

F10

● High lead: Lead 30

● Origin at non-motor side: Lead 10-20-30



Ordering method

| | | | | | | | | | | | | | | |
|--------------|--|--|--|--|-----------------------------|--|-------------------|--------------------------------|--|---|---|---|--|--|
| F10 | | | | | | | SR1-X | 05 | | | | | | |
| Model | Lead designation | Brake | Cable entry location | Option | Stroke | Cable length | Controller | Driver | Usable for CE | Regenerative unit | I/O selection | Battery | | |
| | 30: 30mm 20: 20mm 10: 10mm 5: 5mm | No entry: No brakes BK: Brakes provided | No entry: Standard (S) U: From the top | Origin position: None: Standard Z: Non-motor side Grease type: None: Standard GC: Clean | 150 to 1050 (50mm pitch) | 3L: 3.5m (Standard) 5L: 5m 10L: 10m | SR1-X TS-X | 05: 100W or less 105 (TS-X) | No entry: Standard E: CE marking | No entry: None R: RGT (SR1-X) R: RGT (TS-X) | N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link | No entry: None (Incremental specification) B: Battery (Absolute specification) | | |

Note 1. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.
 Note 2. The robot cable is standard cable, but can be changed to bend-resistant cable. (consult factory)
 Note 3. To find TS-X selection options, see the ordering method listed on each controller's page.
 Note 4. When using the SR1-X, TS-X, a regenerative unit is required when the movement stroke is 700mm or more and used vertically.
 Note 5. Available only for the SR1-X slave.

Basic 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 20 40 60 Vertical - 4 10 20 |
| Rated thrust (N) | 56 84 169 339 |
| Stroke (mm) | 150 to 1050 (50mm pitch) |
| Overall length (mm) | Horizontal Stroke+260 Vertical Stroke+290 |
| Maximum dimensions of cross section of main unit (mm) | W110 x H71 |
| Cable length (m) | Standard: 3.5 / Option: 5.10 |
| Linear guide type | 4 rows of circular arc grooves x 1 rail |
| Position detector | Resolvers |
| Resolution (Pulse/rotation) | 16384 |

Note 1. Positioning repeatability in one direction.
 Note 2. When the stroke is longer than 750mm, 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

| Installation | Unit (mm) | Horizontal installation (Unit: mm) | | | Wall installation (Unit: mm) | | | Vertical installation (Unit: mm) | | | | | | | |
|--------------|-----------|------------------------------------|--------|------|------------------------------|------|------|----------------------------------|-----|----------|---------|------|-----|-----|-----|
| | | A | B | C | A | B | C | A | C | | | | | | |
| Horizontal | Lead 30 | 5kg | 491 | 273 | 215 | 5kg | 206 | 209 | 480 | Vertical | Lead 20 | 1kg | 600 | 600 | |
| | Lead 20 | 15kg | 223 | 61 | 63 | 15kg | 45 | 0 | 177 | | 2kg | 649 | 691 | | |
| | | Lead 10 | 5kg | 937 | 282 | 259 | 5kg | 250 | 213 | | 905 | 4kg | 306 | 347 | |
| | | | Lead 5 | 10kg | 487 | 121 | 116 | 10kg | 99 | | 51 | 438 | 4kg | 338 | 380 |
| | | | | 20kg | 236 | 40 | 44 | 20kg | 21 | | 0 | 149 | 8kg | 142 | 183 |
| Wall | Lead 20 | 15kg | 389 | 71 | 74 | 10kg | 105 | 53 | 550 | 10kg | 102 | 144 | | | |
| | | Lead 10 | 30kg | 179 | 17 | 20 | 20kg | 22 | 0 | 230 | 10kg | 105 | 146 | | |
| | | | Lead 5 | 40kg | 106 | 0 | 0 | 30kg | 0 | 0 | 0 | 15kg | 51 | 93 | |
| | | | | 30kg | 419 | 19 | 20 | 10kg | 107 | 54 | 1410 | 20kg | 25 | 66 | |
| | Lead 5 | 60kg | 0 | 0 | 0 | 30kg | 0 | 0 | 0 | | | | | | |

Note 1. 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

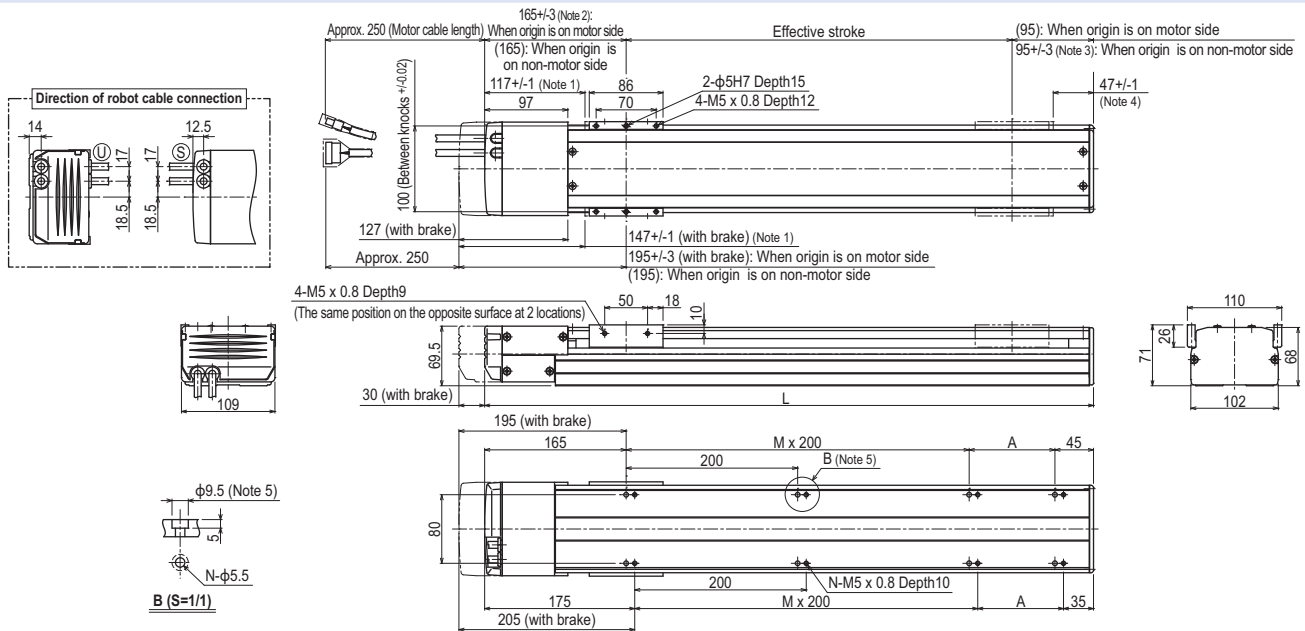
| MY | MP | MR |
|-----|-----|-----|
| 131 | 131 | 115 |

Controller

| Controller | Operation method |
|------------|--|
| SR1-X-05 | Programming / I/O point trace (BCD) / Remote command / Operation using RS-232C communication |
| TS-X105 | I/O point trace (BCD) |

Note 1. 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. 167.5+/-4 when the high lead specification (Lead 30) is used.
 Note 3. 95+/-4 when the high lead specification (Lead 30) is used.
 Note 4. 44.5+/-1 when the high lead specification (Lead 30) is used.
 Note 5. When installing the unit, washers, etc., cannot be used in the φ9.5 counter bore hole.
 Note 6. Minimum bend radius of motor cable is R5.
 Note 7. Weight of models with no brake. The weight of brake-attached models is 0.6 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 |
|-------------------------------|---------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| L | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 | 810 | 860 | 910 | 960 | 1010 | 1060 | 1110 | 1160 | 1210 | 1260 | 1310 |
| A | 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 |
| N | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 | 12 | 12 | 12 | 14 | 14 |
| Weight (kg) | 5.5 | 5.7 | 5.8 | 6.2 | 6.5 | 6.9 | 7.3 | 7.7 | 8.1 | 8.5 | 8.8 | 9.2 | 9.6 | 10.0 | 10.4 | 10.8 | 11.1 | 11.5 | 11.9 |
| Maximum speed (mm/sec) | Lead 30 | 1800 | | | | | | | | | | | | | | | | | |
| | Lead 20 | 1200 | | | | | | | | | | | | | | | | | |
| | Lead 10 | 600 | | | | | | | | | | | | | | | | | |
| | Lead 5 | 300 | | | | | | | | | | | | | | | | | |
| | Speed setting | - | | | | | | | | | | | | | | | | | |

Note 8. When the stroke is longer than 750mm, 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.