F8

- High lead: Lead 20
- Origin on the non-motor side is selectable

Ordering method

F8 – [Model] – [Lead designation] – [Brake Note 1] – [Origin position change] – [Grease type] – [Stroke] – [Cable length Note 2]

Model	Lead designation	Brake Note 1	Origin position change	Grease type	Stroke	Cable length Note 2
F8	20: 20mm 12: 12mm 6: 6mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	150 to 800 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

TSX – [Positioner Note 3] – [Driver: Power-supply voltage / Power capacity] – [LCD monitor] – [I/O selection] – [Battery]

Positioner Note 3	Driver: Power-supply voltage / Power capacity	LCD monitor	I/O selection	Battery
TS-X	105: 100V/100W or less 205: 200V/100W or less	No entry: None L: With LCD	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 4	B: With battery (Absolute) N: None (Incremental)

SR1-X – **05** – [Usable for CE] – [I/O selection] – [Battery]

Controller	Driver: Power capacity	Usable for CE	I/O selection	Battery
SR1-X	05: 100W or less	No entry: Standard E: CE marking	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	B: With battery (Absolute) N: None (Incremental)

RDV-X – **2** – **05** – **RBR1**

Driver	Power-supply voltage	Driver: Power capacity	Regenerative unit
RDV-X	2: AC200V	05: 100W or less	RBR1

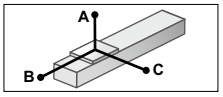
Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).
Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.
Note 3. See P.522 for DIN rail mounting bracket.
Note 4. Select this selection when using the gateway function. For details, see P.66.

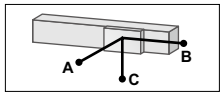
Specifications

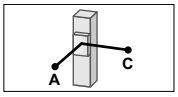
AC servo motor output (W)		100		
Repeatability Note 1 (mm)		+/-0.02		
Deceleration mechanism		Ball screw ϕ12		
Ball screw lead (mm)		20	12	6
Maximum speed Note 2 (mm/sec)		1200	720	360
Maximum payload (kg)	Horizontal	12	20	40
	Vertical	–	4	8
Rated thrust (N)		84	141	283
Stroke (mm)		150 to 800 (50mm pitch)		
Overall length (mm)	Horizontal	Stroke+286		
	Vertical	Stroke+316		
Maximum dimensions of cross section of main unit (mm)		W80 × H65		
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 550mm, 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 20	5kg	197	76	120
	10kg	100	32	54
	12kg	85	25	43
Lead 12	5kg	364	89	188
	10kg	203	39	87
	15kg	139	22	51
	20kg	103	14	33
Lead 6	10kg	403	43	113
	20kg	214	16	43
	30kg	140	6	20
	40kg	113	0	8

Wall installation (Unit: mm)

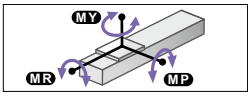
		A	B	C
Lead 20	5kg	104	67	174
	10kg	37	23	72
	12kg	27	15	55
Lead 12	5kg	171	81	340
	10kg	69	32	172
	15kg	33	15	100
	20kg	15	6	55
Lead 6	10kg	94	36	369
	20kg	25	9	157
	30kg	0	0	14
	40kg	0	0	0

Vertical installation (Unit: mm)

		A	C
Lead 12	1kg	447	448
	2kg	214	216
	3kg	137	138
	4kg	98	99
Lead 6	2kg	244	245
	4kg	113	113
	6kg	69	69
	8kg	46	46

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



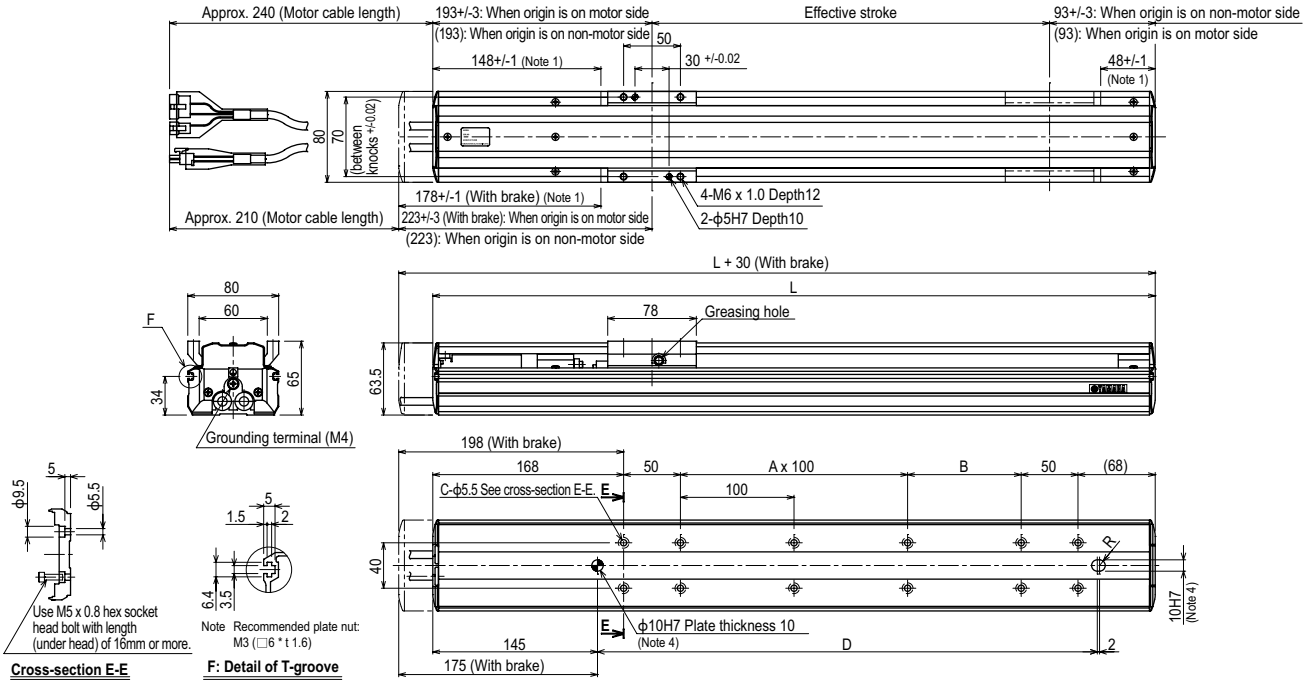
(Unit: N·m)

MY	MP	MR
70	95	110

Controller

Controller	Operation method
SR1-X05 RCX320 RCX221/222 RCX340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105 TS-X205	I/O point trace / Remote command
RDV-X205-RBR1	Pulse train control

F8



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086
A	0	0	1	1	2	2	3	3	4	4	5	5	6	6
B	100	150	100	150	100	150	100	150	100	150	100	150	100	150
C	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	240	290	340	390	440	490	540	590	640	690	740	790	840	890
Weight (kg) Note 5	3.6	3.9	4.2	4.4	4.7	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3
Maximum speed Note 6 (mm/sec) Lead 20	1200									1080	900	780	720	600
Lead 12	720									648	540	468	432	360
Lead 6	360									324	270	234	216	180
Speed setting	–									90%	75%	65%	60%	50%

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. When using this ϕ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.
Note 5. Weight of models with no brake. The weight of brake-attached models is 0.3 kg heavier than the models with no brake shown in the table.
Note 6. When the stroke is longer than 550mm, 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.