Discontinue

CKD

SM-396062-A

INSTRUCTION MANUAL

ELECTRIC ACTUATOR

KBB Series R AXIS

KBB-00D

ACTUATOR INSTRUCTION MANUAL

- Read this manual carefully and thoroughly before using this product.
- Pay extra attention to the instructions concerning safety.
- After reading this manual, keep it in a safe and convenient place.

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Discontinue

Introduction

Before using the Electric Slider KBB series, read through and completely understand this instruction manual to assure correct use.
For general details on the Electric Slider KBB series, see the instruction manual (basic) provided separately.

PRECAUTION

1. The contents of this manual are subject to change without prior notice.
2. The contents of this manual are subject to change without prior notice to effect improvements.
3. All efforts have been made to assure the contents of this manual. If you have any questions, or find any mistakes, however, please contact CKD.
4. CKD will not be held responsible for any effects caused by using this equipment, regardless of Item 3 above.
5. This equipment does not have an explosion-proof structure. Take utmost care of the operating environment.

Discontinue

Contents

Discontinue

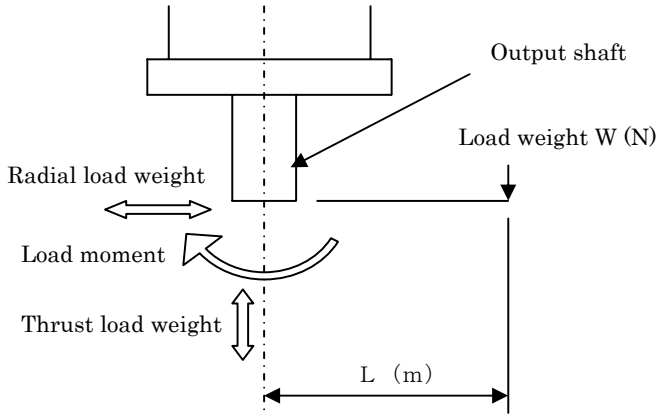
Chapter 1　Component

Type / Component	KBB-00D-RH-A	KBB-00D-RH-F	KBB-00D-RP-A	KBB-00D-RP-F
Main body	One unit	One unit	One unit	One unit
Hexagon socket headed bolt (M5×20)	4 piece	Attachment no	4 piece	Attachment no
Band	2 piece			
Operating manual	1 pies			

Chapter 2　Specification

Type	KBB-00D-RH-A	KBB-00D-RH-F	KBB-00D-RP-A	KBB-00D-RP-F
Mount method	L form bracket	Flange	L form bracket	Flange
Motor	AC servomotor 50W			
Deceleration method	Harmonic Drive		Gear	
Deceleration ratio	1/50		1/21	
Action range (degree)	360			
Max. speed (degree/s)	360		857	
Max. load weight (kg)　(Note)	5		10	
Allowable torque (N・m)	2.5		3.9	
Allowable load inertia (kg m^2)	0.0485		0.0125	
Allowable thrust load weight (N)	49		98	
Allowable radial load weight (N)	98		196	
Allowable load moment (N m)	0.65		1.3	
Repeatability (degree)	±0.025		±0.05	
Resolution (degree)	0.01			
Mass (kg)	2.0	1.8	2.4	2.2

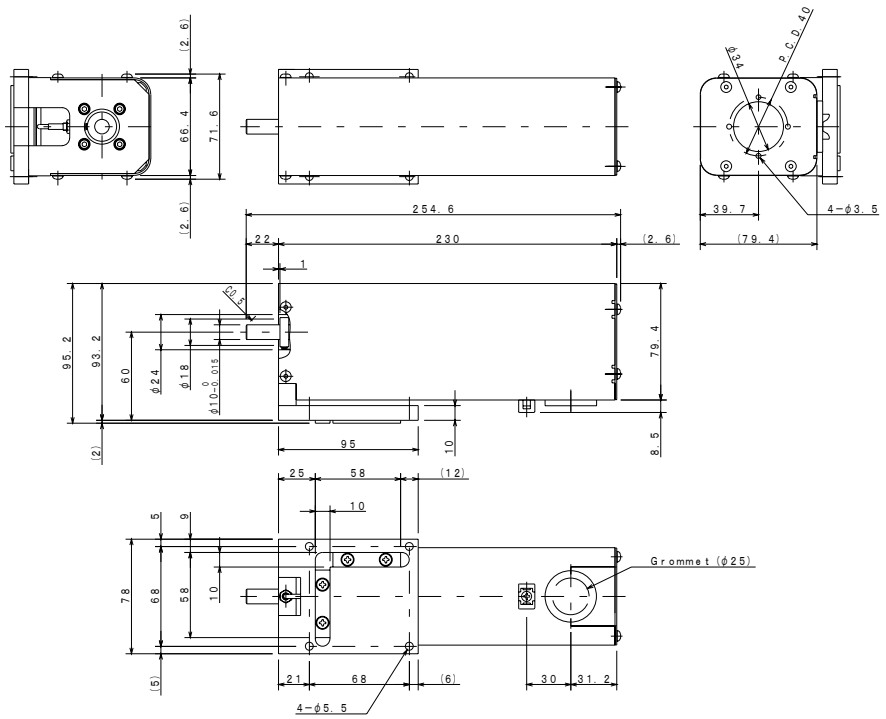
(Note) Acceleration / deceleration time 0.3sec or more.



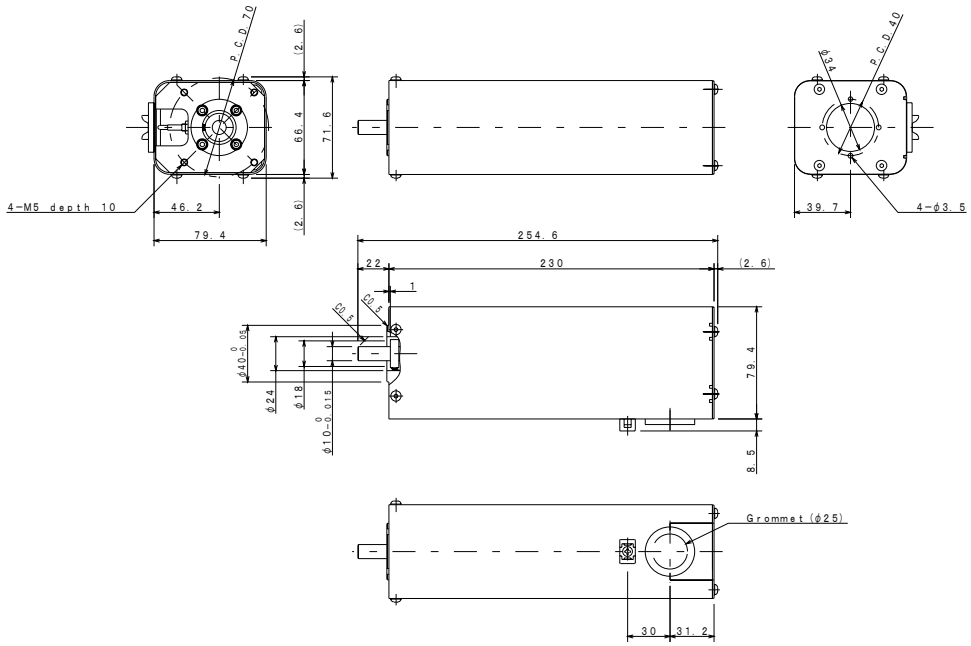
Allowable load moment＝W×L　（N． m）

Chapter 3　External form figure

3.1　KBB-00D-RH-A axis



3.2　KBB-00D-RH-F axis



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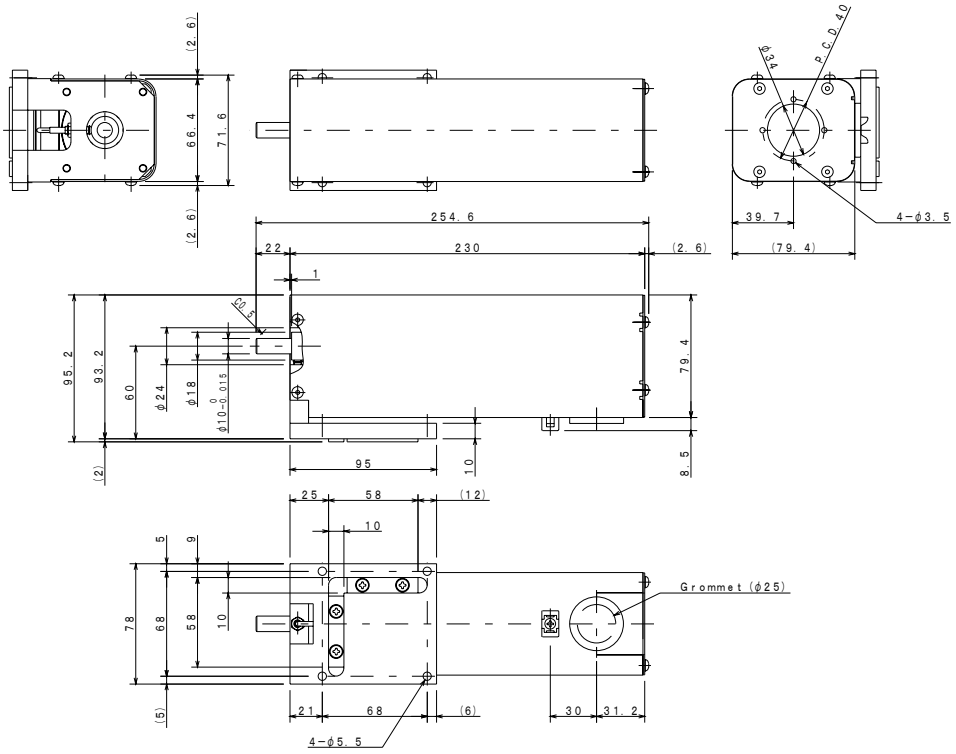
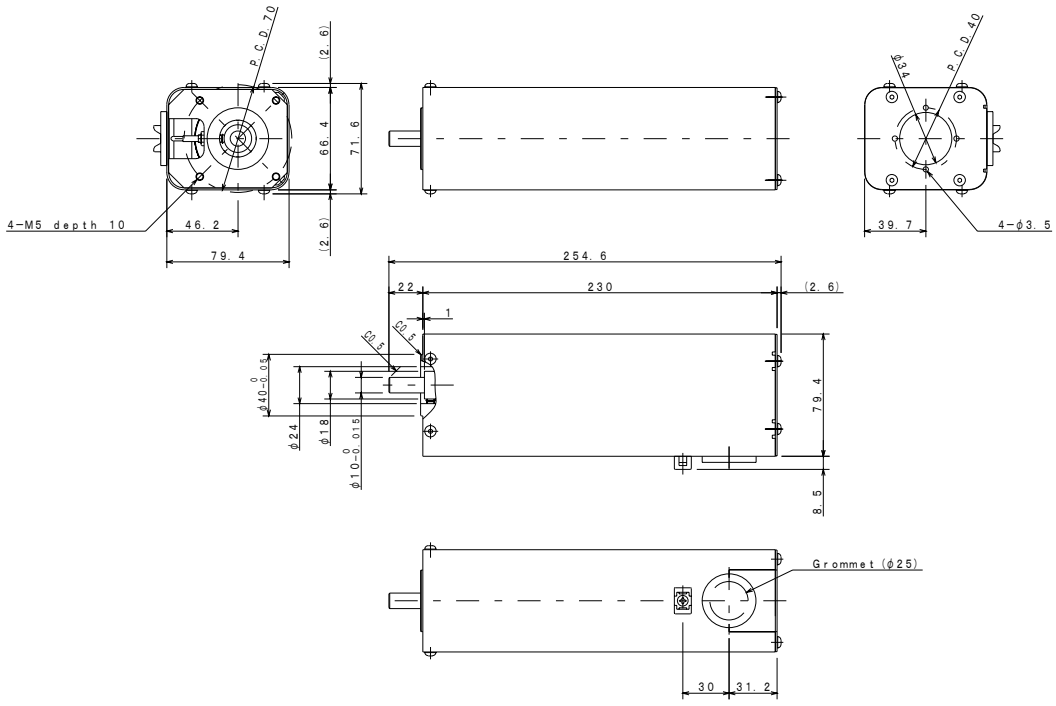
3.3 KBB-00D-RP-A axis



3.4 KBB-00D-RP-F axis



Chapter 4　Installation of axis

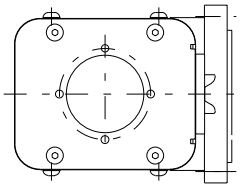
4.1　KBB-00D-RH-A axis and KBB-00D-RP-A axis

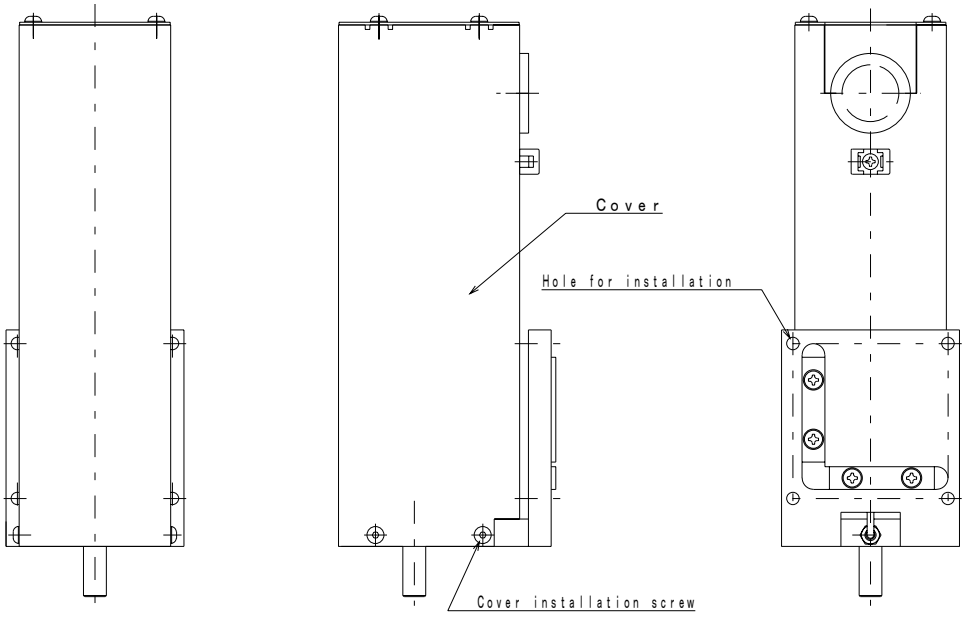
(1) Remove the cover of the axis main body.

(2) Install the axis with the bolt (M5×20) of the belonging.

(3) Install the cable and department of hand section.

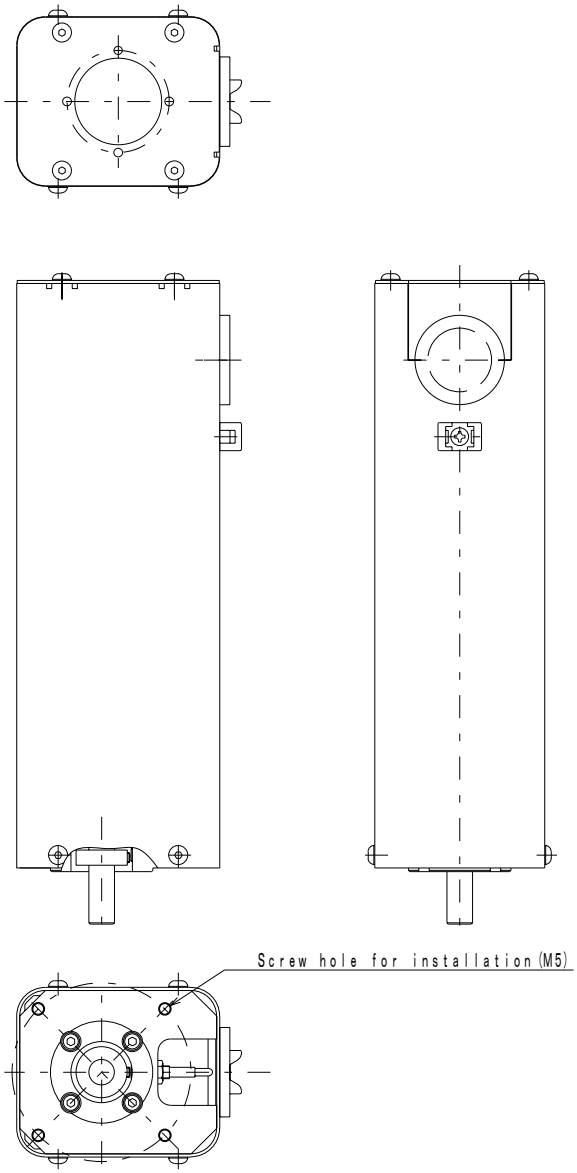
(4) Please return the cover that removed to the source.





4.2 KBB-00D-RH-F axis and KBB-00D-RP-F axis

(1) Install the axis with the bolt (M5).



Chapter 5　Setting of robot type

The robot type is a six-digit number set according to the axis type.
By setting this type, the optimum values of various parameters for the axis being used will be set automatically. Refer to the Basic Section for the methods of entering the data.

5.1　Robot type per axis

Type	Robot type
KBB-00D-RH-A	510131
KBB-00D-RH-F	
KBB-00D-RP-A	510041
KBB-00D-RP-F	

5.2　Putter meter value about

As for the parameter of this machine, there are each parameter 1 and also parameter 2 by the use frequency and the relation with the contents and also robot type become below.
By inputting the robot type the parameter value of the left end circle department is set up automatically.

5.2.1　Value of parameter 1 according to robot type

Automatic setting	Robot type / Parameter		510131	510041
	Software limit value(plus)		0000.00	0000.00
	Software limit value(minus)		0000.00	0000.00
○	Servo gain (position/speed)	P(position)	7	7
		V(speed)	6	6
	Pass area		Cannot be used	
	Origin offset value		0000.00	0000.00
	Return to origin sequence		1 (Note)	1 (Note)
	JOG speed	L(low speed)	10	10
		H(high speed)	50	50
	JOG inching movement		0.01	0.01

(Note) The return to origin sequence will differ according to the combination type and installation conditions, etc. This must be set by the user according to the usage conditions.
The initial values are 1 for all robot types. Thus, if no changes are made, all axes will simultaneously return to the origin.

5.2.2 Value of parameter 2 according to robot type

Automatic setting	Robot type / Parameter		510131	510041
	Axis display		X	X
	In-position data		0.05	0.05
	Overflow data		20000	20000
○	Feed forward data		2000	2000
○	Direction of motor revolution		1	0
○	Max. speed data		360	857
	Return to origin speed data	L(low speed)	2	2
		M(medium speed)	20	20
		H(high speed)	100	100
○	Return to origin method		0	0
○	Origin sensor logic		1	1
	High speed return to origin position		20	20
○	Lead		7.2	17.143
○	Encoder No. of divisions		2000	2000
○	Encoder pulse multiplier		4	4
	Encoder type (Note)		i	i
	Task and axis combination		[1] [0] [0] [0]	[1] [0] [0] [0]
	Task order of priority		[1] [1] [1] [1]	[1] [1] [1] [1]
	Task point table		999 999 999 999	999 999 999 999
	No. of task steps		1000 1000 1000 1000	1000 1000 1000 1000

(Note) The setting of the encoder type is not able to set up it in the robot type, because setting is not produced every the axis. Refer to the Basic Section for the methods of entering the data.