F10H

- High lead: Lead 30
- Origin on the non-motor side is selectable: Lead 10·20·30

Ordering method

F10H – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ]

Model	Lead designation	Brake Note 1	Cable entry location	Origin position change	Grease type	Stroke	Cable length Note 3
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	No entry: No brakes BK: Brakes provided	No entry: Standard (S) U:From the top	None: Standard Z: Non-motor side Note 2	None: Standard GC: Clean	Lead 20·10·5: 150 to 1000 (50mm pitch) Lead 30: 150 to 1000 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

TSX – [ ] – [ ] – [ ] – [ ] – [ ]

Positioner Note 4	Driver: Power-supply voltage / Power capacity	Regenerative unit	LCD monitor	I/O selection	Battery
TS-X	110: 100V/200W 210: 200V/200W	No entry: None R: With RGT	No entry: None L: With LCD	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 5	B: With battery (Absolute) N: None (Incremental)

SR1-X – **10** – [ ] – [ ] – [ ] – [ ]

Controller	Driver: Power capacity	Usable for CE	Regenerative unit	I/O selection	Battery
	10: 200W	No entry: Standard E: CE marking	No entry: None R: With RG1	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: Profibus	B: With battery (Absolute) N: None (Incremental)

RDV-X – **2** – **10** – **RBR1**

Driver	Power-supply voltage	Driver: Power capacity	Regenerative unit
	2: AC200V	10: 200W or less	

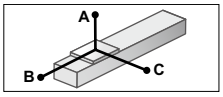
Note 1. The model with a lead of 30mm cannot select specifications with brake (vertical specifications).
Note 2. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.
Note 3. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.
Note 4. See P.522 for DIN rail mounting bracket.
Note 5. Select this selection when using the gateway function. For details, see P.66.

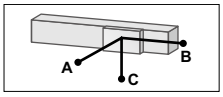
Specifications

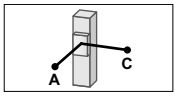
AC servo motor output (W)		200			
Repeatability Note 1 (mm)		+/- 0.01			
Deceleration mechanism		Ball screw ϕ15			
Ball screw lead (mm)		30	20	10	5
Maximum speed Note 2 (mm/sec)		1800	1200	600	300
Maximum payload (kg)	Horizontal	25	40	80	100
	Vertical	–	8	20	30
Rated thrust (N)		113	170	341	683
Stroke (mm)		150 to 1000			
Overall length (mm)	Horizontal	Stroke+355			
	Vertical	Stroke+385			
Maximum dimensions of cross section of main unit (mm)		W110 × H71			
Cable length (m)		Standard: 3.5 / Option: 5,10			
Linear guide type		4 rows of circular arc grooves × 1 rail			
Position detector		Resolvers Note 3			
Resolution (Pulse/rotation)		16384			

Note 1. Positioning repeatability in one direction.
Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below. When the movement distance is short, the speed may not reach the maximum speed according to the payload.
Note 3. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

Allowable overhang Note







Horizontal installation (Unit: mm)

		A	B	C
Lead 30	10kg	1181	681	219
	20kg	772	298	99
Lead 20	10kg	1961	685	232
	20kg	949	301	103
	40kg	432	109	38
Lead 10	30kg	1615	239	84
	50kg	1131	112	39
	80kg	812	40	14
Lead 5	60kg	3091	112	39
	80kg	2330	64	23
	100kg	1733	36	12

Wall installation (Unit: mm)

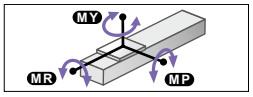
		A	B	C
Lead 30	10kg	193	570	1062
	20kg	65	187	549
Lead 20	10kg	198	570	1786
	20kg	65	187	732
	40kg	0	0	0
Lead 10	20kg	100	283	1981
	25kg	66	187	1546
	30kg	43	123	1223
Lead 5	20kg	134	379	7629
	25kg	93	264	5987
	30kg	66	187	4841

Vertical installation (Unit: mm)

		A	C
Lead 20	4kg	1650	1650
	6kg	1104	1104
	8kg	832	832
Lead 10	10kg	927	927
	15kg	614	614
	20kg	458	458
Lead 5	15kg	752	752
	20kg	560	560
	30kg	369	369

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
Note. Service life is calculated for 600mm stroke models.

Static loading moment



(Unit: N·m)

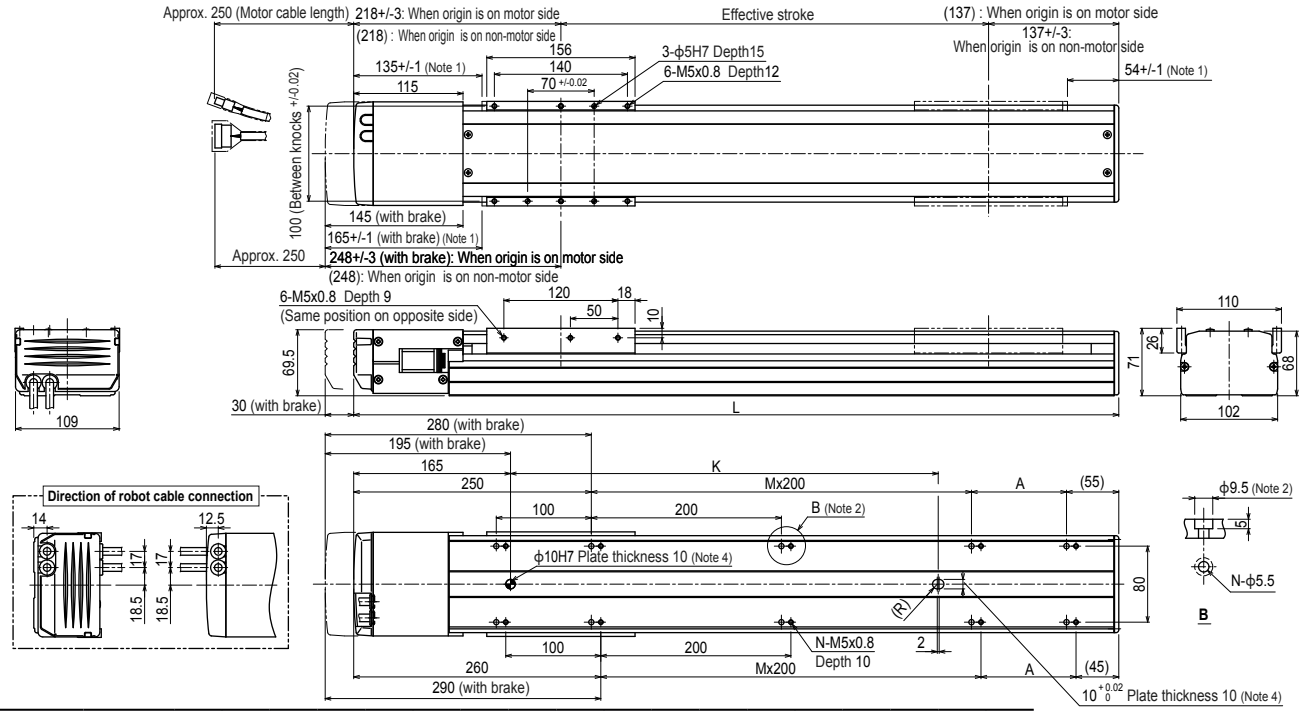
MY	MP	MR
348	348	160

Controller

Controller	Operation method
SR1-X10 Note RCX320 RCX221/222 RCX340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X110 Note TS-X210 Note	I/O point trace / Remote command
RDV-X210-RBR1	Pulse train control

Note. When using the unit vertically, a regeneration unit is required.

F10H

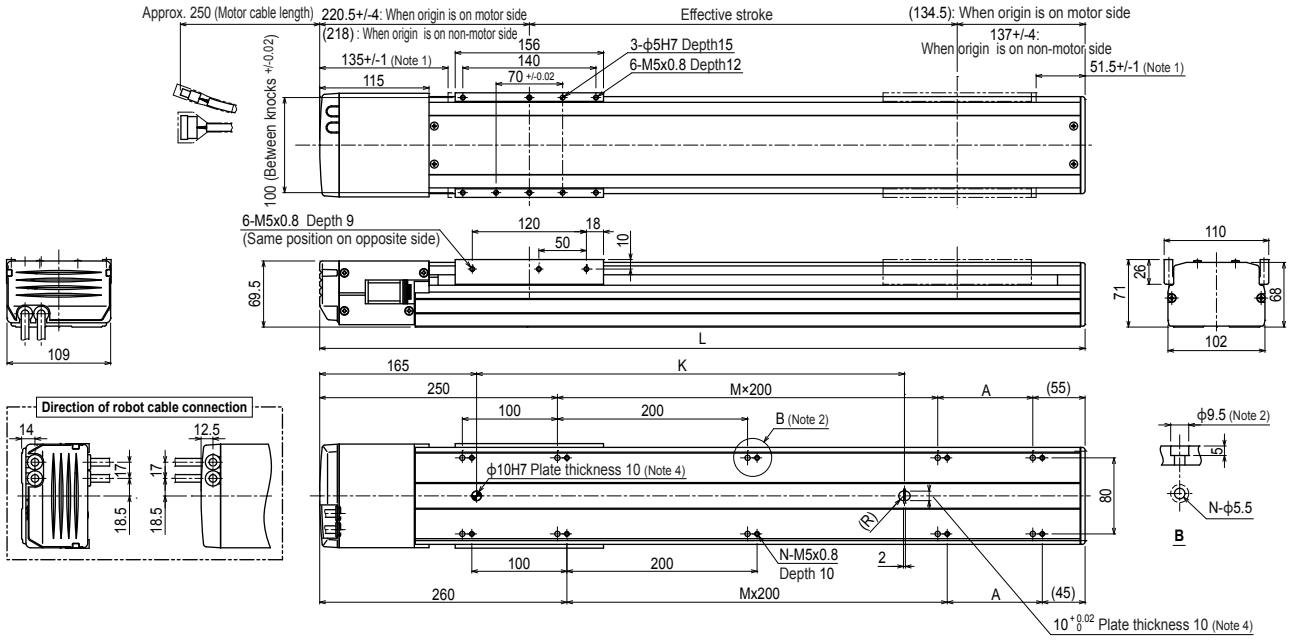


Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
N	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16
K	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg) Note 5	6.9	7.3	7.7	8.1	8.4	8.8	9.2	9.6	10.0	10.3	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4
Maximum speed Note 6 (mm/sec) Lead 30	1800										1440	1260	1080	900		720		630
Lead 20	1200										960	840	720	600		480		420
Lead 10	600										480	420	360	300		240		210
Lead 5	300										240	210	180	150		120		105
Speed setting	–										80%	70%	60%	50%		40%		35%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When installing the unit, washers, etc., cannot be used in the ϕ9.5 counter bore hole.
Note 3. Minimum bend radius of motor cable is R50.
Note 4. When using this ϕ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.
Note 5. Weight of models with no brake. The weight of brake-attached models is 0.5 kg heavier than the models with no brake shown in the table.
Note 6. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table above.

Controller SR1-X ▶ 540 TS-X ▶ 514 RDV-X ▶ 528

F10H High lead type: Lead 30



Effective stroke		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L		505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355
A		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
N		6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16
K		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)		6.9	7.3	7.7	8.1	8.4	8.8	9.2	9.6	10.0	10.3	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4
Maximum speed Note 5 (mm/sec)	Lead 30	1800										1440	1260	1080	900		720		630
	Lead 20	1200										960	840	720	600		480		420
	Lead 10	600										480	420	360	300		240		210
	Lead 5	300										240	210	180	150		120		105
	Speed setting	–										80%	70%	60%	50%		40%		35%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When installing the unit, washers, etc., cannot be used in the ϕ9.5 counter bore hole.
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Note 4. When using this ϕ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.

Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table above.