

F17

● High lead: Lead 40 ● Origin at non-motor side



Ordering method

F17 - [] - [] - [] - [] - SR1-X - 20 - [] - [] - [] - [] - []												
Model	Lead designation	Brake	Cable entry location	Option	Stroke	Cable length	Controller	Driver	Usable for CE marking	Regenerative unit	I/O selection	Battery
	40: 40mm 20: 20mm 10: 10mm	No entry: No brakes BK: Brakes provided	No entry: Standard (S) U: From the top R: From the right L: From the left	Origin position: None: Standard Z: Non-motor side Grease type: None: Standard GC: Clean	Lead 20-10: 200 to 1250 (50mm pitch) Lead 40: 200 to 1450 (50mm pitch)	3L: 3.5m (Standard) 5L: 5m 10L: 10m	SR1-X TS-X ^{Note 2}	20: 400 to 600W 220 (TS-X)	No entry: Standard E: CE marking	No entry: None R: RG1 (SR1-X) R: RGT (TS-X)	N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link ^{Note 4}	No entry: None (Incremental specification) B: Battery (Absolute specification)

Note 1. The robot cable is standard cable, but can be changed to bend-resistant cable. (consult factory)
 Note 2. To find TS-X, RDX selection options, see the ordering method listed on each controller's page.
 Note 3. A regenerative unit is required if using SR1-X, TS-X if oriented vertically or with high-leads (lead40) or at the maximum speed exceeds 1000mm/sec.
 Note 4. Available only for the SR1-X slave.

Basic specifications

AC servo motor output (W)	400	
Repeatability ^{Note 1} (mm)	+/- 0.01	
Deceleration mechanism	Ball screw (Class C7)	
Ball screw lead (mm)	40	20
Maximum speed ^{Note 2} (mm/sec)	Horizontal	2400
	Vertical	1000 (1200 ^{Note 3})
Maximum payload (kg)	Horizontal	40
	Vertical	80
Rated thrust (N)	Horizontal	169
	Vertical	339
Stroke (mm)	Horizontal	200 to 1450 ^{Note 4} (50mm pitch)
	Vertical	39
Overall length (mm)	Horizontal	Stroke+375
	Vertical	Stroke+365
Maximum dimensions of cross section of main unit (mm)	W168 x H100	
Cable length (m)	Standard: 3.5 / Option: 5,10	
Linear guide type	4 rows of circular arc grooves x 2 rail	
Position detector	Resolvers ^{Note 5}	
Resolution (Pulse/rotation)	16384	

Note 1. Repeatability for single oscillation.
 Note 2. When the stroke exceeds 850mm, although depending on the moving range, the ball screw may resonate (critical speed). In that case, make adjustment to lower the speed on the program using the maximum speed given in the below table as a guide.
 Note 3. To operate the unit at a speed exceeding 1,000mm/sec. (Max. speed), a regeneration unit RG1 is required.
 Note 4. Longer than 1250mm stroke can be handled by the high lead specification (Lead 40) only.
 Note 5. 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

Installation	Lead	Weight (kg)	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
			A	B	C	A	B	C	A	C	
Horizontal	40	10kg	3540	2753	1999	2022	2670	3501	5kg	3000	3000
		20kg	2541	1357	1181	1202	1283	2483			
		40kg	2639	661	736	752	587	2516			
		60kg	2647	894	989	987	820	2578			
Wall	20	10kg	1770	521	588	574	447	1685	15kg	1782	1782
		20kg	1391	312	362	342	237	1263			
		40kg	1770	521	588	574	447	1685			
		60kg	2443	430	572	535	355	2443			
Vertical	10	100kg	2000	243	326	283	169	2000	25kg	1054	1054
		120kg	1841	197	264	220	123	1841			
		100kg	2000	243	326	283	169	2000			
		120kg	1841	197	264	220	123	1841			

Note 1. 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

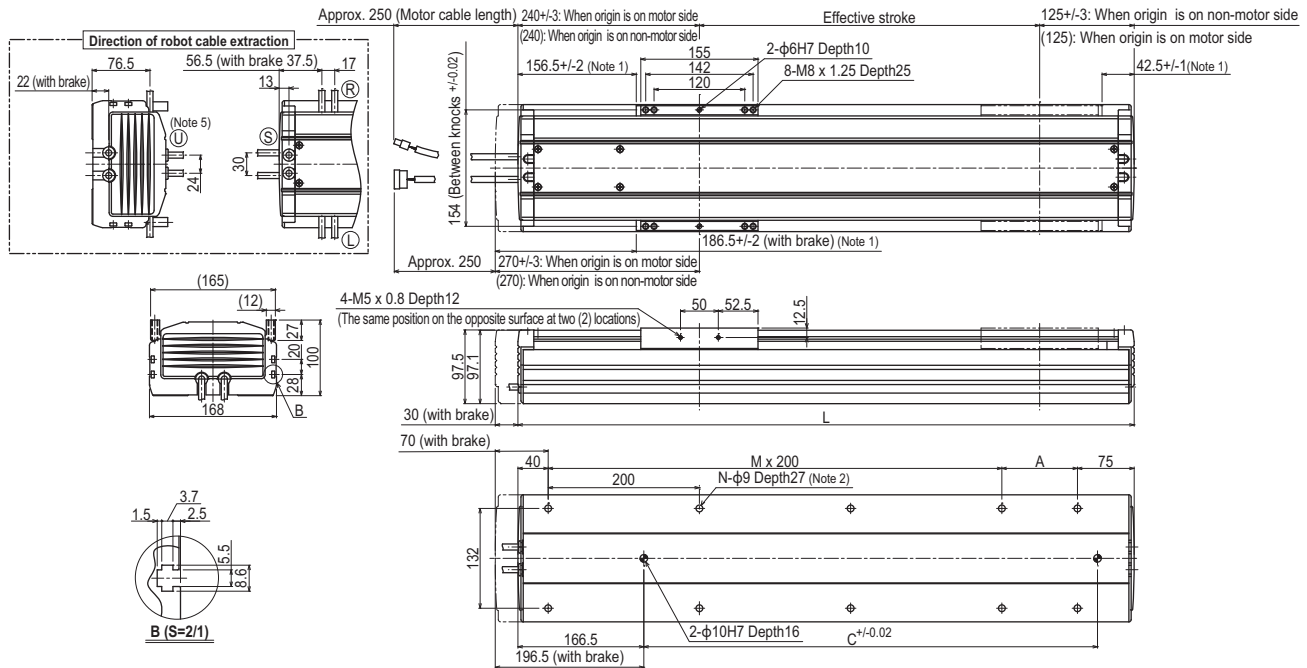
MY	MP	MR
1032	1034	908

Controller

Controller	Operation method
SR1-X-20 ^{Note 6}	Programming / I/O point trace (BCD) / Remote command / Operation using RS-232C communication
TS-X220 ^{Note 6}	I/O point trace (BCD)

Note. When using the vertical model, if the unit is operated at such speed exceeding the maximum speed of 1,000mm/sec., and if it has a high lead (40), a regeneration unit is required.

F17



Note 1. Distance from both ends to the mechanical stopper.
 Note 2. When installing the robot, do not use washers inside the robot body.
 Note 3. Minimum bend radius of motor cable is R50.
 Note 4. Weight of models with no brake. The weight of brake-attached models is 1.2 kg heavier than the models with no brake shown in the table.
 Note 5. Make a separate consultation with us regarding robot cable (brake specifications) U extraction.

Effective stroke	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250			
L	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615			
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100			
M	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7			
N	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18			
C	240	240	420	420	420	600	600	600	600	780	780	780	960	960	960	960	960	1140	1140	1140	1140	1320			
Weight (kg) ^{Note 4}	14.5	15.3	16.2	17.0	17.8	18.6	19.5	20.3	21.1	21.9	22.8	23.6	24.4	25.2	26.1	26.9	27.7	28.5	29.4	30.2	31.0	31.8			
Maximum speed ^{Note 6} (mm/sec)	Lead 20	1000(1200 ^{Note 7})											960	840	720	600	480								
	Lead 10	600											480	420	360	300	240								
Speed setting	-											80%	70%	60%	50%	40%									

Note 6. When the stroke is longer than 850mm, 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.
 Note 7. To operate the unit at a speed exceeding 1,000mm/sec. (Max. speed), a regeneration unit RG1 is required.

