

Discontinue

Electric actuator

KBZ Series slider, table, and rod types

- Drive method, ball screw
- Applicable motors: 50 W



Selection guide

Slider

Single axis specifications

Rod

R-axis

2 axes

3 axes

4 axes

Axis-related part

Control part

Technical data

Safety precautions

Slider specifications

Descriptions		KBZ-5D				KBZ-7D					
Type		Slider				Slider					
Drive method		Rolled ball screw, outer diameter: 8 mm				Rolled ball screw, outer diameter: 12 mm					
Motor		50 W AC servo motor				50 W AC servo motor					
Screw lead	mm	6		12		6			12		
Stroke	mm	50 to 450	500	50 to 450	500	50 to 550	600	700	50 to 550	600	700
Max. speed	mm/s	400	340	800	680	400	340	250	800	680	500
Max. load capacity	Horizontal	kg		kg		kg			kg		
	Vertical	(3)		(1.5)		(4)			(2)		
Acceleration/deceleration time	s	0.1		0.2		0.1			0.2		
Repeatability	mm	±0.02				±0.02					
Static allowable moment of load	Nm	MR: 31 MP: 12 MY: 12				MR: 58 MP: 25.7 MY: 25.7					

* For use as a vertical axis, select the with brake type.

* Max. load capacity applies when load is applied to the top of the slider.

* The value in () for max. load capacity is the value when using regenerative discharge unit (KCA-CAR-0500) or regenerative discharge unit (KCA-CAR-UN50).

* Acceleration/deceleration time is the time it takes to reach the speed specified in the programming.

Table specifications

Descriptions		KBZ-5D				KBZ-7D						
Type		Table type				Table type						
Drive method		Rolled ball screw, outer diameter: 8 mm				Rolled ball screw, outer diameter: 12 mm						
Motor		50 W AC servo motor				50 W AC servo motor						
Screw lead	mm	6		12		6			12			
Stroke	mm	50	100	50	100	50	100	150	50	100	150	
Max. speed	mm/s	400		800		400			800			
Max. load capacity	Horizontal	kg	4.5	3.0	2.5	1.5	9.0	5.6	3.8	4.5	2.8	1.9
	Vertical	kg	(2.5)		(1.0)		(3.5)			(1.5)		
Acceleration/deceleration time	s	0.1		0.1		0.1			0.1			
Repeatability	mm	±0.02				±0.02						
Static allowable moment of load	Stroke 50 mm	MR: 4.4 MP: 1.9 MY: 1.9				MR: 11.7 MP: 3.8 MY: 3.8						
	Stroke 100 mm	MR: 4.4 MP: 1.2 MY: 1.2				MR: 11.7 MP: 2.3 MY: 2.3						
	Stroke 150 mm	-				MR: 11.7 MP: 1.7 MY: 1.7						

* For use as a vertical axis, select the with brake type.

* Max. load capacity applies when load is applied to the top of the slider.

* The value in () for max. load capacity is the value when using regenerative discharge unit (KCA-CAR-0500) or regenerative discharge unit (KCA-CAR-UN50).

* Acceleration/deceleration time is the time it takes to reach the speed specified in the programming.

Rod specifications

Descriptions		KBZ-3D				KBZ-4D			
Type		Rod				Rod			
Drive method		Rolled ball screw, outer diameter: 8 mm				Rolled ball screw, outer diameter: 12 mm			
Motor		50 W AC servo motor				50 W AC servo motor			
Screw lead	mm	12				12			
Stroke	mm	50 to 150				50 to 200			
Max. speed	mm/s	600				600			
Max. load capacity	Horizontal	kg		kg		kg		kg	
	Vertical	(1.5)		(1.5)		(2.2)		(2.2)	
Acceleration/deceleration time	s	0.15				0.15			
Repeatability	mm	±0.02				±0.02			
Static allowable moment of load	Nm					- (*1)			

*1: Static and dynamic load moment cannot be applied to a rod. Use in combination with linear guide to ensure that radial load is not applied to the rod.

* For use as a vertical axis, select the with brake type.

* Acceleration/deceleration time is the time it takes to reach the speed specified in the programming.

* The value in () for max. load capacity is the value when using regenerative discharge unit (KCA-CAR-0500) or regenerative discharge unit (KCA-CAR-UN50).

How to order axes (slider, rod)

KBZ - 5 D - ST - M 12 N - 50 - M

Model No.

A Body size

B Motor capacity

C Motor mount

D Output shape

E Lead

F Brake

G Stroke

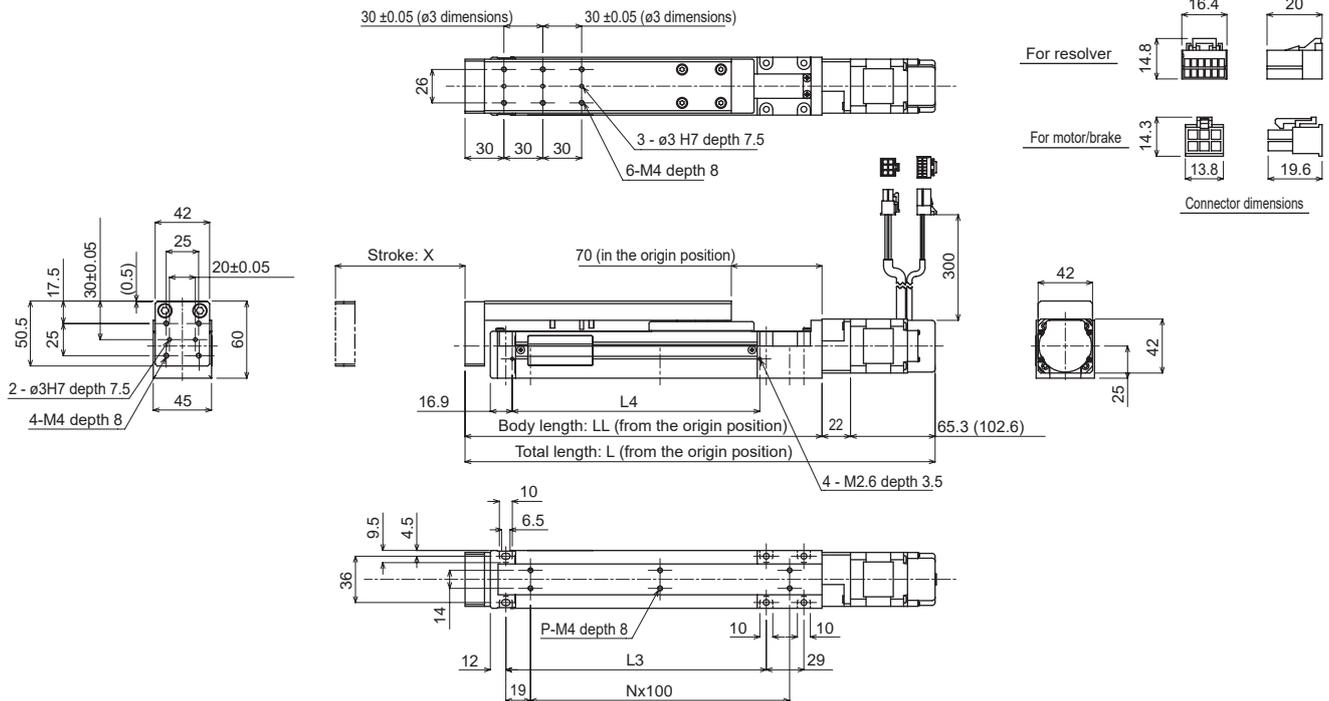
H Axis option

Code	Content
A Body size (mm)	
3	Width 35 × height 38.5 (rod type only)
4	Width 45 × height 45 (rod type only)
5	Width 45 × height 45 (60) (slider/table types only) () is the body size of table type
7	Width 64 × height 60 (75) (slider/table types only) () is the body size of table type
Refer to the applicable dimensions for details.	
B Motor capacity	
D	50 W
C Motor mount	
ST	Straight
D Output shape	
M	Slider
T	Table type
C	Rod
E Lead	
06	6 mm (rod type cannot be selected)
12	12 mm
F Brake	
N	None
B	Yes
G Stroke	
05 to 70	50 to 700 mm (50 mm pitch) (Refer to the applicable dimensions for details on stroke and stroke codes)
H Axis option	
Blank	None
M	With motor cover

Selection guide	Single axis specifications	Orthogonal axis specifications	Axis-related part	Control part	Technical data	Safety precautions
	Slider	2 axes				
	Rod	3 axes				
	R-axis	4 axes				

Dimensions

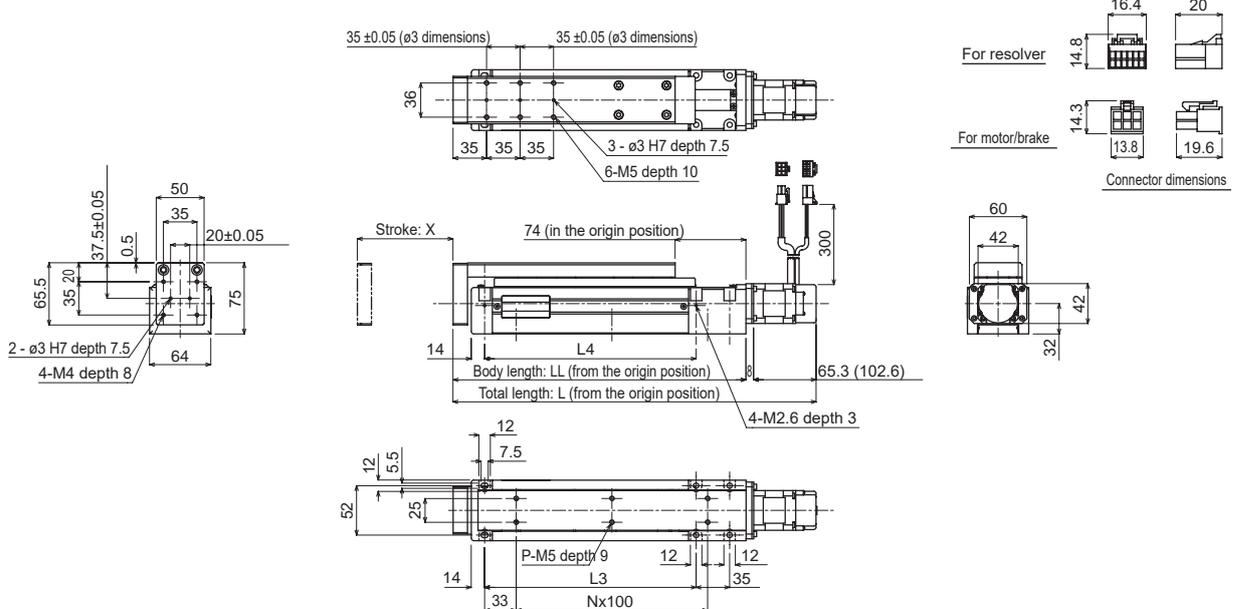
● KBZ-5D-ST-T



Stroke length X (mm)	50	100
Stroke code	05	10
Total length L (mm)	312.8 (350.1)	362.8 (400.1)
Body length LL (mm)	225.5	275.5
L3 (mm)	151	201
L4 (mm)	141.6	191.6
Number of mounting holes P	4	6
Number of mounting hole intervals N	1	2
Body weight (kg)	1.7 (1.9)	1.9 (2.1)

* The value in () is compatible with axis with brake. Refer to page 58 for with motor cover dimensions.

● KBZ-7D-ST-T



Stroke length X (mm)	50	100	150
Stroke code	05	10	15
Total length L (mm)	329.3 (366.6)	379.3 (416.6)	429.3 (466.6)
Body length LL (mm)	256	306	356
L3 (mm)	171	221	271
L4 (mm)	171	221	271
Number of mounting holes P	4	6	6
Number of mounting hole intervals N	1	2	2
Body weight (kg)	3.0 (3.2)	3.3 (3.5)	3.6 (3.8)

Note The value in () is compatible with axis with brake. Refer to page 58 for with motor cover dimensions.

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 3 axes
 4 axes
 Axis-related part
 Control part
 Technical data
 Safety precautions

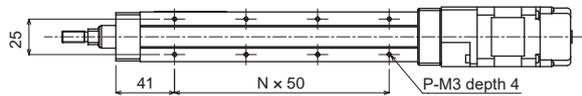
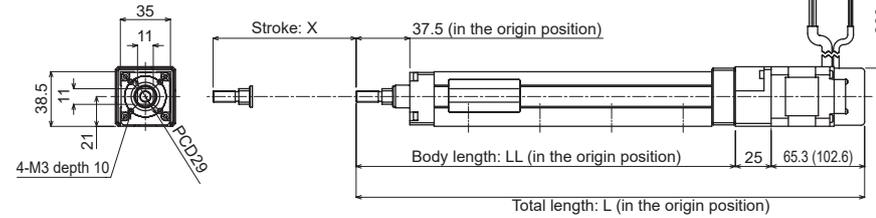
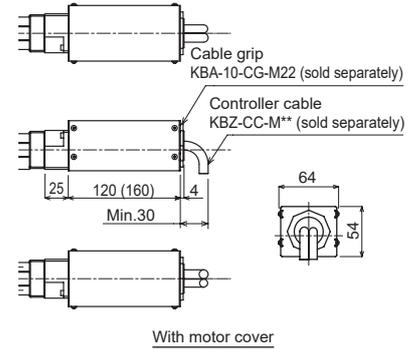
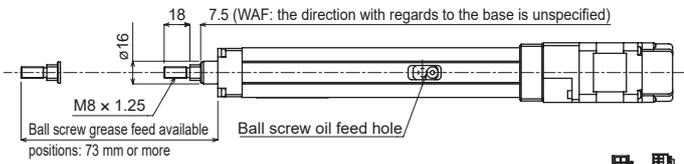
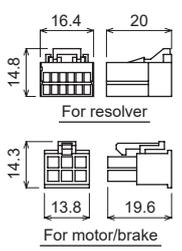
KBZ Series

Ball screw drive/rod

Dimensions

● KBZ-3D-ST-C

Connector dimensions

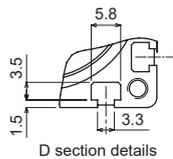
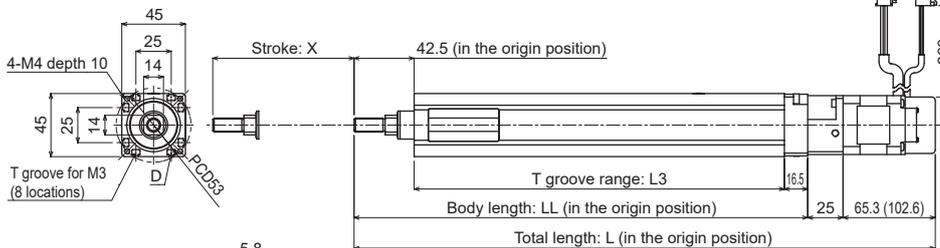
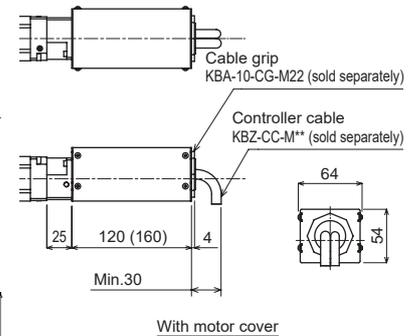
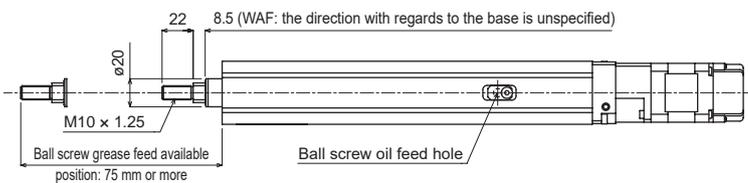
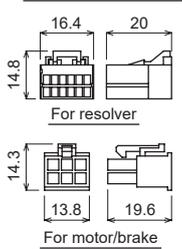


Stroke	X (mm)	50	100	150
Stroke code		05	10	15
Total length	L (mm)	305.3 (342.6)	355.3 (392.6)	405.3 (442.6)
Body length	LL (mm)	215	265	315
Number of mounting holes	P	6	8	10
Number of mounting hole intervals	N	2	3	4
Body weight	(kg)	1.3 (1.5)	1.4 (1.6)	1.5 (1.7)

* The value in () is compatible with axis with brake.

● KBZ-4D-ST-C

Connector dimensions



Stroke	X (mm)	50	100	150	200
Stroke code		05	10	15	20
Total length	L (mm)	311.8 (349.1)	361.8 (399.1)	411.8 (449.1)	461.8 (499.1)
Body length	LL (mm)	221.5	271.5	321.5	371.5
T groove range	L3 (mm)	162.5	212.5	262.5	312.5
Body weight	(kg)	1.4 (1.6)	1.6 (1.8)	1.8 (2.0)	2.1 (2.3)

* The value in () is compatible with axis with brake.