



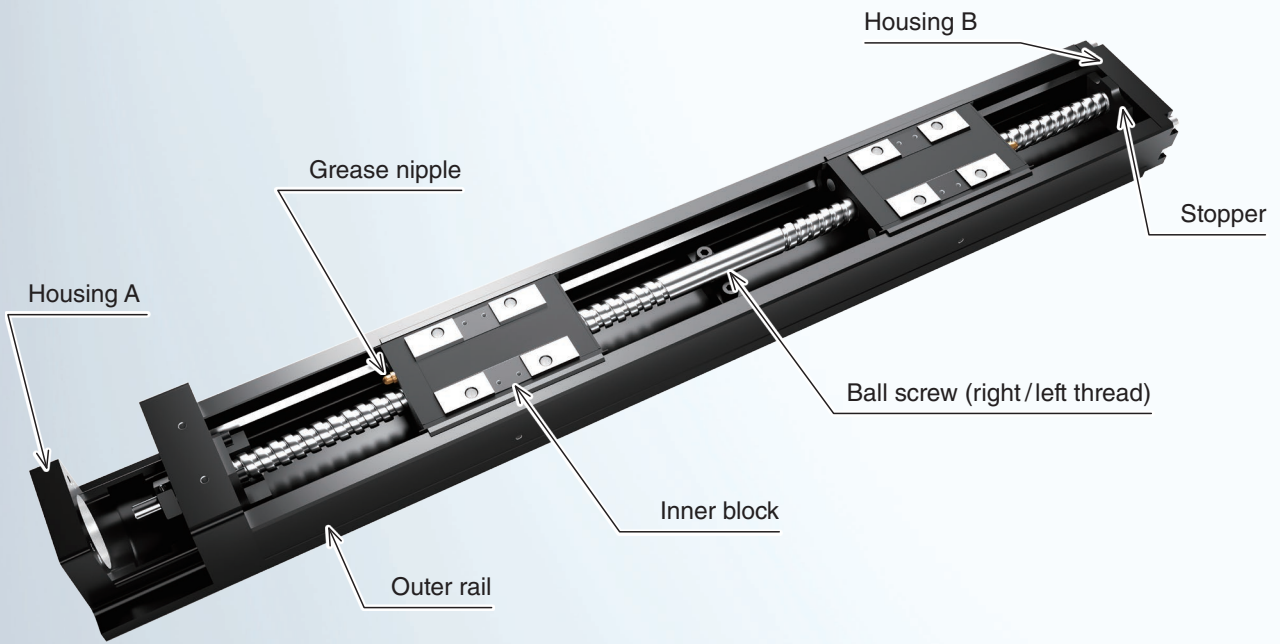
LM Guide Actuator with
Right/Left Ball Screw

KR-RL



The driving element uses right/left threads
Easily performs gripping, opening/closing, and symmetrical
operations

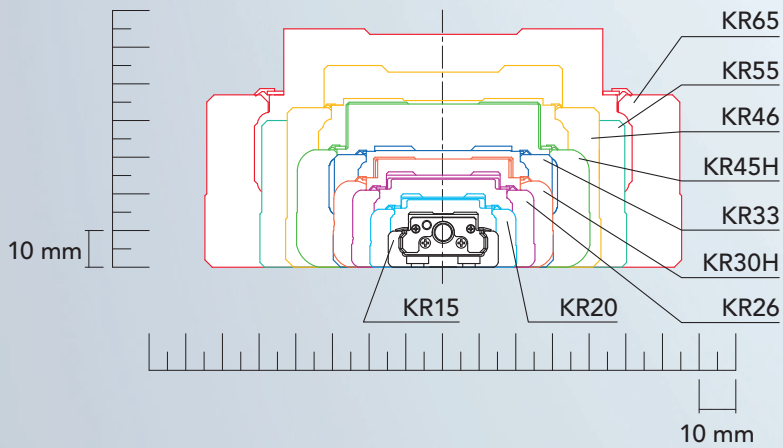
Structure



Lineup

Nine sizes and two block types are available for selecting a product that suits the application.

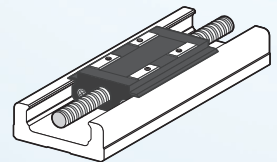
Size



Block type

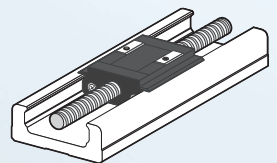
A type

The typical block type of the LM Guide Actuator KR.



C type

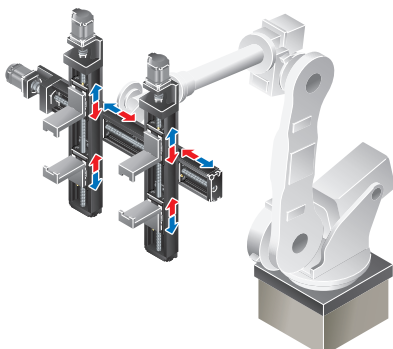
Shorter overall length than the A type inner blocks as an extended stroke type.



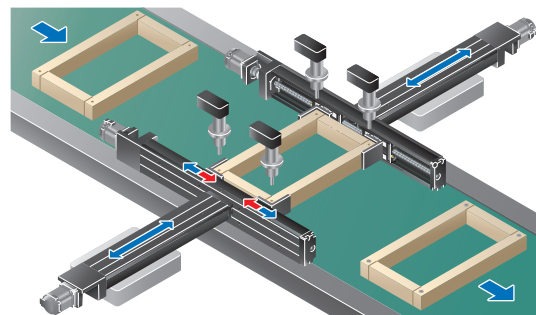
Note) Only for KR30H, 33, 45H, and 46.

Example Applications

Robot hand



Screw tightening machine

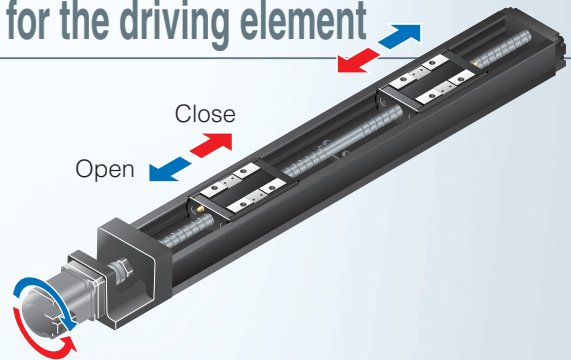


THK Technology 1

Right/left threads used for the driving element

One motor performs both the "open" and "close" operations.

It can be used in a wide range of applications, such as gripping, measuring, and positioning.



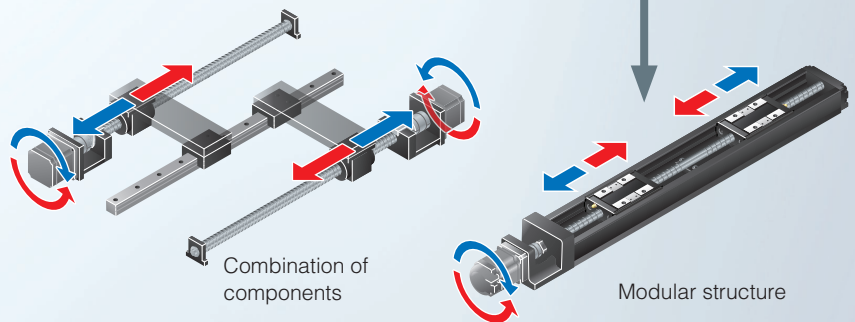
THK Technology 2

Modular structure

Adopts a KR modular structure to greatly reduce the number of parts for components using the LM Guide and ball screws.

In addition, the time required for procurement work, delivery management, design, and assembly is reduced, resulting in shortened lead times to complete equipment.

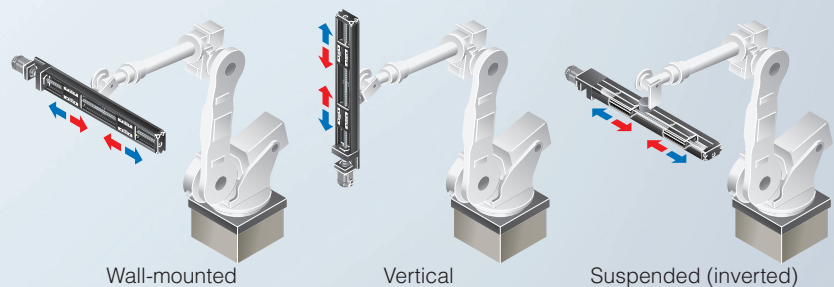
From components to modular products



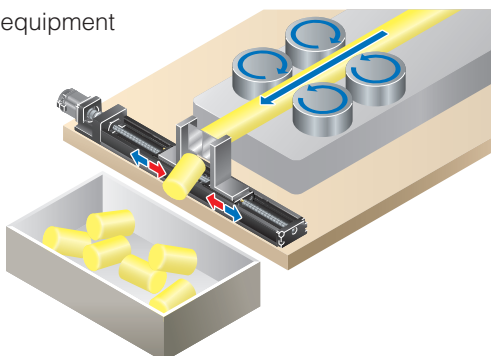
THK Technology 3

Can be used in any orientation

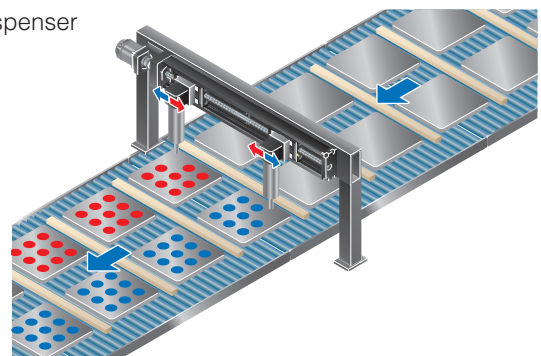
Each row of balls in the linear motion guide is arranged at a 45° contact angle, achieving the same load rating in 4 directions (radial, reverse-radial, and horizontal directions) acting on the inner block. It can be used in any orientation. Optimal for end effectors of robot arms that move freely.



Cutting equipment



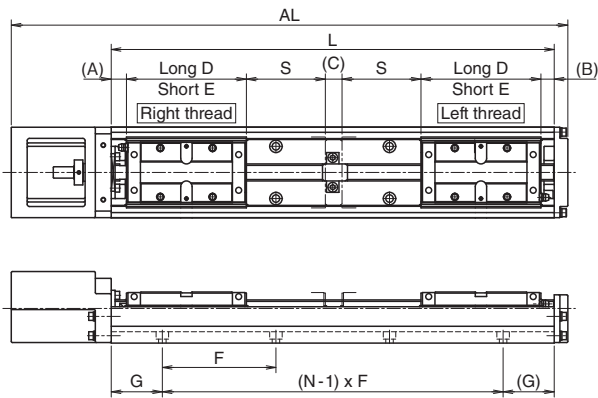
Dispenser



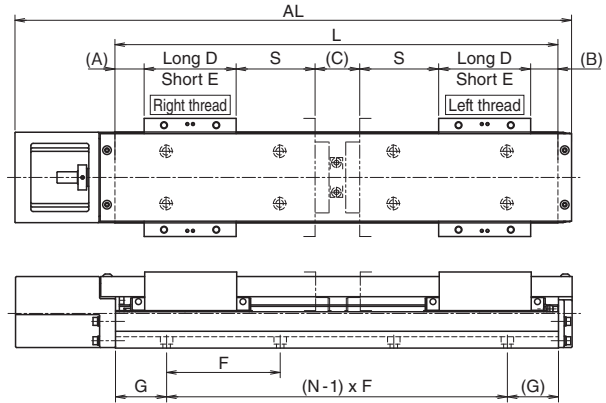
Dimensions

Direct motor coupling

Without cover



With cover



(mm)

Model	Lead	Block type A Long		Block type C Short		Total length AL*	Outer rail length L	A*	B*	C*	D*	E*	F	G	N (Mounting holes)
		Stroke	Stroke S between mechanical stoppers	Stroke	Stroke S between mechanical stoppers										
KR15	1, 2	25	31.4	-	-	204 (194.8)	150	8 (12.3)	7 (11.3)	9 (17.6)	31.6 (23)	-	50	50	2
		37	43.9	-	-	229 (219.8)	175							12.5	4
		50	56.4	-	-	254 (244.8)	200							25	4
		75	81.4	-	-	304 (294.8)	250							50	4
KR20	1, 6	30	41.5	-	-	259 (249.8)	200	9.5 (14.9)	8.5 (13.9)	11 (21.8)	44 (33.2)	-	60	10	4
		55	66.5	-	-	309 (299.8)	250							35	4
KR26	2, 6	59	68.5	-	-	370 (351.8)	300	14 (21.3)	10.5 (17.8)	14.5 (29.1)	62 (47.4)	-	80	30	4
		84	93.5	-	-	420 (401.8)	350							55	4
KR30H	6, 10	-	-	46	60.3	320 (310)	250	12 (21.1)	10.5 (19.6)	13.5 (31.7)	72.2 (54)	46.7 (28.5)	200	25	2
		51	59.8	71	85.3	370 (360)	300							100	2
		76	84.8	96	110.3	420 (410)	350							25	4
		101	109.8	121	135.3	470 (460)	400							50	4
		126	134.8	146	160.3	520 (510)	450							75	4
		151	159.8	171	185.3	570 (560)	500							100	4
		176	184.8	196	210.3	620 (610)	550							25	6
		201	209.8	221	235.3	670 (660)	600							50	6
		226	234.8	246	260.3	720 (710)	650							75	6
KR33	6, 10	-	-	48	60.5	320 (310)	250	12 (21)	10 (19)	14 (32)	72 (54)	46.5 (28.5)	200	25	2
		48	60	73	85.5	370 (360)	300							100	2
		73	85	98	110.5	420 (410)	350							25	4
		98	110	123	135.5	470 (460)	400							50	4
		123	135	148	160.5	520 (510)	450							75	4
		148	160	173	185.5	570 (560)	500							100	4
		173	185	198	210.5	620 (610)	550							25	6
		198	210	223	235.5	670 (660)	600							50	6
		223	235	248	260.5	720 (710)	650							75	6
KR45H	10, 20	-	-	61	82	440 (416)	340	13.4 (25.7)	11.7 (24)	14.7 (39.3)	105.6 (81)	68.1 (43.5)	100	70	3
		-	-	86	107	490 (466)	390							45	4
		81	94.5	111	132	540 (516)	440							70	4
		106	119.5	136	157	590 (566)	490							45	5
		131	144.5	161	182	640 (616)	540							70	5
		156	169.5	186	207	690 (666)	590							45	6
		181	194.5	211	232	740 (716)	640							70	6
		206	219.5	236	257	790 (766)	690							45	7
		231	244.5	261	282	840 (816)	740							70	7
		256	269.5	286	307	890 (866)	790							45	8
		281	294.5	311	332	940 (916)	840							70	8
306	319.5	336	357	990 (966)	890	45	9								
331	344.5	361	382	1040 (1016)	940	70	9								

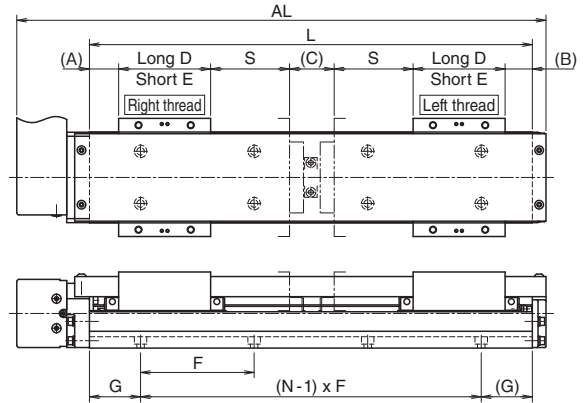
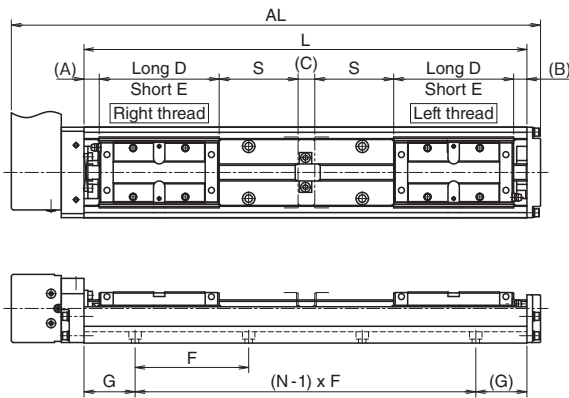
*Values in parentheses for AL are dimensions of the motor wrap. Values in parentheses for A to E are dimensions with the cover on.

Note) Other external dimensions are the same as those of the standard KR Series. Refer to "LM Guide Actuator KR catalog No.209-14E." for details. The appearance and specifications are subject to change without prior notice for improvement purposes.

Motor wrap

Without cover

With cover



(mm)

Model	Lead	Block type A Long		Block type C Short		Total length AL*	Outer rail length L	A*	B*	C*	D*	E*	F	G	N (Mounting holes)
		Stroke	Stroke S between mechanical stoppers	Stroke	Stroke S between mechanical stoppers										
KR46	10, 20	-	-	51	77	440.5 (417)	340	18 (30.5)	14 (26.5)	17 (42)	106 (81)	68.5 (43.5)	100	70	3
		-	-	76	102	490.5 (467)	390							45	4
		-	-	101	127	540.5 (517)	440							70	4
		96	114.5	126	152	590.5 (567)	490							45	5
		121	139.5	151	177	640.5 (617)	540							70	5
		146	164.5	176	202	690.5 (667)	590							45	6
		171	189.5	201	227	740.5 (717)	640							70	6
		196	214.5	226	252	790.5 (767)	690							45	7
		221	239.5	251	277	840.5 (817)	740							70	7
		246	264.5	276	302	890.5 (867)	790							45	8
		271	289.5	301	327	940.5 (917)	840							70	8
		296	314.5	326	352	990.5 (967)	890							45	9
321	339.5	351	377	1040.5 (1017)	940	70	9								
KR55	20	112	138	-	-	689 (664)	580	16 (32.4)	14 (30.4)	18 (50.8)	128 (95.2)	-	150	65	4
		137	163	-	-	739 (714)	630							90	4
		162	188	-	-	789 (764)	680							115	4
		187	213	-	-	839 (814)	730							140	4
		212	238	-	-	889 (864)	780							15	6
		237	263	-	-	939 (914)	830							40	6
		262	288	-	-	989 (964)	880							65	6
		287	313	-	-	1039 (1014)	930							90	6
		312	338	-	-	1089 (1064)	980							115	6
		337	363	-	-	1139 (1114)	1030							140	6
		362	388	-	-	1189 (1164)	1080							15	8
		387	413	-	-	1239 (1214)	1130							40	8
		412	438	-	-	1289 (1264)	1180							65	8
		437	463	-	-	1339 (1314)	1230							90	8
		462	488	-	-	1389 (1364)	1280							115	8
		487	513	-	-	1439 (1414)	1330							140	8
		512	538	-	-	1489 (1464)	1380							15	10
		537	563	-	-	1539 (1514)	1430							40	10
562	588	-	-	1589 (1564)	1480	65	10								
587	613	-	-	1639 (1614)	1530	90	10								
612	638	-	-	1689 (1664)	1580	115	10								
637	663	-	-	1739 (1714)	1630	140	10								
662	688	-	-	1789 (1764)	1680	15	12								
KR65	25	100	120.1	-	-	698 (678)	580	15.4 (32.9)	13.7 (31.2)	20.7 (55.7)	145 (110)	-	150	65	4
		125	145.1	-	-	748 (728)	630							90	4
		150	170.1	-	-	798 (778)	680							40	5
		175	195.1	-	-	848 (828)	730							65	5
		200	220.1	-	-	898 (878)	780							90	5
		225	245.1	-	-	948 (928)	830							40	6
		250	270.1	-	-	998 (978)	880							65	6
		275	295.1	-	-	1048 (1028)	930							90	6
		300	320.1	-	-	1098 (1078)	980							40	7
		325	345.1	-	-	1148 (1128)	1030							65	7
		350	370.1	-	-	1198 (1178)	1080							90	7
		375	395.1	-	-	1248 (1228)	1130							40	8
		400	420.1	-	-	1298 (1278)	1180							65	8
		425	445.1	-	-	1348 (1328)	1230							90	8
		450	470.1	-	-	1398 (1378)	1280							40	9
		475	495.1	-	-	1448 (1428)	1330							65	9
		500	520.1	-	-	1498 (1478)	1380							90	9
		525	545.1	-	-	1548 (1528)	1430							40	10
		550	570.1	-	-	1598 (1578)	1480							65	10
		575	595.1	-	-	1648 (1628)	1530							90	10
600	620.1	-	-	1698 (1678)	1580	40	11								
625	645.1	-	-	1748 (1728)	1630	65	11								
650	670.1	-	-	1798 (1778)	1680	90	11								

*Values in parentheses for AL are dimensions of the motor wrap. Values in parentheses for A to E are dimensions with the cover on.

Note) Other external dimensions are the same as those of the standard KR Series. Refer to "LM Guide Actuator KR catalog No.209-14E." for details. The appearance and specifications are subject to change without prior notice for improvement purposes.

Specifications

Model	KR15		KR20		KR26		KR30H		KR33		KR45H				KR46				KR55		KR65
Drive method	Ball screw		Ball screw		Ball screw		Ball screw		Ball screw		Ball screw				Ball screw				Ball screw		Ball screw
Ball screw lead (mm)	1	2	1	6	2	6	6	10	6	10	10	20	10	20	10	20	10	20	20		25
Rated speed (mm/s)	50	100	50	300	100	300	300	500	300	500	500	1000	500	1000	500	1000	500	1000	1000		1120
Rated thrust (N)	537	268	899	149	449	149	299	179	299	179	361	180	718	359	361	180	718	359	359	675	540
Estimated motor capacity (W)	30		50		50		100		100		200				400				400		750
Positioning repeatability (mm)	±0.003		±0.003		±0.003		±0.003		±0.003		±0.003				±0.003				±0.005		±0.005
Backlash (mm)	0.002		0.003		0.003		0.003		0.003		0.003				0.003				0.003		0.005
Starting torque (N·cm)	1.4		2.3		7.8		30		30		33				33				39		41

Note) For details on the specifications, refer to the "LM Guide Actuator KR catalog No.209-14E."
 Outward appearances and specifications are subject to change without notice for the purpose of improvement.

Static Permissible Moment

Model	KR15		KR20		KR26		KR30H		KR33		KR45H				KR46		KR55		KR65
Block type	A type		A type		A type		A type		C type		A type		C type		A type		C type		A type
M _A (N·m)	12.1 (5)	31 (9)	84 (31)	166 (32)	44 (10)	166 (53)	44 (7)	486 (34)	130 (16)	547 (34)	149 (18)	870 (169)	1300 (326)						
M _B (N·m)	12.1 (5)	31 (8)	84 (22)	166 (40)	44 (14)	166 (40)	44 (14)	486 (95)	130 (32)	547 (98)	149 (34)	870 (212)	1300 (448)						
M _C (N·m)	38 (5)	83 (13)	208 (30)	428 (46)	214 (20)	428 (53)	214 (26)	925 (31)	463 (15)	1400 (34)	700 (17)	2280 (169)	3920 (326)						

Note 1) Static permissible moment is the maximum permissible moment when the unit is stationary.
 Note 2) Values in parentheses are with a cover.

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	Stroke (4)	Accuracy grade (5)	With/without motor/Control device type (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR33	10	ARL	0098	P	0	0	0	AQ
KR15	01 : 1 mm	ARL : Block type A right/left thread	0025 : 25 mm	P : Precision grade	For direct coupling	0 : Without cover	0	For direct coupling
KR20	02 : 2 mm	CRL : Block type C right/left thread	to		0 : Direct coupling (without motor)	1 : With cover	1	For wrap
KR26	06 : 6 mm		0662 : 662 mm		1 : Direct coupling (Specified motor prepared and mounted by THK)			2 : AN WP-08D
KR30H	10 : 10 mm				For wrap			6 : AP WP-08K
KR33	20 : 20 mm				R1 : Non-standard side wrap (without motor)			7 : AQ WP-08M
KR45H	25 : 25 mm				R2 : Standard side wrap (without motor)			B : AR WQ-08D
KR46					R3 : Bottom side wrap (without motor)			E : AS WQ-08K
KR55					R4 : Non-standard side wrap (Specified motor prepared and mounted by THK)			H : AT WQ-08M
KR65					R5 : Standard side wrap (Specified motor prepared and mounted by THK)			L : AU WV-14M
					R6 : Bottom side wrap (Specified motor prepared and mounted by THK)			J : AV WY-11M
								M : AY WY-14M
								AZ WZ-16M
								A5 WZ-19M
								A6 W5-19M
								10
								20
								30
								40
								60

Note) For details on (6), (8), and (9), refer to the "LM Guide Actuator KR catalog No.209-14E."
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