

N18



Ordering method

N18- 20

Model	Lead designation	Cable carrier entry location RH: Horizontal, right LH: Horizontal, left RW: Wall, right LW: Wall, left	Cable carrier specification S: Standard M: Optional C: Cable carrier	Origin position change Horizontal: None, R side (Standard) Z: L side Wall: None, L side (Standard) Z: R side	Grease type None, Standard GC: Clean	Stroke 500 to 2500 (100mm pitch)	Cable length ^{Note 2} 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	Positioner ^{Note 3} TS-X	220 Driver: Power-supply voltage / Power capacity 220: 200V/400 to 600W	R Regenerative unit R: With RGT	LCD monitor No entry: None L: With LCD	I/O selection NP: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	Battery B: With battery (Absolute) N: None (Incremental)
SR1-X	20							Controller SR1-X	Driver: Power capacity 20: 400 to 600W	Usable for CE No entry: Standard E: CE marking	Regenerative unit 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							Driver RDV-X	Power-supply voltage 2: AC200V		20 Driver: Power capacity 20: 600W or less	RBR1	Regenerative unit

Note 1. To find information on cable carrier extraction directions see P.173.
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.594 for details on robot cable.
 Note 3. See P.498 for DIN rail mounting bracket.
 Note 4. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	400
Repeatability ^{Note 1} (mm)	+/-0.01
Deceleration mechanism	Ball screw φ20 (Class C7)
Ball screw lead (mm)	20
Maximum speed ^{Note 2} (mm/sec)	1200
Maximum payload (kg)	80
Rated thrust (N)	339
Stroke (mm)	500 to 2500 (100mm pitch)
Overall length (mm)	Stroke+362
Maximum dimensions of cross section of main unit (mm)	W180 × H115
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. Repeatability for single oscillation.
 Note 2. The maximum speed may not be reached when the moving distance is short.
 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)	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)		
	A	B	C	A	B	C
Lead 20	3045	1629	1902	3045	1553	3045
30kg	3045	1629	1902	3045	1553	3045
50kg	2602	961	1150	1157	885	2602
80kg	2193	586	716	707	509	2193

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
1161	1163	1021

Controller

Controller	Operation method
SR1-X20-R RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X220-R	I/O point trace / Remote command
RDV-X220-RBR1	Pulse train control

Cable carrier for users

S type Standard cable carrier
 Note. Cannot pass more than 3 urethane hoses (φ6 × 4).
 Dimensions: 180mm width, 114mm height, 58mm top flange, 61mm base, 14mm hole offset.

M type Optional cable carrier
 Space for optional cable for users.
 Dimensions: 180mm width, 166mm height, 86mm base, 73mm top flange, 57mm hole offset, 35mm hole offset.

N18: Horizontal installation / Standard Cable carrier specification RH

Cross-section E-E
 Use M8 x 1.25 hex socket head bolt with length head bolt with length (under head) of 40mm or more.
 Dimensions: 179mm total width, 156mm main width, 58mm top flange, 36mm hole offset, 115mm height, 22mm base, 180mm main width, 61mm hole offset, 114mm height, 113mm main width, 113mm height, 113mm height, 113mm height.

Cross-section of cable carrier
 Dimensions: 40mm width, 14mm hole offset, φ6.5 hole, φ8.2 hole.

Detail of section F
 Dimensions: 7mm total width, 2.5mm hole offset, 3.7mm hole offset, R1, R0.3.

Side View
 Dimensions: 181±/3 L-side origin position, 78±/1 (Note 1), Effective stroke L, 181±/3 R-side origin position, 190mm hole offset, 150mm hole offset, 98mm hole offset, 78mm hole offset, 168mm height, 168mm height (Between knobs φ6H7 +0.02).

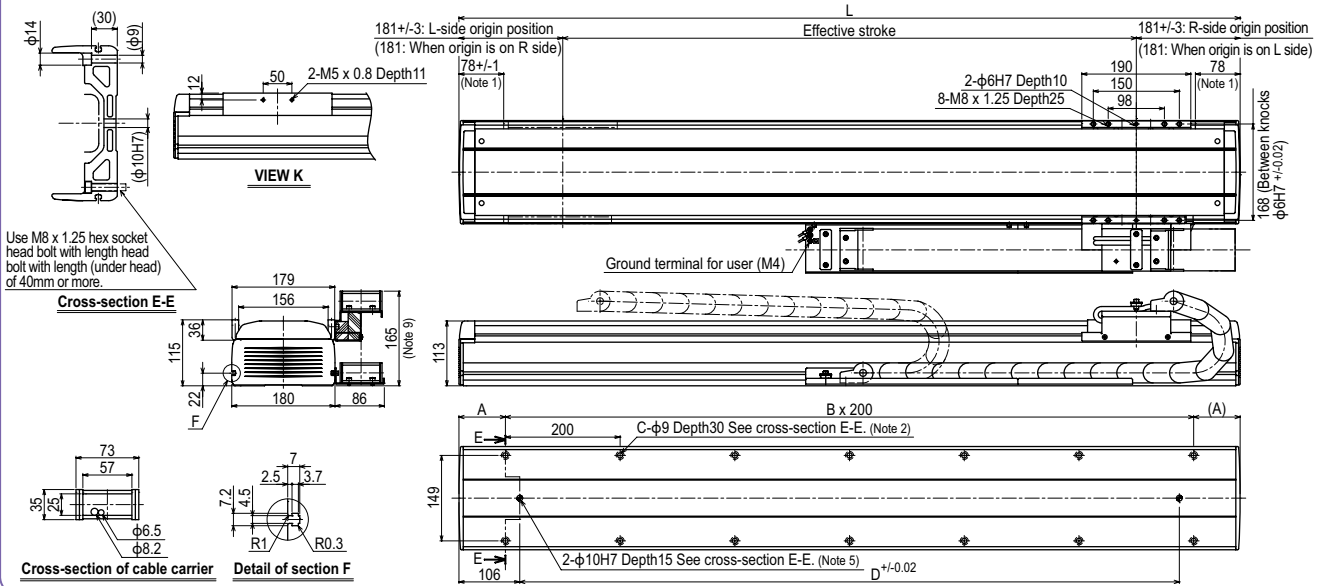
Ground terminal for user (M4)

Other Dimensions
 A: 200mm, B: 200mm, C: φ9 Depth30 See cross-section E-E. (Note 2), 2-φ10H7 Depth15 See cross-section E-E. (Note 5), D: ±0.02.

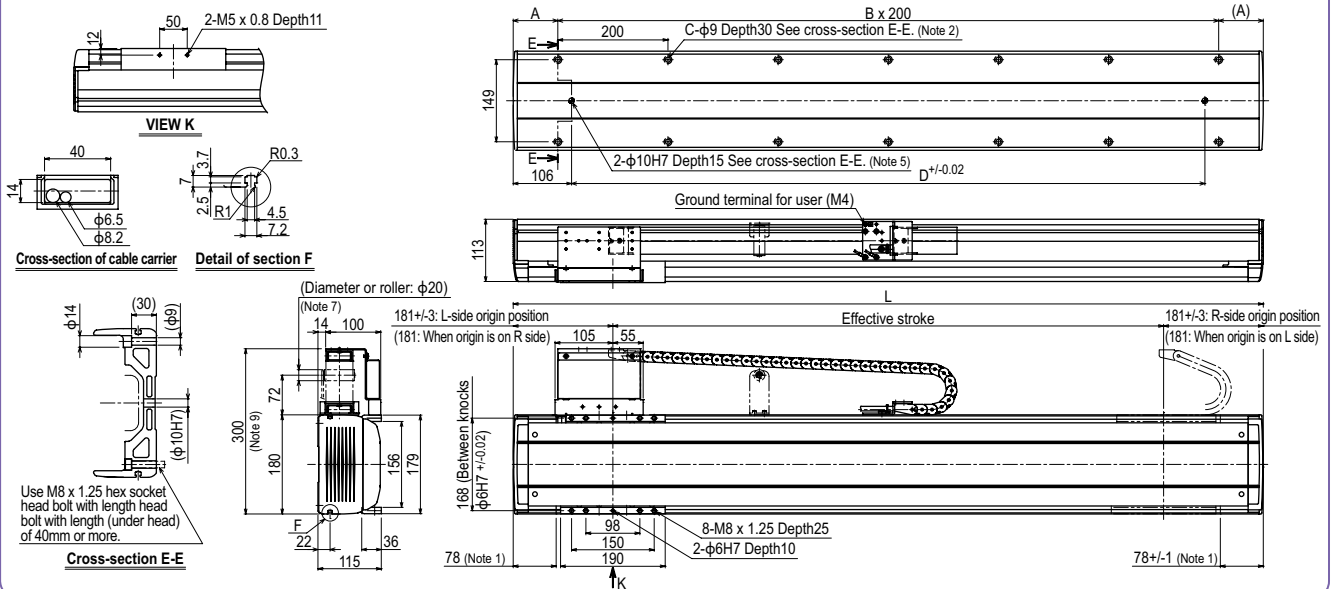
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When using φ9 holes for installation, do not use a washer, spring washer, etc. in the main unit.
 Note 3. When shipped from the factory, the horizontal model has the origin on the right side and the wall model has the origin on the left side. (This diagram shows the machine whose cable carrier taken out from right.)
 Note 4. If the model is a standard cable carrier specification, it is not possible to pass 3 or more φ6 × 4 urethane air hoses.
 Note 5. When using a φ10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
 Note 6. Contact us for vertical installation.
 Note 7. For the robot with more than 2,100 stroke, a roller is installed to prevent the cable carrier hanging.
 Note 8. Weight of models with no brake. The weight of brake-attached models is 1 kg heavier than the models with no brake shown in the table.
 Note 9. Depending on the stroke and the operating conditions, the cable carrier bending radius might be larger, making it higher than the dimensions shown in the diagram.

Effective stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	862	962	1062	1162	1262	1362	1462	1562	1662	1762	1862	1962	2062	2162	2262	2362	2462	2562	2662	2762	2862
A	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131
B	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
D	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Weight (kg) ^{Note 8}	27	29	31	33	35	37	39	41	43	45	47	48	50	52	54	56	58	60	62	64	66

N18: Horizontal installation / Optional Cable carrier specification **RH**



N18: Wall installation / Standard Cable carrier specification **RW**



N18: Wall installation / Optional Cable carrier specification **RW**

