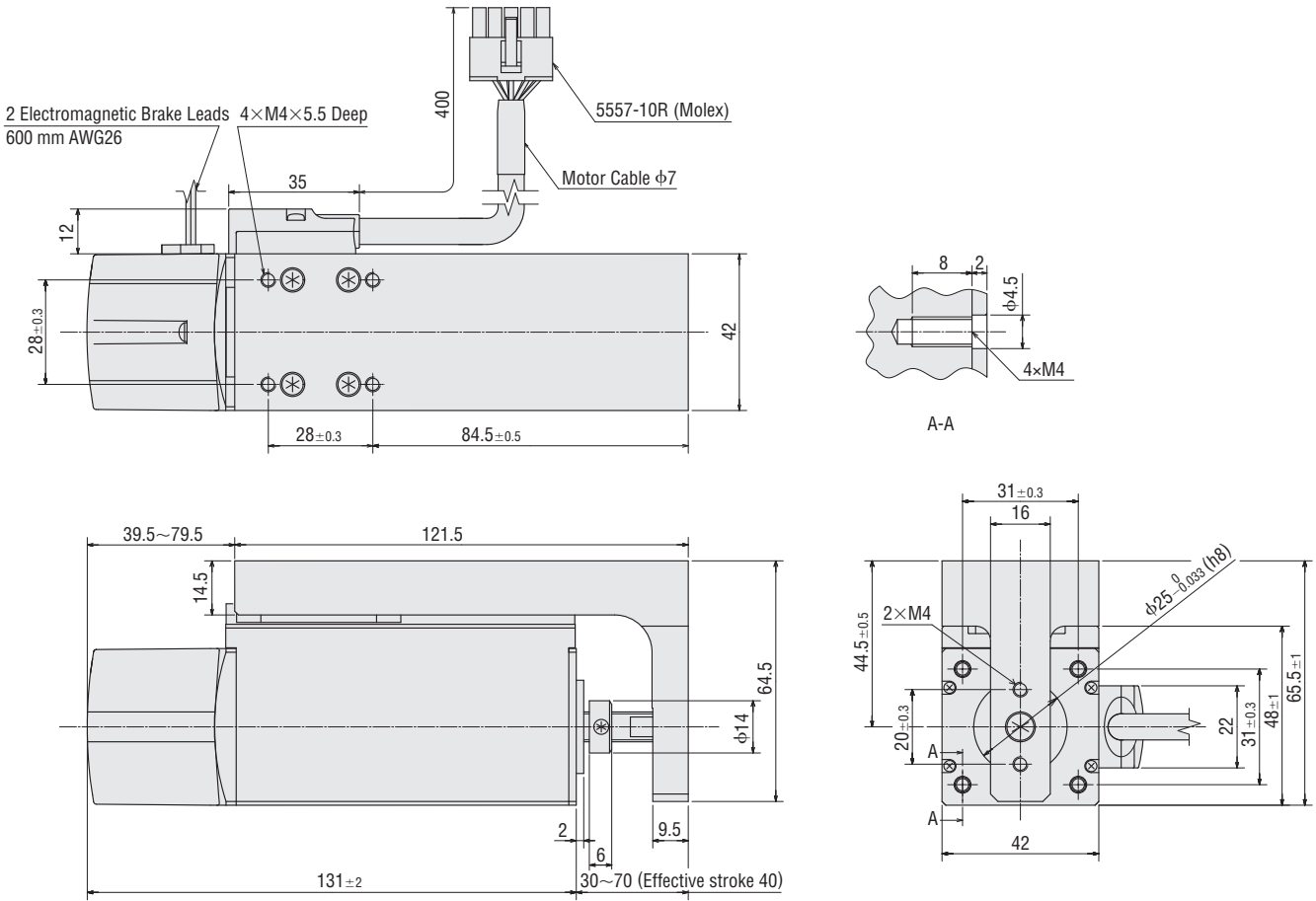
Product Name	Actuator Product Name	Mass kg
DRS42SA2G-04KA	DRS42SA2G-04K	1
DRS42SB2G-04KA	DRS42SB2G-04K	1
DRS42SA2G-04NKA	DRS42SA2G-04NK	1.01
DRS42SB2G-04NKA	DRS42SB2G-04NK	1.01



● The dimensions of 9 and 10 apply to a configuration with an adjusting knob. For products without additional functions, the shaft and adjusting knob shown in shaded areas should be ignored.

11 Frame Size 42 mm

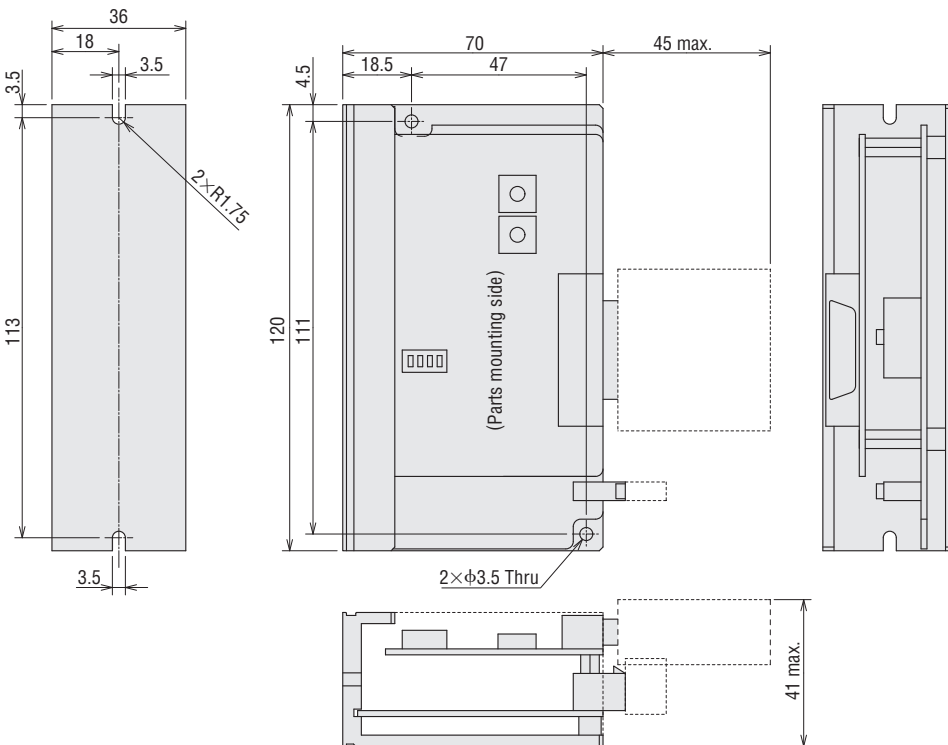
Product Name	Actuator Product Name	Mass kg
DRS42SA2G-04MKA	DRS42SA2G-04MK	1.13



● Driver

12

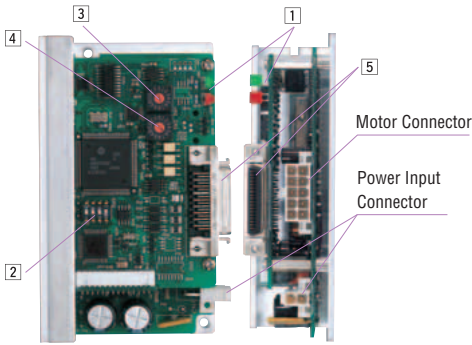
Driver Product Name: DRSD07A-KA, DRSD18A-KA
Mass: 0.25 kg



- Included
- Control I/O Connector
 - Case : 54331-1361 (Molex)
 - Connector : 54306-3619 (Molex)
- Power Supply Connector
 - Connector : 5557-02R (Molex)
 - Connector Crimp
 - Terminal : 5556TL (Molex)

Connection and Operation

Names and Functions of Driver Parts



1 Signal Monitor Display

◇ LED Indicators

Indication	Color	Functions	Lighting Condition
LED1	Green	Power Supply Indication	When power is applied
LED2	Red	Alarm Indication	Blinks when protective functions are activated

◇ Alarm Contents

Blink Count	Functions	Operating Condition
2	Overload Protection	The motor has been operated continuously over 5 seconds under a load exceeding the maximum torque.
3	Overvoltage Protection	The inverter voltage of the driver exceeded the permissible value.
4	Speed Error Protection	The actuator cannot accurately follow at the indicated pulse speed.
6	Overspeed	The set speed is too high.
7	EEPROM Data Error	A parameter has been damaged.
8	Sensor Error	The power source is turned ON when the motor cable is not connected to the driver.
Lighting	System Error	The driver has a fatal error.

2 Function Switches

Indication	Switch Name	Functions																								
SW3 1/2	Resolution Select Switch	This function is for selecting the actuator resolution. Factory Setting: OFF Resolution (Unit: mm) <table border="1"> <thead> <tr> <th>SW3</th> <th>1</th> <th>OFF</th> <th>ON</th> <th>OFF</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>OFF</td> <td>OFF</td> <td>ON</td> <td>ON</td> <td>ON</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Model</th> <th>DRS28</th> <th>0.001</th> <th>0.002</th> <th>0.0001</th> <th>0.0002</th> </tr> </thead> <tbody> <tr> <td>DRS42</td> <td>0.002</td> <td>0.004</td> <td>0.0002</td> <td>0.0004</td> <td></td> </tr> </tbody> </table>	SW3	1	OFF	ON	OFF	ON	2	OFF	OFF	ON	ON	ON	Model	DRS28	0.001	0.002	0.0001	0.0002	DRS42	0.002	0.004	0.0002	0.0004	
SW3	1	OFF	ON	OFF	ON																					
2	OFF	OFF	ON	ON	ON																					
Model	DRS28	0.001	0.002	0.0001	0.0002																					
DRS42	0.002	0.004	0.0002	0.0004																						
SW3 4	Pulse Input Mode Switch	The settings of this switch are compatible with the following two types of pulse input modes: 1P for the 1-pulse input mode 2P for the 2-pulse input mode. (Factory Setting)																								

Note

- Always turn the power OFF before switching resolution or pulse input, and turn it ON again after you have made the change.
- When resolution select switch 2 is set to "ON," the resolution setting will not change even if a resolution select signal is input.

3 Current Adjustment Switch

Indication	Switch Name	Function
SW1	Current Adjustment Switch	The motor running current can be lowered to suppress temperature rise in the actuator and driver, if there is a sufficient margin for motor torque.

4 Velocity Filter Adjustment Switch

Indication	Switch Name	Function
SW2	Velocity Filter Adjustment Switch	This switch is used to make adjustments when a smooth start/stop or smooth motion at low speed operation is required.

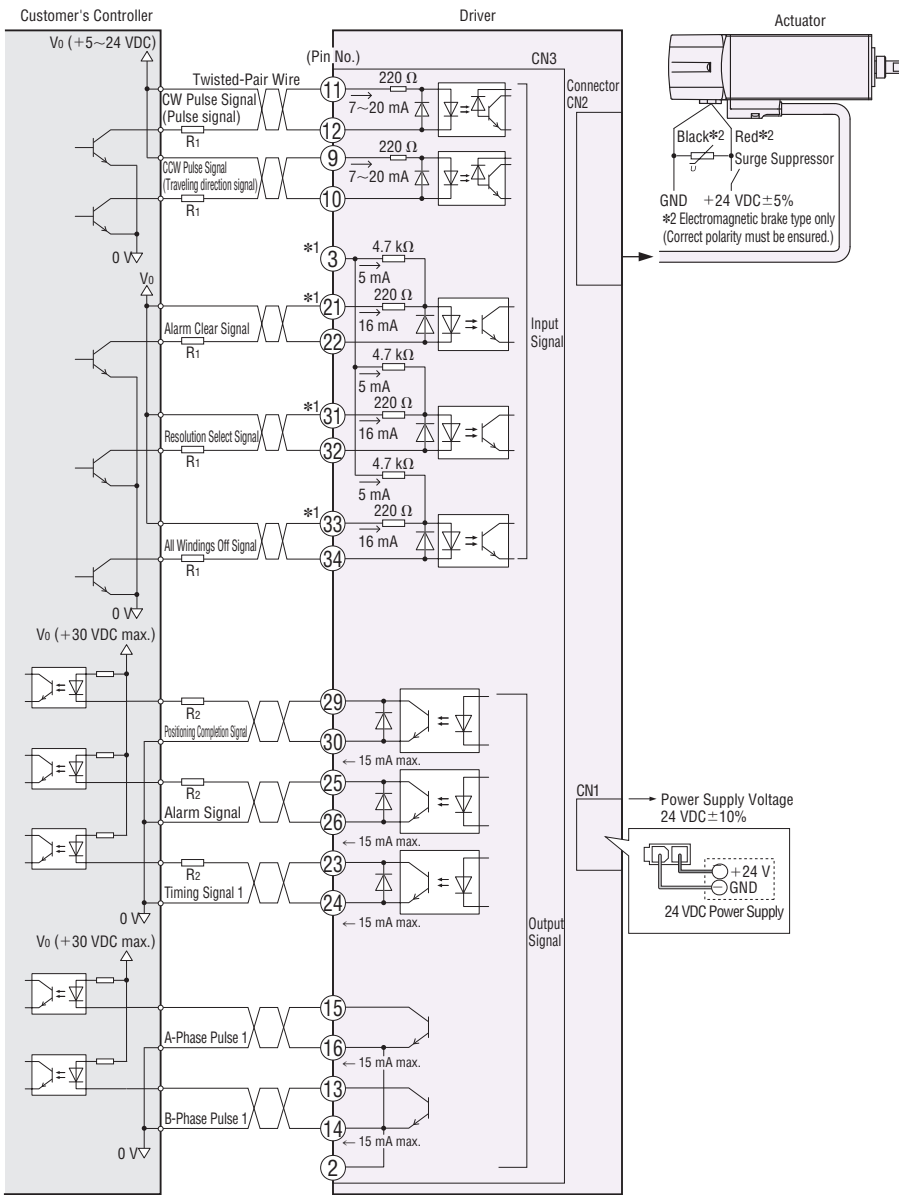
5 I/O Signals

Indication	I/O	Pin No.	Code	Signal Name	
		1	—	—	
External Power Supply Input		2	GND	Power Supply for Signal Control	
		3	Vcc+24 V		
		4	—		
		5	—		
		6	—		
		7	—		
		8	—		
Input		9	CCW (DIR.)	CCW Pulse (Traveling direction)*	
		10	CCW (DIR.)		
		11	CW (PLS)		CW Pulse (Pulse)*
		12	CW (PLS)		
Output		13	BSG1	B-Phase Pulse Output (Open collector)	
		14	GND		
		15	ASG1		A-Phase Pulse Output (Open collector)
		16	GND		
CN3		17	—	—	
		18	—	—	
		19	—	—	
		20	—	—	
		21	ACL	Alarm Clear	
	22	ACL			
Output		23	TIM.1	Timing (Open collector)	
		24	TIM.1		
		25	ALARM	Alarm	
		26	ALARM		
		27	—	—	
		28	—	—	
Output		29	END	Positioning Completion	
		30	END		
Input		31	×10	Resolution Select	
		32	×10		
		33	C.OFF	All Windings Off	
		34	C.OFF		
		35	—	—	
		36	—	—	

* () indicates the signal name for the setting in 1-pulse input mode.

The initial setting is the 2-pulse input mode.

● Connection Diagram



Notes on Wiring

◇ I/O Signal Connection

- **Input Signal**
The external resistor is not needed when the voltage is 5 VDC. If voltage exceeding 5 VDC is applied, connect an external resistor R₁ so that the current becomes 7 to 20 mA.
Example: V_o is 24 VDC, R₁: 1.5 to 2.2 kΩ 0.5 W or more
- *1 Pin ③ becomes +COM when the alarm clear signal, resolution select signal and all windings off signal are used at 24 VDC. Connect +24 VDC to pin ③ and do not connect anything to pins ②, ③ or ③.
- **Output Signal**
Check the specifications of all devices to be connected and if the current will exceed 15 mA, connect an external resistor R₂.
- Use a twisted-pair wire of AWG28 to 24 (0.08 to 0.2 mm²).
- Since the maximum transmissible frequency drops as the pulse line becomes longer, keep the wiring length as short as possible (within 2 m). Technical reference → Page G-46
- Provide a distance of 300 mm or more between the I/O signal lines and power lines (power supply lines, motor lines, etc.).

◇ Power Connection

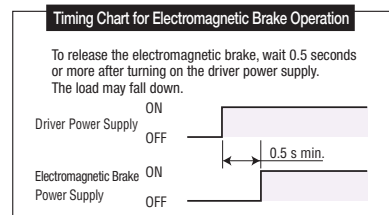
- Use wires of AWG20 to 18 (0.5 to 0.75 mm²).
- Incorrect polarities of the DC power supply input will lead to driver damage. Make sure that the polarity is correct before turning power on.

◇ Extension of Motor Cable

To extend the wiring distance between the actuator and driver, use an extension cable (sold separately). The wiring distance can be extended to a maximum of 10 m.

◇ Connecting the Electromagnetic Brake

- Use a shielded cable of AWG24 (0.2 mm²) or thicker.
- Use power supplies of 24 VDC ±0.1 A or more for electromagnetic brakes.
- Connect the red lead wire from the actuator to the +24 VDC terminal on the DC power supply and the black lead wire to the GND terminal on the DC power supply.
- Correct polarity (+ and -) must be ensured when connecting the electromagnetic brake lead wires to the DC power supply. If polarity is incorrect, the electromagnetic brake will not operate.
- Keep the wiring distance as short as possible to suppress noise.
- To protect the switch contacts and prevent noise, always connect a surge suppressor (included).



◇ General

- A separate hand crimp tool is required to crimp the supplied power connector and lead wire.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

Actuator and Driver Combinations

Product names for actuator and driver combination products are shown below.

● Rolled Ball Screw Type

Frame Size (mm)	Type	Additional Functions	Product Name	Actuator Product Name	Driver Product Name
□28	Standard Type	Without Additional Function	DRS28SA1-03KA	DRS28SA1-03K	DRSD07A-KA
			DRS28SA1-06KA	DRS28SA1-06K	
		With Adjusting Knob	DRS28SA1-03NKA	DRS28SA1-03NK	
	Guide Type	Without Additional Function	DRS28SA1G-03KA	DRS28SA1G-03K	
			DRS28SA1G-03NKA	DRS28SA1G-03NK	
		With Adjusting Knob	DRS28SA1G-03NKA	DRS28SA1G-03NK	
□42	Standard Type	Without Additional Function	DRS42SA2-04KA	DRS42SA2-04K	DRSD18A-KA
			DRS42SA2-10KA	DRS42SA2-10K	
		With Electromagnetic Brake	DRS42SA2-04MKA	DRS42SA2-04MK	
	Guide Type	With Adjusting Knob	DRS42SA2-04NKA	DRS42SA2-04NK	
		Without Additional Function	DRS42SA2G-04KA	DRS42SA2G-04K	
		With Electromagnetic Brake	DRS42SA2G-04MKA	DRS42SA2G-04MK	
	With Adjusting Knob	DRS42SA2G-04NKA	DRS42SA2G-04NK		

● Ground Ball Screw Type

Frame Size (mm)	Type	Additional Functions	Product Name	Actuator Product Name	Driver Product Name
□28	Standard Type	Without Additional Function	DRS28SB1-03KA	DRS28SB1-03K	DRSD07A-KA
			DRS28SB1-06KA	DRS28SB1-06K	
		With Adjusting Knob	DRS28SB1-03NKA	DRS28SB1-03NK	
	Guide Type	Without Additional Function	DRS28SB1G-03KA	DRS28SB1G-03K	
			DRS28SB1G-03NKA	DRS28SB1G-03NK	
		With Adjusting Knob	DRS28SB1G-03NKA	DRS28SB1G-03NK	
□42	Standard Type	Without Additional Function	DRS42SB2-04KA	DRS42SB2-04K	DRSD18A-KA
			DRS42SB2-10KA	DRS42SB2-10K	
		With Electromagnetic Brake	DRS42SB2-04MKA	DRS42SB2-04MK	
	Guide Type	With Adjusting Knob	DRS42SB2-04NKA	DRS42SB2-04NK	
		Without Additional Function	DRS42SB2G-04KA	DRS42SB2G-04K	
		With Electromagnetic Brake	DRS42SB2G-04MKA	DRS42SB2G-04MK	
	With Adjusting Knob	DRS42SB2G-04NKA	DRS42SB2G-04NK		