

F17

● High lead: Lead 40

● Origin on the non-motor side is selectable

Note. Upper robot cable (U) on models with brakes is a special order item, so please consult our sales office or sales representative for assistance.
(External dimensions: overall length + 20 mm)

Ordering method

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Model	Lead designation	Brake	Cable entry location	Origin position change	Grease type	Stroke	Cable length
	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	None: Standard Z: Non-motor side	None: Standard GC: Clean	Lead 20-10: 200 to 1250 (50mm pitch) Lead 40: 200 to 1450 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

- Note 1. The model with a lead of 40mm cannot select specifications with brake (vertical specifications).
Note 2. Upper robot cable (U) on models equipped with brake is a special-order item.
Note 3. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.732 for details on robot cable.
Note 4. See P.634 for DIN rail mounting bracket.
Note 5. The robot with the high lead specifications (lead 40) needs a regenerative unit.
Note 6. Select this selection when using the gateway function. For details, see P.96.

TSX	220				
Positioner TSX: TS-X	Driver: Power supply voltage Power capacity 220: 200V/400 to 600W	Regenerative unit No entry: None R: With RGT	LCD monitor No entry: None L: With LCD	I/O selection NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	Battery N: None (Incremental)
SR1-X	20				
Controller	Driver: Power capacity 20: 400 to 600W	Usable for CE No entry: Standard E: CE marking	Regenerative unit No entry: None R: With RGT	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	Battery B: With battery (Absolute) N: None (Incremental)
RDV-X	2	20			
Driver	Power supply voltage 2: AC200V	Driver: Power capacity 20: 600W or less	Regenerative unit RBR1 (Horizontal) RBR2 (Vertical)		

Specifications

AC servo motor output (W)	400
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw $\phi 20$
Ball screw lead (mm)	40 20 10
Maximum speed (mm/sec)	2400 1000 (1200) 600
Maximum payload (kg)	Horizontal 40 80 120 Vertical 15 35
Rated thrust (N)	169 339 678
Stroke (mm)	200 to 1450 (50mm pitch) Stroke+375 Stroke+365
Overall length (mm)	Horizontal 169 339 678 Vertical 15 35
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
Resolution (Pulse/rotation)	16384

- Note 1. Repeatability for single oscillation.
Note 2. When the stroke exceeds 800mm, 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

	A	B	C
Horizontal installation (Unit: mm)			
Lead 40	10kg 3540 2753 1999		
20kg 2541 1357 1181			
40kg 2639 661 736			
30kg 2647 894 989			
50kg 1770 521 588			
80kg 1391 312 362			
60kg 2443 430 572			
100kg 2000 243 326			
120kg 1841 197 264			
Wall installation (Unit: mm)			
Lead 40	10kg 2022 2670 3501		
20kg 1202 1283 2483			
40kg 752 587 2516			
30kg 987 820 2578			
50kg 574 447 1685			
80kg 342 237 1263			
60kg 535 355 2443			
100kg 283 169 2000			
120kg 220 123 1841			
Vertical installation (Unit: mm)			
Lead 20	5kg 3000 3000		
10kg 2447 2447			
15kg 1650 1650			
15kg 1782 1782			
25kg 1054 1054			
35kg 742 742			

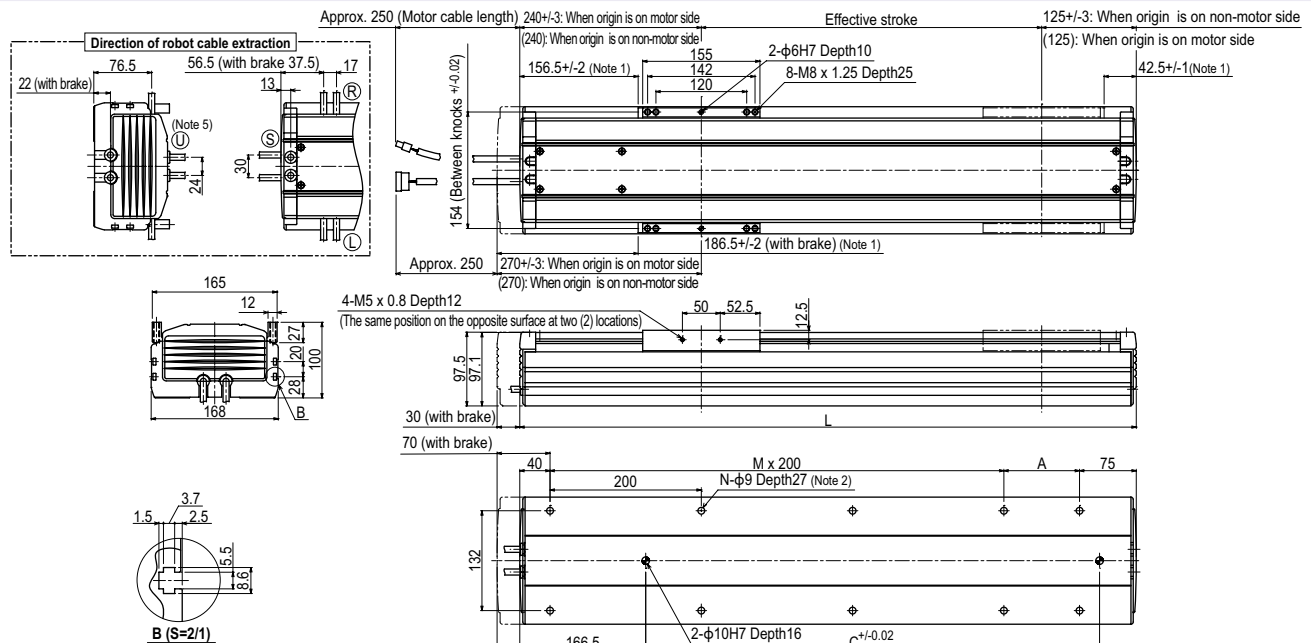
Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

Controller

Controller	Operation method
SR1-X20	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX320, RCX221/222, RCX340	I/O point trace / Remote command
TS-X220	Pulse train control
RDV-X220-RBR1 (Horizontal)	
RDV-X220-RBR2 (Vertical)	

- Note. [The following arrangements require a regeneration unit.]
• Using in the upright position.
• To move at a speed exceeding 1,000 mm/sec horizontally.
• High lead (40) used horizontally.

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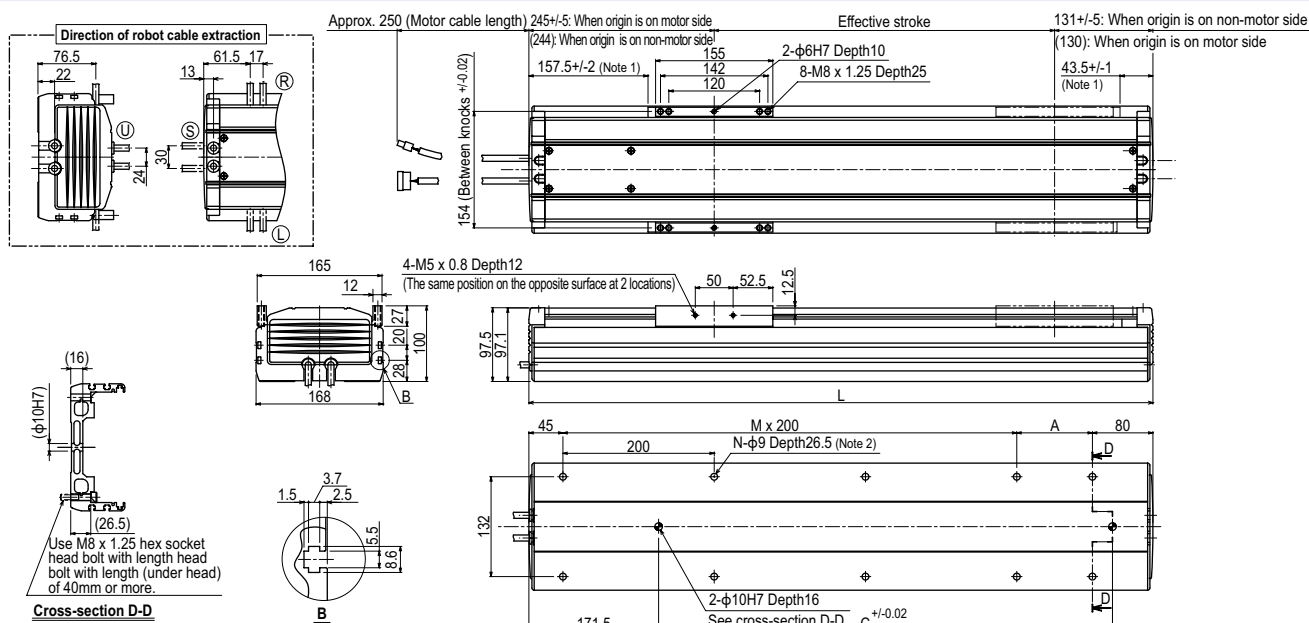
- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When installing the robot, do not use washers inside the robot body.
Note 3. Minimum bend radius of motor cable is R50.
Note 4. Weight of models with no brake. The weight of brake-attached models is 1.2 kg heavier 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. (External dimensions: overall length + 20 mm)
Note 6. When the stroke is longer than 800mm, 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.

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	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
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	780	960	960	960	960	1140	1140	1140	1140	1320
Weight (kg)	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	Lead 20	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)	1000(1200)
Speed setting	Lead 10	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
	Speed setting	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%

Controller

SR1-X ▶ 652 TS-X ▶ 626 RDV-X ▶ 640

F17 High lead type: Lead 40



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
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 2: When installing the robot, do not use washers inside the robot body.																												
Effective stroke		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	
L		575	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	
A		50	100	150	200	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	7	7	8	8	
N		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	
C		240	240	420	420	420	600	600	600	600	780	780	780	780	960	960	960	960	1140	1140	1140	1140	1320	1320	1320	1320	1320	
Weight (kg)		14.7	15.5	16.4	17.2	18.0	18.8	19.7	20.5	21.3	22.1	23.0	23.8	24.6	25.4	26.3	27.1	27.9	28.7	29.6	30.4	31.2	32.0	32.8	33.6	34.4	35.2	
Maximum speed (mm/sec)	Lead 40	2400													1920		1680		1440		1200		960		840		720	
	Speed setting	—													80%		70%		60%		50%		40%		35%		30%	

Note 4. When the stroke is longer than 800mm, 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.