MEJQZ series

COMPACT ELECTRIC ACTUATOR (INTEGRATED MOTOR CONTROLLER)

mindman

Selection table

Applications

Motor type	Step motor	Transmission	Ball screw
Sensor type	Reed switch	Anti-rotation mech.	Hexagonal rod

Features

- Non-rotating rod.
- Compact, Lightweight.
- Pre-lubricated before shipment.
- Good repeatability accuracy.
- Compatible with external magnetic sensors.
- Built-in motor and controller for an all-in-one, space-saving design.
- Easy operation via I/O signal control for fast setup and use.

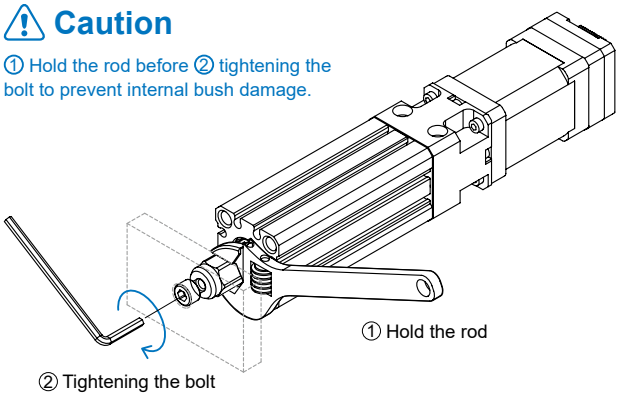
Weight

Unit: kg

Stroke / Size	BC (Motor direct connection)				BA (Motor turned)			
	30	50	75	100	30	50	75	100
16	0.42	0.46	0.50	0.54	0.48	0.52	0.56	0.6
20	0.51	0.57	0.63	0.70	0.59	0.65	0.71	0.78

Caution

① Hold the rod before ② tightening the bolt to prevent internal bush damage.



Specification

Model		MEJQZ	
Size		16	20
Positioning repeatability	(mm)	±0.02	
Lead	(mm)	1	2
Ball screw	(ø)	4	6
Stroke	(mm)	30 / 50 / 75 / 100	
Anti-rotation tolerance *1	(°)	±0.7	
Sensor switch		RDC(V), RQC(V)	
With step motor		□28	□35
Max. speed	(mm/s)	≤ 50	≤ 100
Rated axial load *2	(kg)	0.7	0.95
Max. thrust *3	(N)	225	680
Supply voltage	(V)	DC 24 ±10%	
Power consumption	(W)	≤ 15	≤ 25

*1. Do not apply radial loads or loads in directions other than the intended movement direction to the shaft.

*2. The rated load refers to a 10,000 km estimated service life. Please refer to page "Capacity" for information on other load conditions.

*3. The actual push/pull force may vary depending on operating speed, acceleration/deceleration, load conditions, stroke, mounting orientation, external guide conditions, mechanical resistance, supply voltage, temperature rise, lubrication condition, and operating environment. The actual push/pull force may deviate from the stated value by ±20%.

Order example

MEJQZ – 20 L02 – 30 – BC – N 015

Model

Size / Ball screw lead

Size		
16	L01	1 mm
20	L02	2 mm

Stroke

30	30 mm
50	50 mm
75	75 mm
100	100 mm

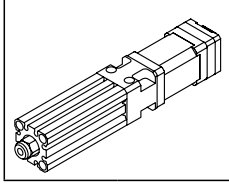
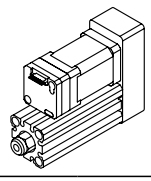
I/O type

N	NPN

Cable length (Power + I/O + RS485)

005	0.5 m
015	1.5 m (Standard)

Motor position

BC : Direct connection	BA : Turned
	

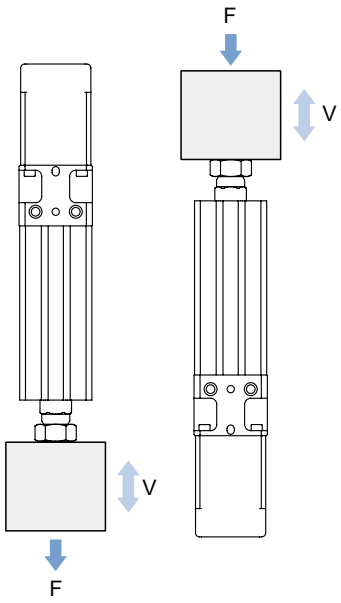
* Motor with rear cable exit.

Mechanical life – Axial load F relationship chart

The estimated service life under an axial load F is shown in the plot.

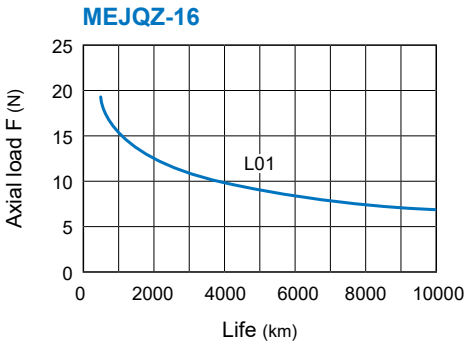
Linear & motor speed – Axial output force chart

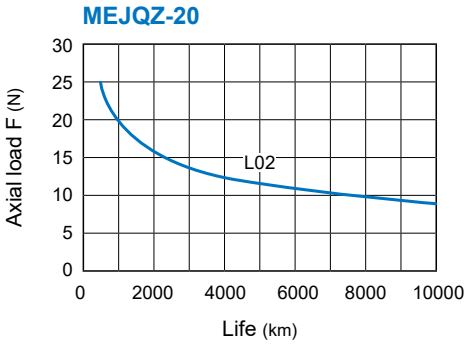
Push/pull force – Current (torque) ratio



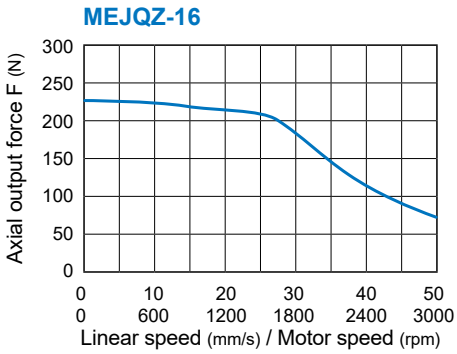
* Do not apply radial load to the rod.

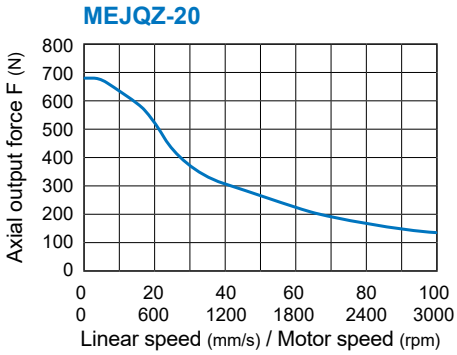
Mechanical life – Axial load F relationship chart



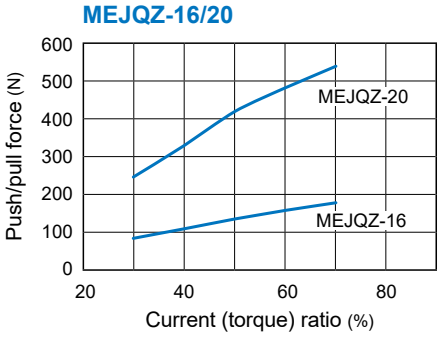


Linear & motor speed – Axial output force relationship chart





Push/pull force – Current (torque) ratio relationship chart



Caution

The force–speed curve applies to Position Mode only and indicates the available push/pull force at different operating speeds. It shall not be used for force setting or force estimation in Push Mode. In Push Mode, the push/pull force is primarily determined by the push-current setting. Refer to the “Push/Pull Force–Current Ratio Chart.”

The actual push/pull force may vary depending on operating speed, acceleration/deceleration, load conditions, stroke, mounting orientation, external guide conditions, mechanical resistance, supply voltage, temperature rise, lubrication condition, and operating environment. The actual push/pull force may deviate from the stated value by ±20%.

The related values and curves are provided for product selection and performance trend evaluation only and should not be used as the sole basis for precise force measurement, force control, or safety protection decisions.

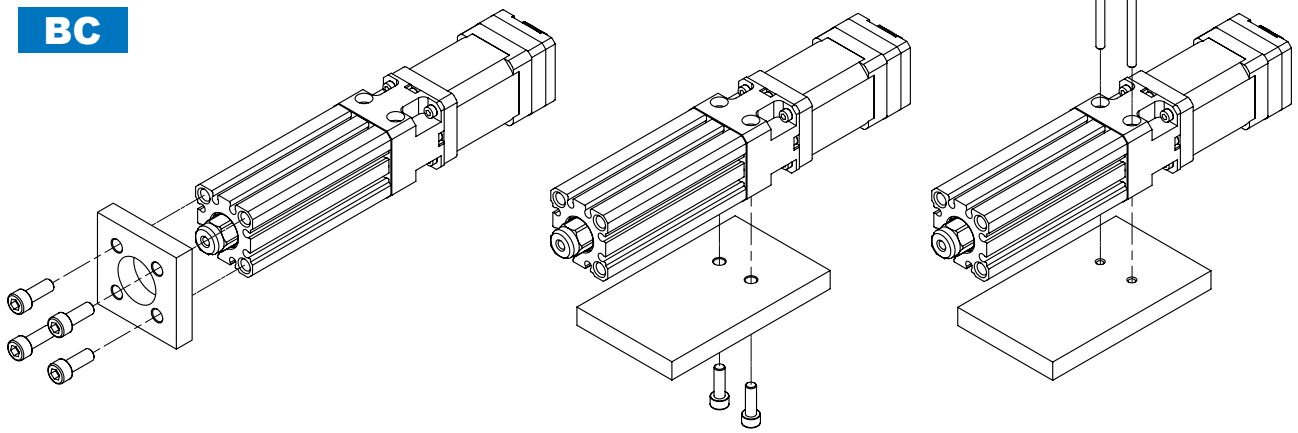
Pin assignment of cable (Power + I/O + RS485)

PIN No.	Function	Description	Color
1	VCC (24VDC)	PWR+	
2	GND	PWR−	
3	Input Com+		
4	Input 1	Move to Pos1	
5	Input 2	Move to Pos2	
6	Input 3	Stop / Alarm Reset	

PIN No.	Function	Description	Color
7	Output 3	Alarm	
8	Output 2	Pos2 Reached	
9	Output 1	Pos1 Reached	
10	Output Com-		
11	RS485A		
12	RS485B		

Plate installation * The plates are prepared by the customers.

BC

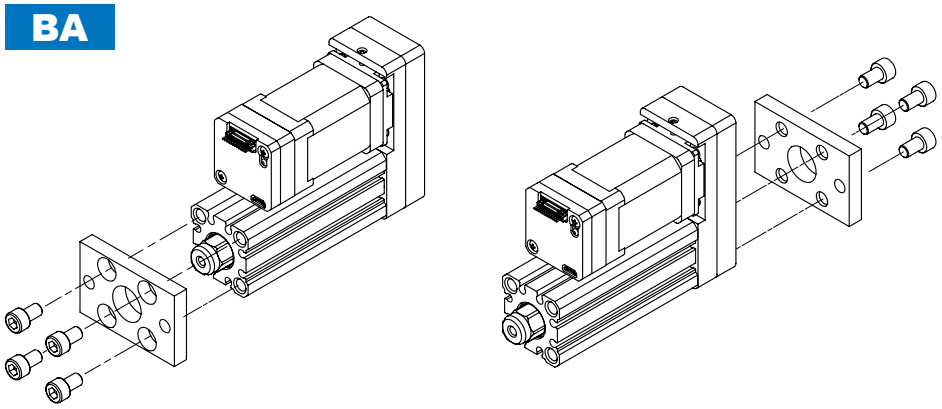


A The plate is positioned in the front, and bolts are mounted from the front.

B The plate is positioned below, and bolts are mounted from below.

C The plate is positioned below, and bolts are mounted from above.

BA



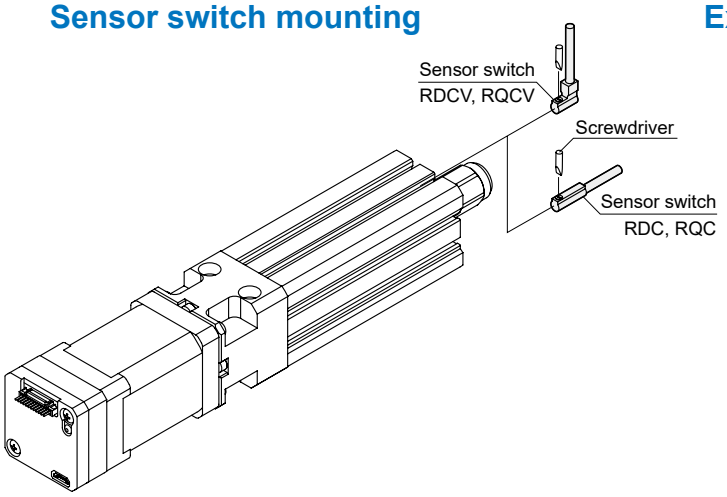
A The plate is positioned in the front, and bolts are mounted from the front.

D The plate is positioned at the back, and bolts are mounted from the rear.

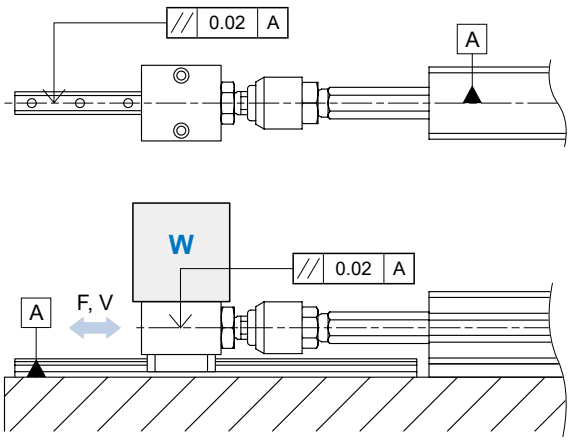
Bolt size

Installation method	Size	
	16	**20**
A, D	M4×0.7	M6×1.0
B	M5×0.8	M5×0.8
C	M4×0.7	M4×0.7

Sensor switch mounting

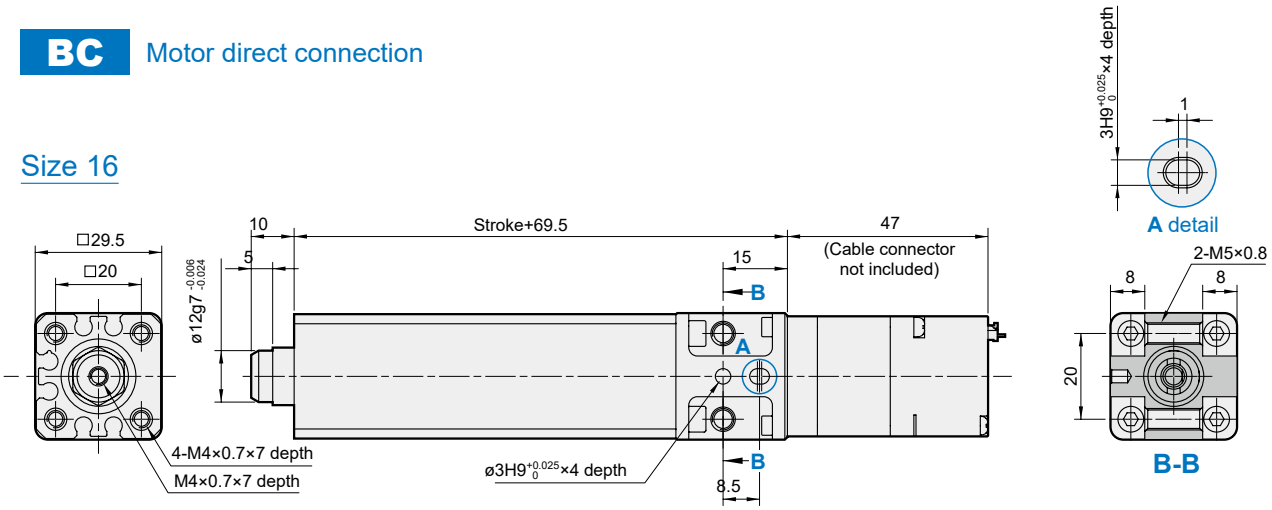


External guide support mounting

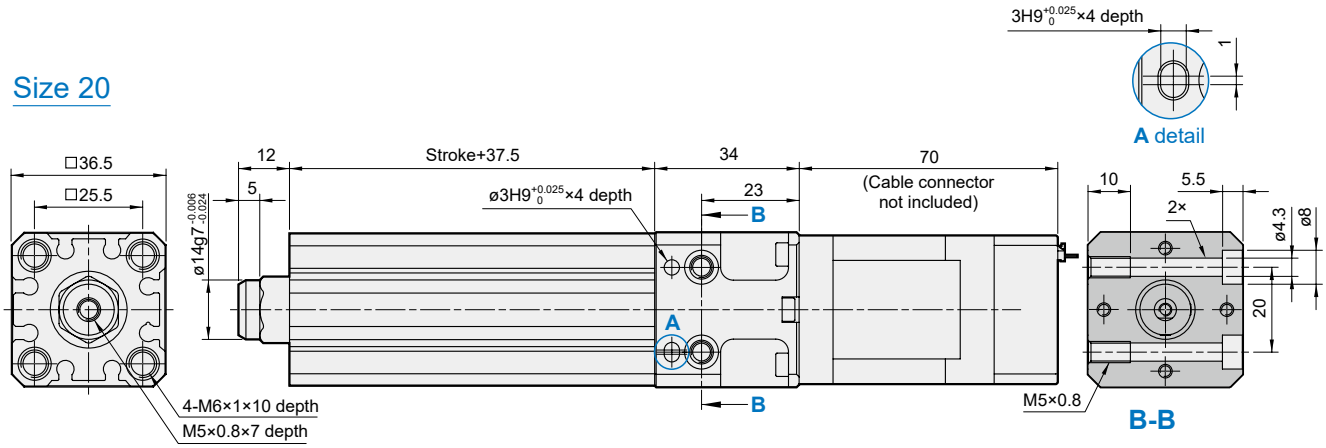


BC Motor direct connection

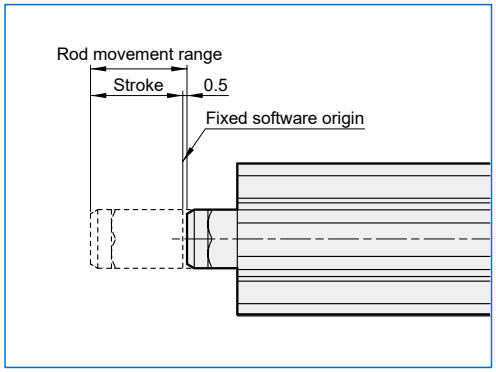
Size 16



Size 20

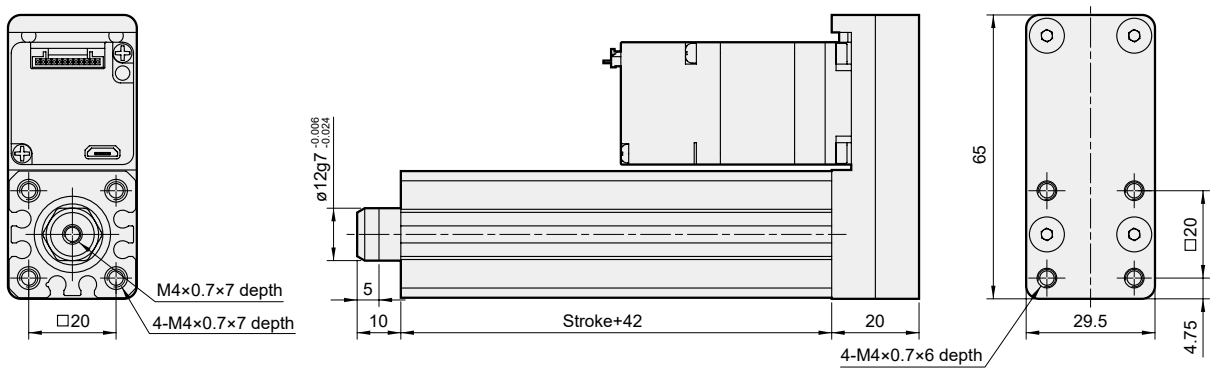


Rod movement range



BA Motor Turned

Size 16



Size 20