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 Note 1	Controller	Driver	Usable for CE	Regenerative unit Note 3	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 change: 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 3K/5K/10K Note 1	SR1-X TS-X Note 2 RDX Note 2	20: 400 to 600W	No entry: Standard E: CE marking	No entry: None R: RG1 (SR1-X)	N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link Note	No entry: None (Incremental specification) B: Battery (Absolute specification)

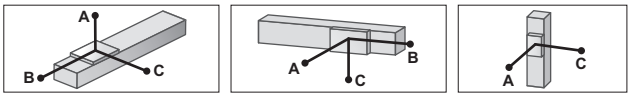
Note 1. The robot cable is standard cable, but can be changed to bend-resistant cable. (not supported on RDX). See P.423 for details on robot cable.
Note 2. To find TS-X, RDX selection options, see the ordering method listed on each controller's page (TS-X: P.355, RDX: P.365).
Note 3. A regenerative unit is required if using SR1-X,TS-X with perpendicular specifications or with high-leads (lead40) or at the maximum speed exceeds 1000mm/sec.When using RDX, the regenerative unit RBR is required regardless of the installation conditions.
Note 4. Available only for the slave.

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	10
Maximum speed Note 2 (mm/sec)		2400	1000 (1200 Note3)	600
Maximum payload (kg)	Horizontal	40	80	120
	Vertical	–	15	35
Rated thrust (N)		169	339	678
Stroke (mm)		200 to 1450 Note (50mm pitch)		
Overall length (mm)	Horizontal	Stroke +375	Stroke+365	
	Vertical	–	Stroke+395	
Maximum dimensions of cross section of main unit (mm)		W168 × H100		
Cable length (m)		Standard: 3 5 / Option: 5,10		
Linear guide type		4 rows of circular arc grooves × 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 Note



Horizontal installation (Unit: mm)

		A	B	C
Lead 40	10kg	3540	2753	1999
	20kg	2541	1357	1181
	40kg	2639	661	736
Lead 20	30kg	2647	894	989
	50kg	1770	521	588
	80kg	1391	312	362
Lead 10	60kg	2443	430	572
	100kg	2000	243	326
	120kg	1841	197	264

Wall installation (Unit: mm)

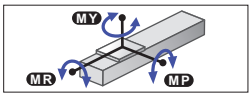
		A	B	C
Lead 40	10kg	2022	2670	3501
	20kg	1202	1283	2483
	40kg	752	587	2516
Lead 20	30kg	987	820	2578
	50kg	574	447	1685
	80kg	342	237	1263
Lead 10	60kg	535	355	2443
	100kg	283	169	2000
	120kg	220	123	1841

Vertical installation (Unit: mm)

		A	C
Lead 20	5kg	3000	3000
	10kg	2447	2447
	15kg	1650	1650
Lead 10	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



(Unit: N·m)

MY	MP	MR
1032	1034	908

Controller

Controller	Operation method
SR1-X-20 Note	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X220 Note	I/O point trace
RDX-20-RBR1 (Horizontal)	Pulse train control
RDX-20-RBR2 (Vertical)	

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.

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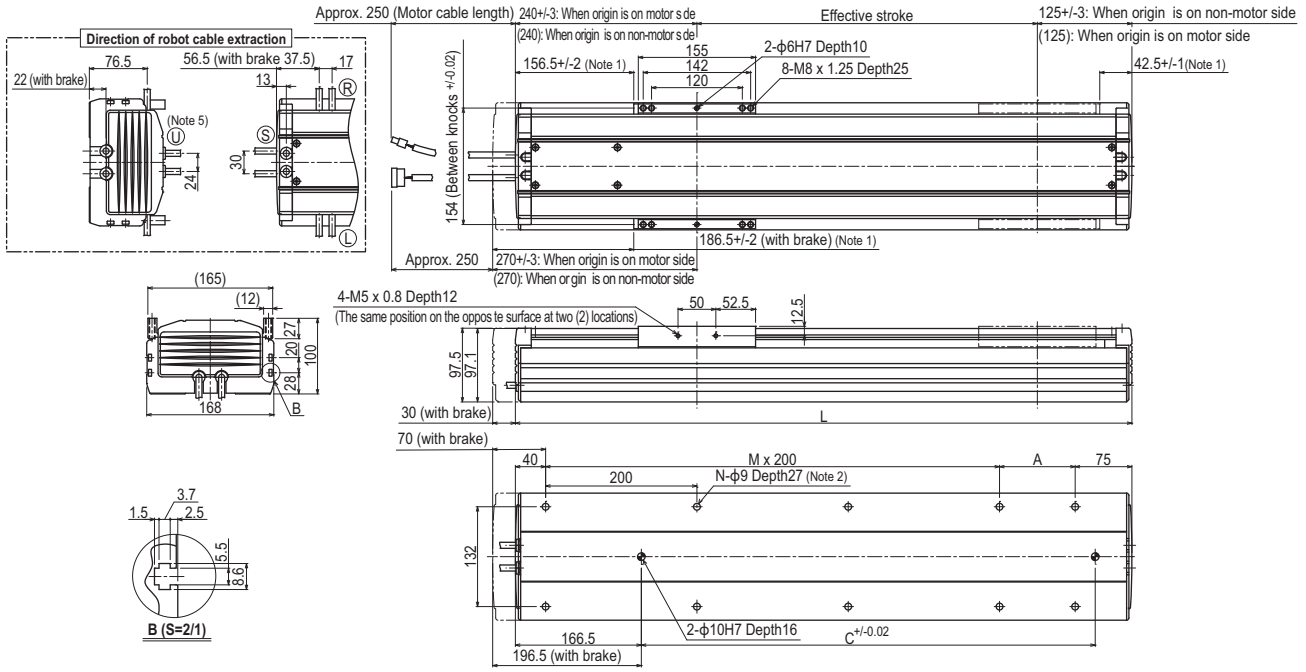
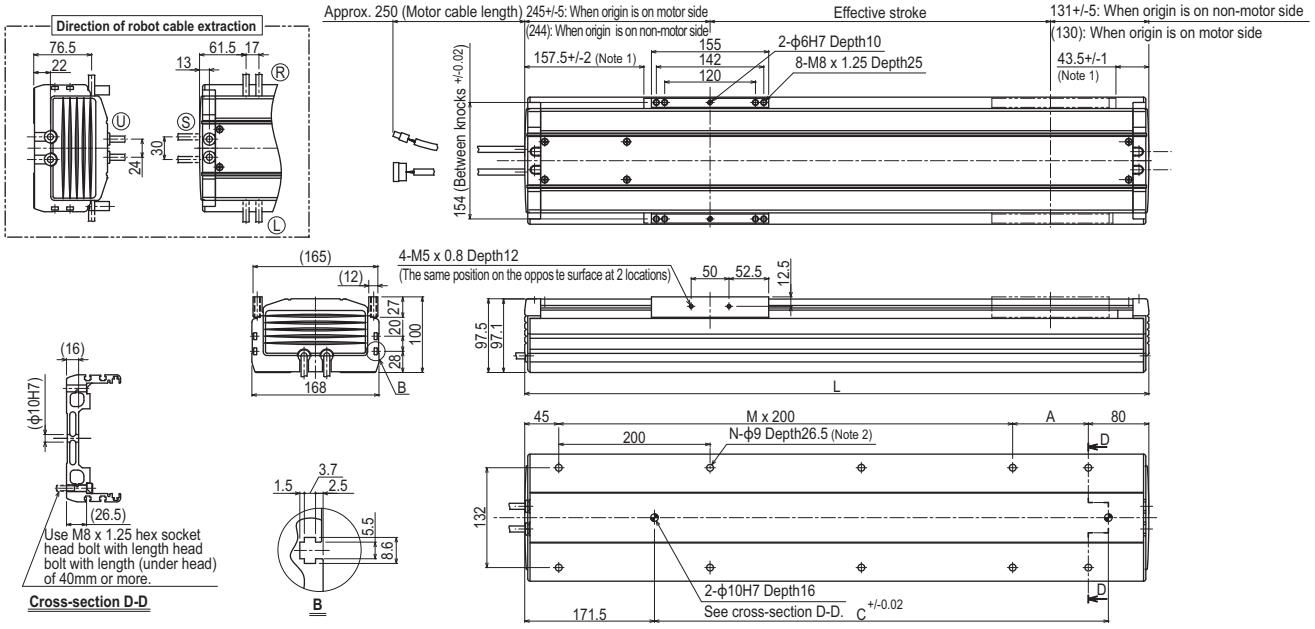


Note 1. Distance from both ends to the mechanical stopper.
Note 2. When installing the robot, do not use washers inside the robot body.
Note 3. Minimum bend radius of motor cable is R50.
Note 4. Weight of models with no brake. The weight of brake-attached models is 1.2 kg heavier than the models with 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	780	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.

F17 High lead type: Lead 40



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.

Effective stroke		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250 Note 5	1300 Note 5	1350 Note 5	1400 Note 5	1450 Note 5
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 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 5. Longer than 1250mm stroke can be handled by the high lead specification (Lead 40) only.