

F14

- High lead: Lead 30
- Origin at non-motor side

Note. Strokes longer than 1050mm are special order items. Please consult us for delivery time.



Ordering method

F14

| Model | Lead designation | Brake | Cable entry location | Origin position change | Grease type | Stroke | Cable length |
|-------|--|--|---|-------------------------------------|-----------------------------|---|--|
| | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | 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 20-10-5: 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch) | 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K: (Flexible cable) |

TSX

| Positioner | Driver: Power-supply voltage Power capacity | Regenerative unit | LCD monitor | I/O selection | Battery |
|------------|--|-------------------------------|-------------------------------|---|---|
| TS-X | 105: 100V/100W or less 205: 200V/100W or less | No entry: None R: With RGT | No entry: None L: With LCD | N: NPN P: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ GW: No I/O board | B: With battery (Absolute) N: None (Incremental) |

SR1-X

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

RDV-X

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

- Note 1. The model with a lead of 30mm cannot select specifications with brake (flexible specifications).
 Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.510 for details on robot cable.
 Note 3. See P.446 for DIN rail mounting bracket.
 Note 4. Select this selection when using the gateway function. For details, see P.439.

Specifications

| | |
|---|--|
| AC servo motor output (W) | 100 |
| Repeatability (mm) | +/-0.01 |
| Deceleration mechanism | Ball screw (Class C7) |
| Ball screw lead (mm) | 30 20 10 5 |
| Maximum speed (mm/sec) | 1800 1200 600 300 |
| Maximum payload (kg) | Horizontal: 15 30 55 80 Vertical: - 4 10 20 |
| Rated thrust (N) | 56 84 169 339 |
| Stroke (mm) | 150 to 1250 (50mm pitch) |
| Overall length (mm) | Horizontal: Stroke+255 Vertical: Stroke+285 |
| Maximum dimensions of cross section of main unit (mm) | W136 x H83 |
| 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. Positioning repeatability in one direction.
 Note 2. When the stroke is longer than 700mm, 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. Strokes longer than 1050mm are available only for high lead (Lead 30). (Special order item)
 Note 4. 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

| Lead | Horizontal installation (Unit: mm) | | | Wall installation (Unit: mm) | | | Vertical installation (Unit: mm) | | |
|---------|------------------------------------|------|-----|------------------------------|-----|------|----------------------------------|------|------|
| | A | B | C | A | B | C | A | B | C |
| Lead 30 | 5kg 1756 | 1364 | 863 | 5kg 951 | 969 | 1286 | 1kg 600 | 600 | 600 |
| Lead 20 | 15kg 1236 | 467 | 438 | 5kg 1066 | 974 | 1578 | 2kg 1200 | 1200 | 1200 |
| Lead 10 | 5kg 2153 | 1366 | 980 | 15kg 402 | 276 | 775 | 4kg 1154 | 895 | 895 |
| Lead 5 | 15kg 1193 | 465 | 430 | 30kg 219 | 105 | 678 | 8kg 634 | 492 | 492 |
| Lead 30 | 30kg 1266 | 245 | 294 | 20kg 312 | 189 | 690 | 10kg 499 | 387 | 387 |
| Lead 20 | 20kg 1132 | 353 | 361 | 40kg 140 | 57 | 402 | 10kg 587 | 456 | 456 |
| Lead 10 | 40kg 872 | 183 | 218 | 55kg 92 | 0 | 345 | 15kg 383 | 297 | 297 |
| Lead 5 | 55kg 946 | 140 | 184 | 30kg 246 | 107 | 1095 | 20kg 281 | 218 | 218 |
| Lead 30 | 50kg 1575 | 158 | 222 | 40kg 167 | 64 | 798 | | | |
| Lead 20 | 60kg 1493 | 135 | 194 | 60kg 88 | 20 | 508 | | | |
| Lead 10 | 80kg 1466 | 107 | 159 | | | | | | |

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

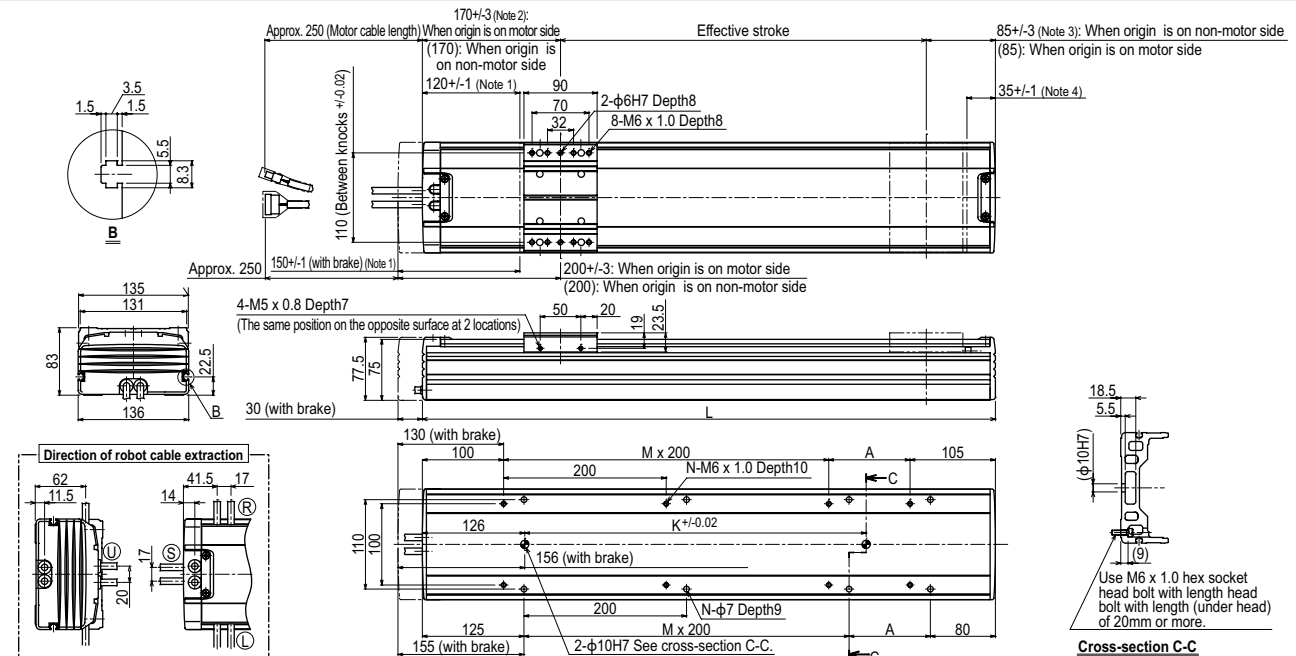
| (Unit: N·m) | | |
|-------------|-----|-----|
| MY | MP | MR |
| 232 | 233 | 204 |

Controller

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

Note. Regenerative unit is required when the models used vertically and with 700mm or larger stroke.

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- Note 1. Distance from both ends to the mechanical stopper.
 Note 2. 172.5+/-4 when the high lead specification (Lead 30) is used.
 Note 3. 85+/-4 when the high lead specification (Lead 30) is used.
 Note 4. 32.5+/-1 when the high lead specification (Lead 30) is used.
 Note 5. Minimum bend radius of motor cable is R50.
 Note 6. Weight of models with no brake. The weight of brake-attached models is 0.7 kg heavier than the models with no brake shown in the table.

| Effective stroke | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 |
|------------------------|---------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | L | 405 | 455 | 505 | 555 | 605 | 655 | 705 | 755 | 805 | 855 | 905 | 955 | 1005 | 1055 | 1105 | 1155 | 1205 | 1255 | 1305 | 1355 | 1405 | 1455 |
| A | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 | 150 | 200 | 50 | 100 |
| M | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 |
| N | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 | 14 | 14 | 16 | 16 |
| K | 240 | 240 | 240 | 240 | 420 | 420 | 420 | 600 | 600 | 600 | 600 | 600 | 780 | 780 | 780 | 780 | 960 | 960 | 960 | 960 | 1140 | 1140 | 1140 |
| Weight (kg) | 6.2 | 6.9 | 7.5 | 8.2 | 8.8 | 9.5 | 10.1 | 10.8 | 11.4 | 12.1 | 12.6 | 13.4 | 13.9 | 14.6 | 15.2 | 15.9 | 16.5 | 17.2 | 17.8 | 18.5 | 19.1 | 19.8 | 20.4 |
| Maximum speed (mm/sec) | Lead 30 | | | | | | | | | | | | 1440 | 1170 | 900 | 810 | | | | | | | |
| | Lead 20 | | | | | | | | | | | | 960 | 780 | 600 | 540 | | | | | | | |
| | Lead 10 | | | | | | | | | | | | 480 | 390 | 300 | 270 | | | | | | | |
| | Lead 5 | | | | | | | | | | | | 240 | 195 | 150 | 135 | | | | | | | |
| Speed setting | | | | | | | | | | | | 80% | 65% | 50% | 45% | | | | | | | | |

- Note 7. When the stroke is longer than 700mm, 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 8. Strokes longer than 1050mm are special order items. Please contact us for speed setting.