

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)

TSX	220	SR1-X	20	RDV-X	2	20
Positioner TS-X	Driver: Power-supply voltage Power capacity 220: 200V/400 to 600W	Controller	Driver: Power capacity 20: 400 to 600W	Driver	Power-supply voltage 2: AC200V	Driver: Power capacity 20: 600W or less
	Regenerative unit No entry: None R: With RGT	Usable for CE No entry: Standard E: CE marking	Regenerative unit No entry: None R: With RG1			Regenerative unit 20: AC200V
	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		I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS			
	Battery N: None (Incremental)		Battery B: With battery (Absolute) N: None (Incremental)			

- 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.614 for details on robot cable.
 Note 4. See P.522 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.66.

Specifications

AC servo motor output (W)	400
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw φ20
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)
Overall length (mm)	Horizontal Stroke+375 Stroke+365 Vertical - - -
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

Installation	Unit (mm)	A	B	C
Horizontal installation	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	
Wall installation	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	
Vertical installation	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.

Static loading moment

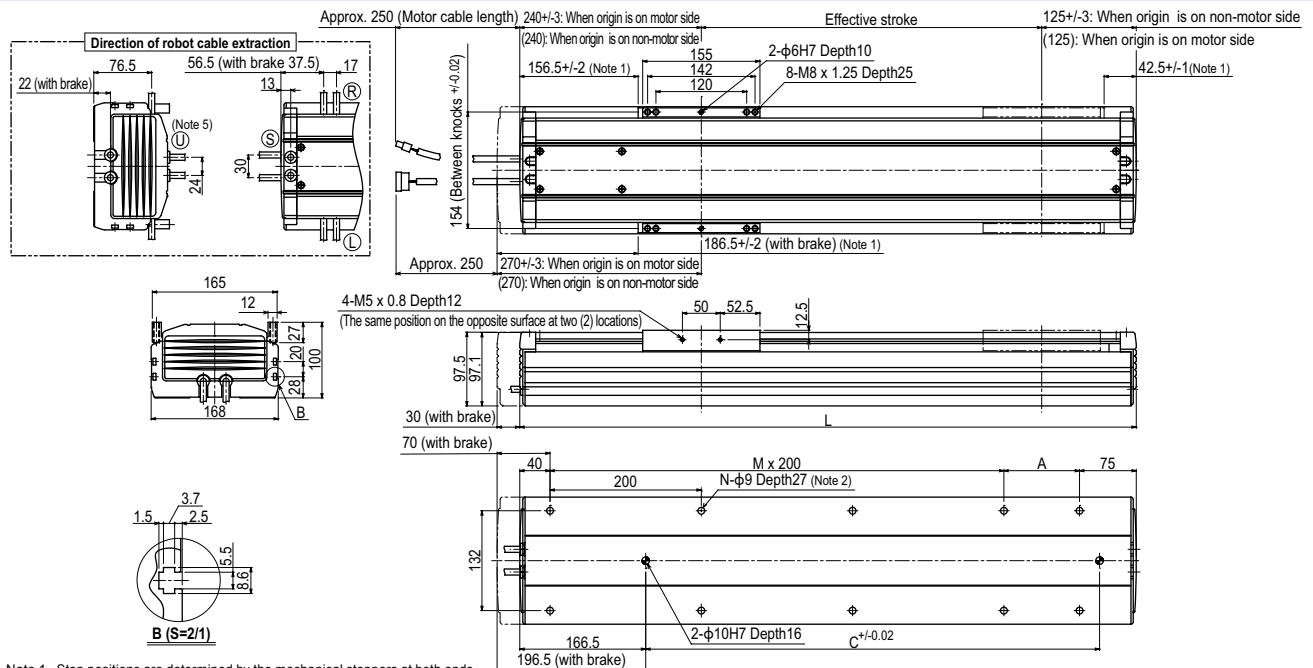
Axis	1032	1034	908
MY			
MP			
MR			

Controller

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

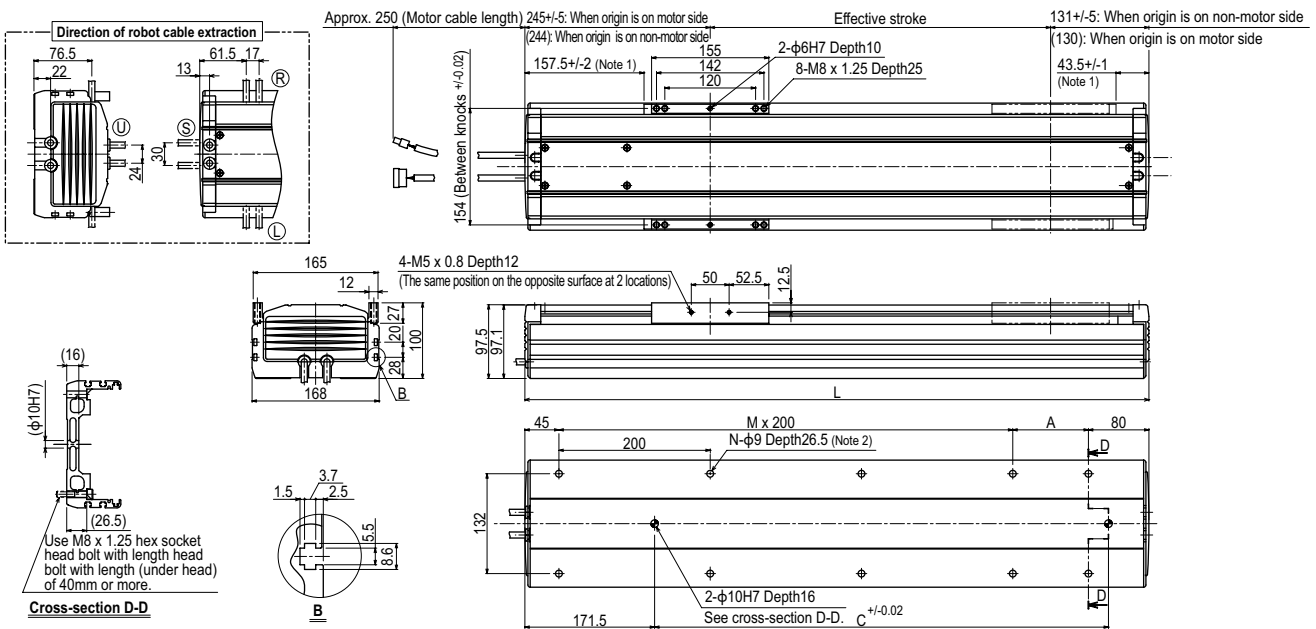
Effective stroke	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
L	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415	1465	1515	1565	1615		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100		
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	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 (mm/sec)	1000(1200)												960	840	720	600	480	420	360	300	240			
Speed setting	600												80%	70%	60%	50%								

Controller

SR1-X ▶ 540 TS-X ▶ 514 RDV-X ▶ 528

- Articulated robots
YA
- Linear conveyor modules
LCM100
- Motor-less single axis actuator
Robonity
- Compact single-axis robots
TRANSEVO
- Single-axis robots
FLIP-X
- Linear motor single-axis robots
PHASER
- Cartesian robots
XY-X
- SCARA robots
YK-X
- Pick & place robots
YP-X
- CLEAN**
- CONTROLLER INFORMATION**
- T type**
- F type**
- GF type**
- N type**
- B/R type**

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.

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 ^{Note 4} (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.