F20N

Ordering method

F20N - 20 -										
Model	Lead designation	Option	Stroke	Cable length Note 1	Controller	Driver	Usable for CE	Regenerative unit Note 3	I/O selection	Battery
		Origin position change: None: L side (Standard); Z: R side	1150 to 2050 (100mm 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 4	No entry: None (Incremental specification); B: Battery (Absolute specification)
		Grease type: None: Standard; GC: Clean								

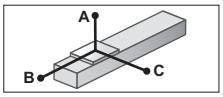
Note 1. The robot cable is standard cable, but can be changed to bend-resistant cable. (not supported on RDX). See P.423 for details on robot cable.
Note 2. To find TS-X, RDX selection options, see the ordering method listed on each controller's page (TS-X: P.355, RDX: P.365).
Note 3. A regenerative unit is needed if using the SR1-X, TS-X at maximum speeds exceeding 1000mm /sec.. If using the RDX, then the regenerative unit RBR1 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)	+/-0.04
Deceleration mechanism	Ball screw (Class C10)
Ball screw lead (mm)	20
Maximum speed (mm/sec)	1000 (1200 Note 2)
Maximum payload (kg)	80
Rated thrust (N)	339
Stroke (mm)	1150 to 2050 (100mm pitch)
Overall length (mm)	Stroke+420
Maximum dimensions of cross section of main unit (mm)	W202 × H120
Cable length (m)	Standard: 3 5 / Option: 5,10
Linear guide type	4 rows of circular arc grooves × 2 rail
Position detector	Resolvers Note 3
Resolution (Pulse/rotation)	16384

Note 1. Positioning repeatability in one direction.
Note 2. A regenerative unit is needed if using the SR1-X, TS-X at maximum speeds exceeding 1000mm /sec.. If using the RDX, then the regenerative unit RBR1 is required regardless of the installation conditions.
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

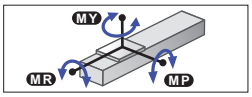


Horizontal installation (Unit: mm)

		A	B	C
Lead 20	20kg	3397	2332	2683
	40kg	2795	1144	1361
	60kg	2443	749	914
	80kg	2193	551	695

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)

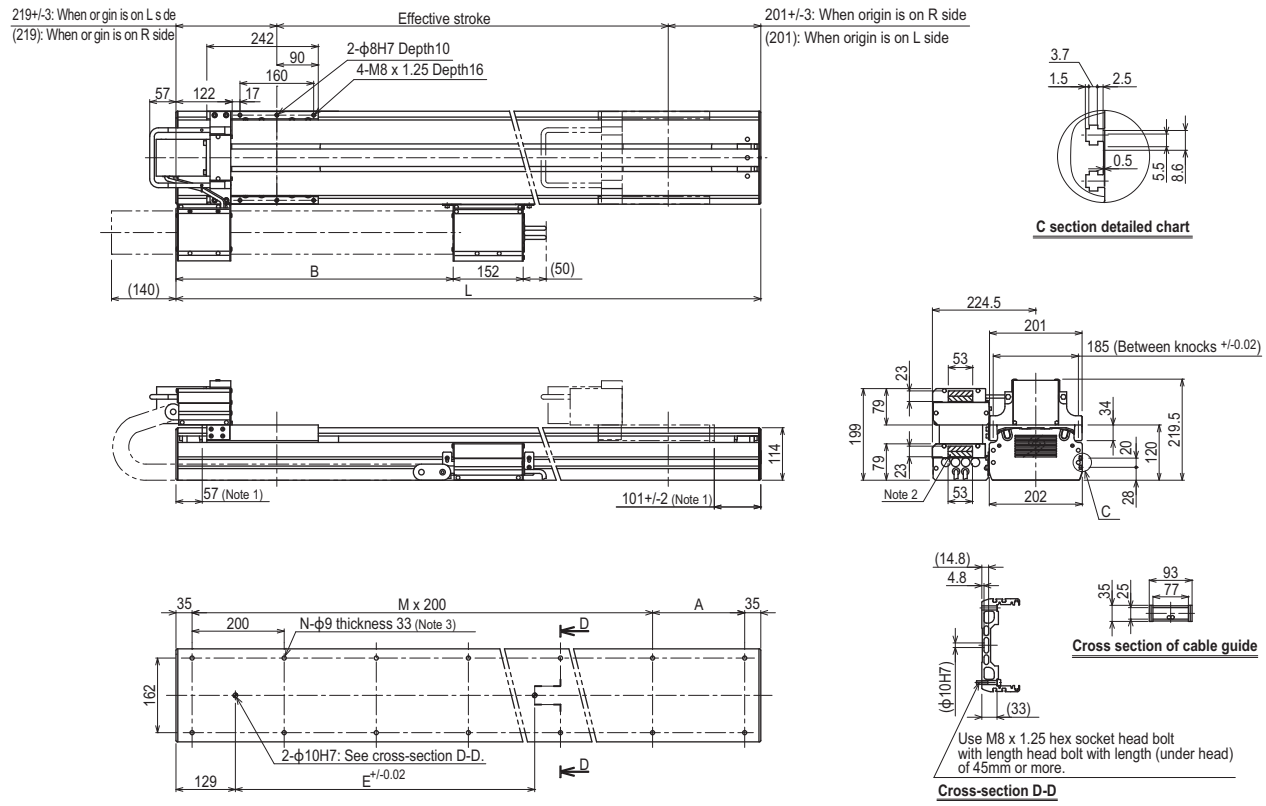
MY	MP	MR
1196	1199	1052

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	Pulse train control

Note. When the unit is operated at a speed exceeding the maximum speed of 1,000mm/sec., a regeneration unit is required.

F20N



Effective stroke	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050
L	1570	1670	1770	1870	1970	2070	2170	2270	2370	2470
A	100	200	100	200	100	200	100	200	100	200
B	602	648	694	740	786	832	878	924	970	1016
E	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320
M	7	7	8	8	9	9	10	10	11	11
N	18	18	20	20	22	22	24	24	26	26
Weight (kg)	54.0	56.2	58.4	60 6	62 9	65.1	67.3	69.6	71.8	74.0

Note 1. Distance from both ends to the mechanical stopper.
Note 2. The shaded position indicates the user cable extraction port.
Note 3. When installing the robot, do not use washers inside the robot body.
Note 4. The origin is set on the left (L) side at shipping.