F10

High lead: Lead 30 **Origin at non-motor side: Lead 10·20·30**

Ordering method

F10							SR1-X	05				
Model	Lead designation 30: 30mm 20: 20mm 10: 10mm 5: 5mm	Brake No entry: No brakes BK: Brakes provided	Cable entry location No entry: Standard (S) U: From the top	Option Origin position change: None: Standard / Z: Non-motor side Note 1 Grease type: None: Standard / GC: Clean	Stroke 150 to 1050 (50mm pitch)	Cable length Note 2 3L: 3.5m (Standard) 5L: 5m 10L: 10m 3K/5K/10K Note 2	Controller SR1-X TS-X Note 3 RDX Note 3	Driver 05: 100W or less	Usable for CE No entry: Standard E: CE marking	Regenerative unit Note 4 No entry: None R: RG1 (SR1-X)	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link No e 5	Battery No entry: None (Incremental specification) B: Battery (Absolute specification)

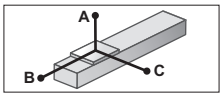
Note 1. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.
Note 2. The robot cable is standard cable, but can be changed to bend-resistant cable. (not supported on RDX). See P.423 for details on robot cable.
Note 3. To find TS-X, RDX selection options, see the ordering method listed on each controller's page (TS-X: P.355, RDX: P.365).
Note 4. When using the SR1-X, TS-X, a regenerative unit is required when the movement stroke is 700mm or more and used perpendicularly. When using the RDX, the regenerative unit RBR1 is required regardless of the installation conditions.
Note 5. Available only for the slave.

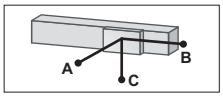
Specifications

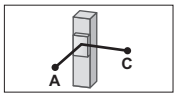
AC servo motor output (W)		100			
Repeatability Note 1 (mm)		+/-0.01			
Deceleration mechanism		Ball screw (Class C7)			
Ball screw lead (mm)		30	20	10	5
Maximum speed Note 2 (mm/sec)		1800	1200	600	300
Maximum payload (kg)	Horizontal	15	20	40	60
	Vertical	–	4	10	20
Rated thrust (N)		56	84	169	339
Stroke (mm)		150 to 1050 (50mm pitch)			
Overall length (mm)	Horizontal	Stroke+260			
	Vertical	Stroke+290			
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 750mm, 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.
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	5kg	491	273	215
	15kg	223	61	63
Lead 20	5kg	937	282	259
	10kg	487	121	116
	20kg	236	40	44
Lead 10	15kg	389	71	74
	30kg	179	17	20
	40kg	106	0	0
Lead 5	30kg	419	19	20
	50kg	0	0	0
	60kg	0	0	0

Wall installation (Unit: mm)

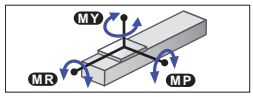
		A	B	C
Lead 30	5kg	206	209	480
	15kg	45	0	177
Lead 20	5kg	250	213	905
	10kg	99	51	438
	20kg	21	0	149
Lead 10	10kg	105	53	550
	20kg	22	0	230
	30kg	0	0	0
Lead 5	10kg	107	54	1410
	20kg	22	0	540
	30kg	0	0	0

Vertical installation (Unit: mm)

		A	C
Lead 20	1kg	600	600
	2kg	649	691
	4kg	306	347
Lead 10	4kg	338	380
	8kg	142	183
	10kg	102	144
Lead 5	10kg	105	146
	15kg	51	93
	20kg	25	66

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

Static loading moment



(Unit: N·m)

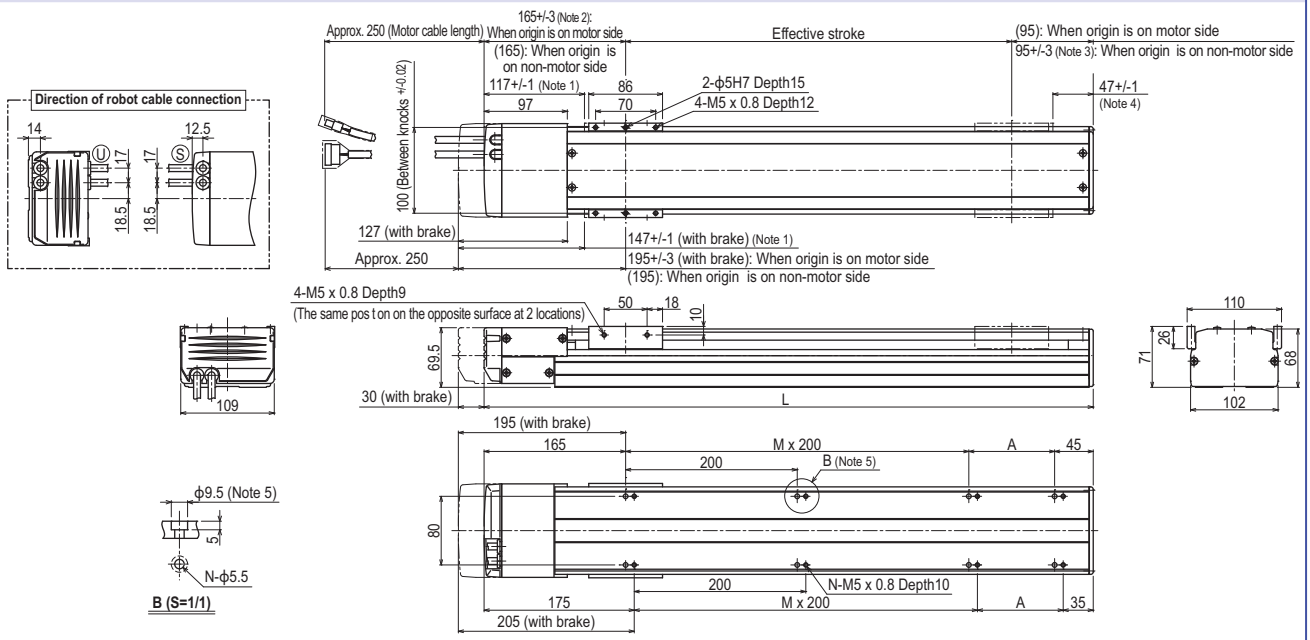
MY	MP	MR
131	131	115

Controller

Controller	Operation method
SR1-X-05 Note	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X205 Note	I/O point trace
RDX-05-RBR1	Pulse train control

Note. Regenerative unit is required when the models used vertically and with 700mm or larger stroke.

F10



Note 1. Distance from both ends to the mechanical stopper.
Note 2. 167.5+/-4 when the high lead specification (Lead 30) is used.
Note 3. 95+/-4 when the high lead specification (Lead 30) is used.
Note 4. 44.5+/-1 when the high lead specification (Lead 30) is used.
Note 5. When installing the unit, washers, etc., cannot be used in the ϕ9.5 counter bore hole.
Note 6. Minimum bend radius of motor cable is R5.
Note 7. Weight of models with no brake. The weight of brake-attached models is 0.6 kg heavier than the models with no brake shown in the table.

Effective stroke		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L		410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310
A		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
Weight (kg) Note 7		5 5	5.7	5.8	6.2	6.5	6.9	7.3	7.7	8.1	8.5	8 8	9.2	9.6	10.0	10.4	10.8	11.1	11.5	11.9
Maximum speed Note 8 (mm/sec)	Lead 30	1800												1440		1170		900		810
	Lead 20	1200												960		780		600		540
	Lead 10	600												480		390		300		270
	Lead 5	300												240		195		150		135
	Speed setting	–												80%		65%		50%		45%

Note 8. When the stroke is longer than 750mm, 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 ▶ 377 | TS-X ▶ 354 | RDX ▶ 365