



## User Manual

### LG5 Series Linear Actuators



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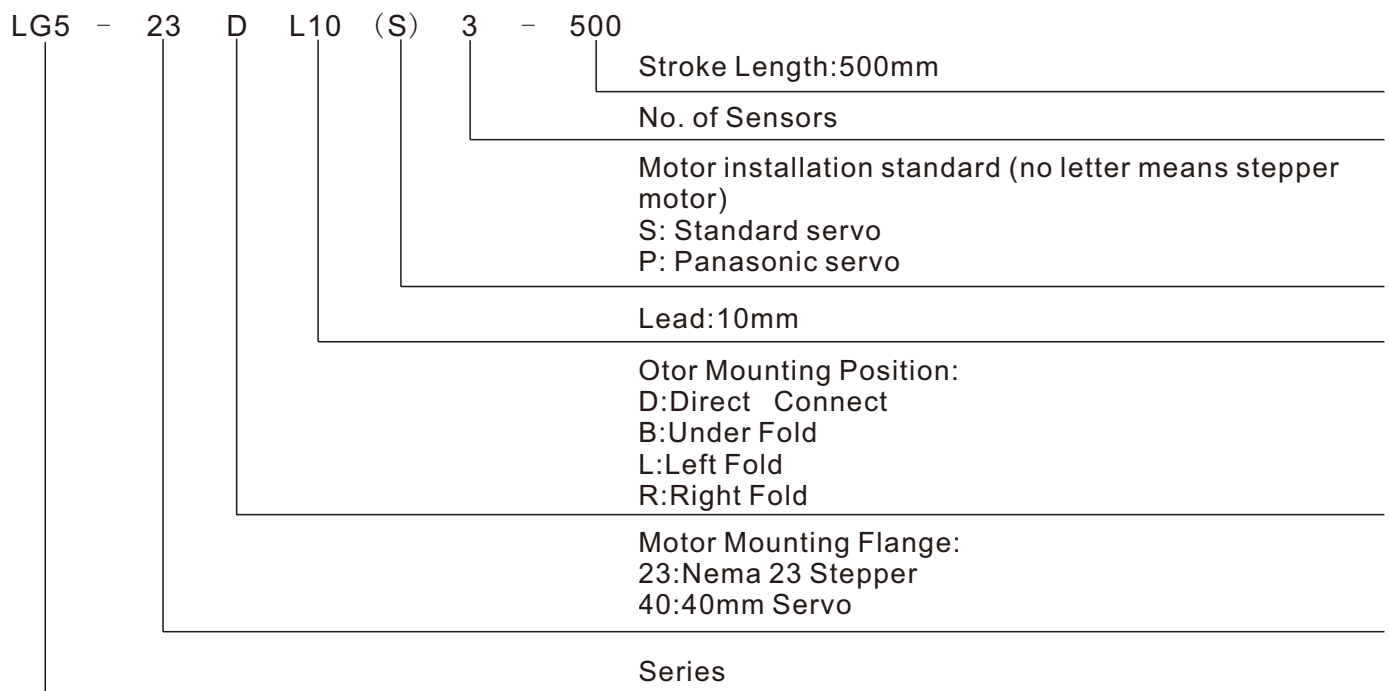
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# LG5 Series

## Model Explanation



## Specifications

Nema 23 Stepper drive:

| Position accuracy (mm) |            | 0.01 |     |     |     |
|------------------------|------------|------|-----|-----|-----|
| Ball screw lead (mm)   |            | 2    | 5   | 10  | 20  |
| Maximum speed (mm/s)   |            | 33   | 83  | 166 | 333 |
| Maximum payload (kg)   | Horizontal | 30   | 30  | 15  | 10  |
|                        | Vertical   | 10   | 10  | 5   | 2.5 |
| Rated thrust (N)       |            | 1330 | 534 | 267 | 133 |

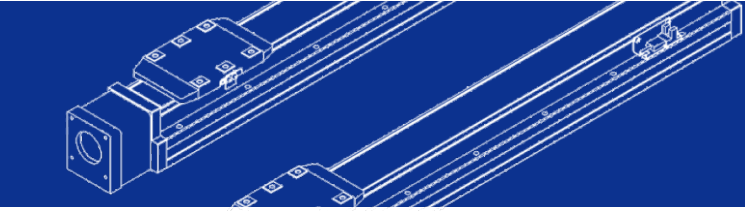
Note: We recommend setting the motor acceleration and deceleration time to 0.4 seconds.

(100W)40mm Servo drive:

| Position accuracy (mm) |            | 0.01 |     |     |      |
|------------------------|------------|------|-----|-----|------|
| Ball screw lead (mm)   |            | 2    | 5   | 10  | 20   |
| Maximum speed (mm/s)   |            | 100  | 250 | 500 | 1000 |
| Maximum payload (kg)   | Horizontal | 30   | 30  | 15  | 10   |
|                        | Vertical   | 10   | 10  | 5   | 2.5  |
| Rated thrust (N)       |            | 854  | 341 | 170 | 85   |

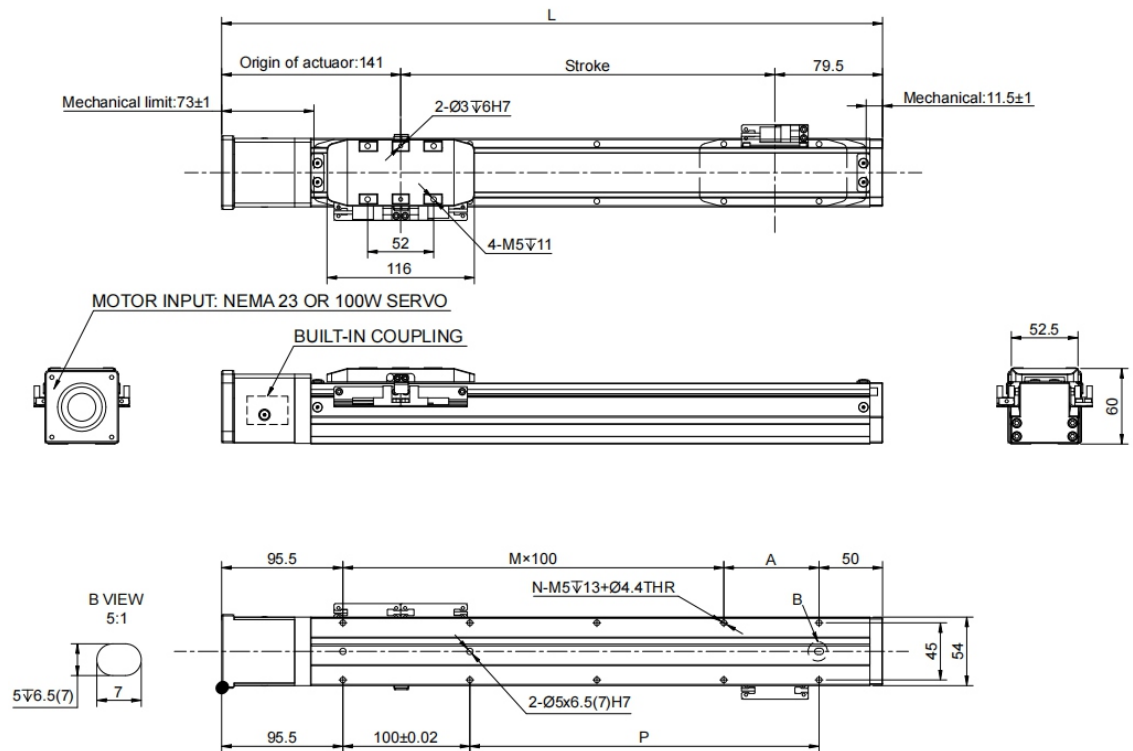
### Note:

1. When the stroke is over 600mm, the run-out of the ballscrew will occur. We recommend to low down the working speed under this circumstances.
2. We recommend setting the motor acceleration and deceleration time to 0.2 seconds.



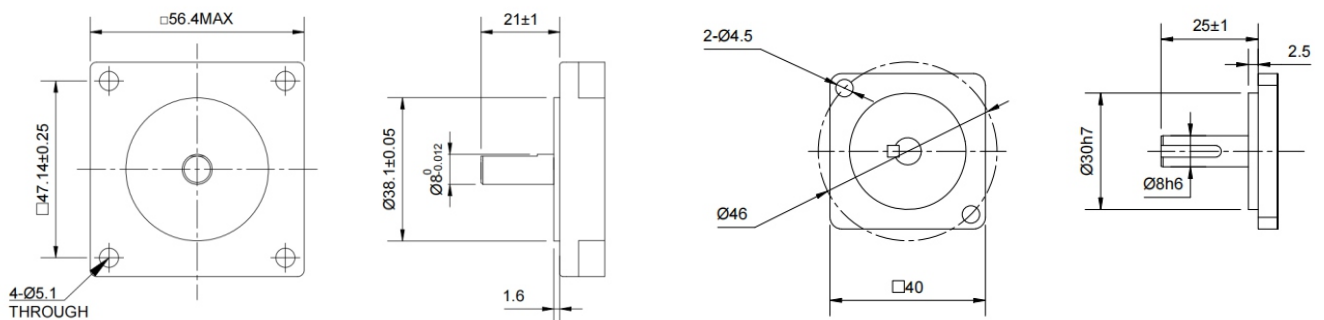
## Size Details

### 1.D: Direct Connect



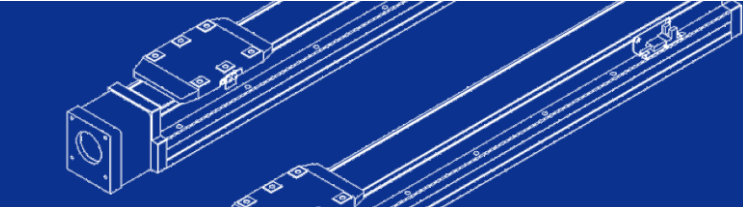
| Stroke | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | 450   | 500   | 550   | 600   | 650   | 700   | 750   | 800    |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| L      | 270.5 | 320.5 | 370.5 | 420.5 | 470.5 | 520.5 | 570.5 | 620.5 | 670.5 | 750.5 | 770.5 | 820.5 | 870.5 | 920.5 | 970.5 | 1020.5 |
| A      | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75     |
| M      | 1     | 1     | 2     | 2     | 3     | 3     | 4     | 4     | 5     | 5     | 6     | 6     | 7     | 7     | 8     | 8      |
| N      | 6     | 6     | 8     | 8     | 10    | 10    | 12    | 12    | 14    | 14    | 16    | 16    | 18    | 18    | 20    | 20     |
| P      | 25    | 75    | 125   | 175   | 225   | 275   | 325   | 375   | 425   | 475   | 525   | 575   | 625   | 675   | 725   | 775    |
| KG     | 1.65  | 1.79  | 1.92  | 2.11  | 2.39  | 2.50  | 2.52  | 2.75  | 2.86  | 2.95  | 3.15  | 3.28  | 3.44  | 3.58  | 3.71  | 4.09   |

### Reference motor size:

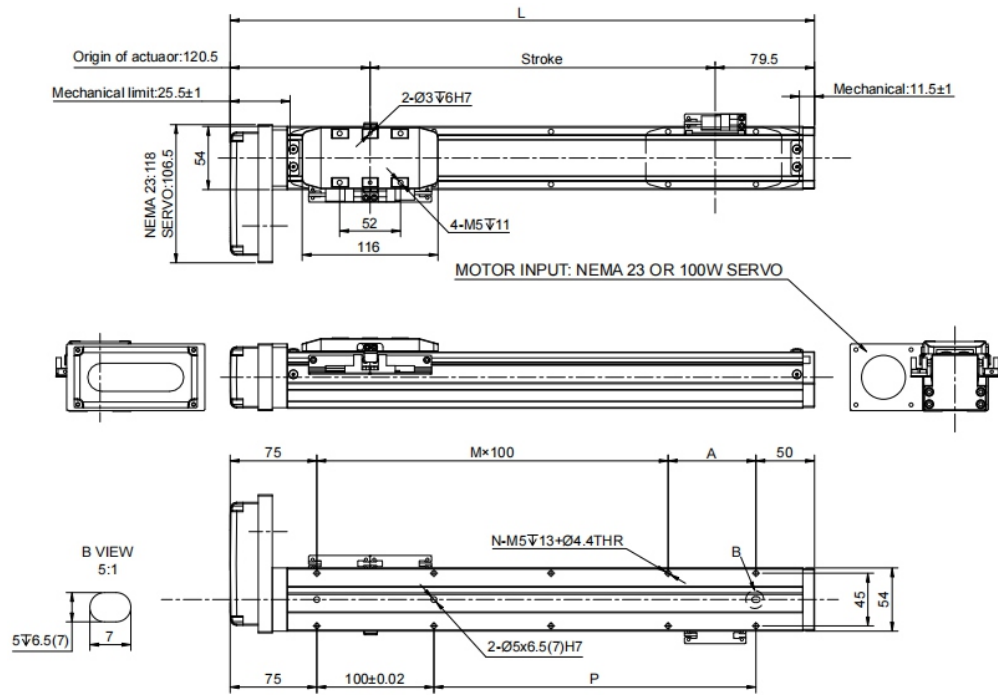


NEMA 23

(100W)40mm Servo

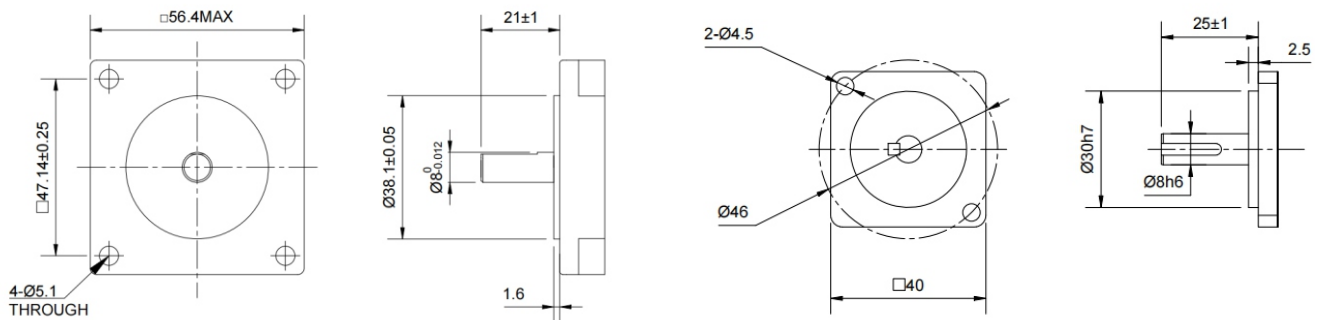


## 2.B: Under Fold



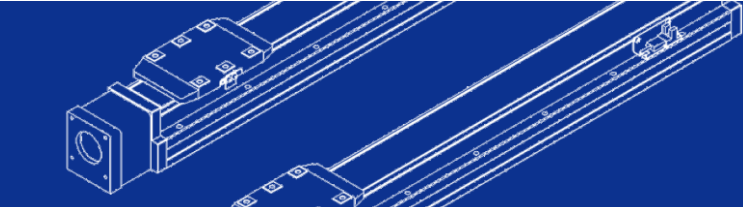
| Stroke | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L      | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  | 850  | 900  | 950  | 1000 |
| A      | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   |
| M      | 0    | 0    | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 6    | 6    | 7    | 7    |
| N      | 4    | 4    | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   | 16   | 16   | 18   | 18   |
| P      | 25   | 75   | 125  | 175  | 225  | 275  | 325  | 375  | 425  | 475  | 525  | 575  | 625  | 675  | 725  | 775  |
| KG     | 1.68 | 1.80 | 2.03 | 2.14 | 2.42 | 2.53 | 2.58 | 2.78 | 2.89 | 2.98 | 3.18 | 3.31 | 3.47 | 3.60 | 3.74 | 4.12 |

## Reference motor size:

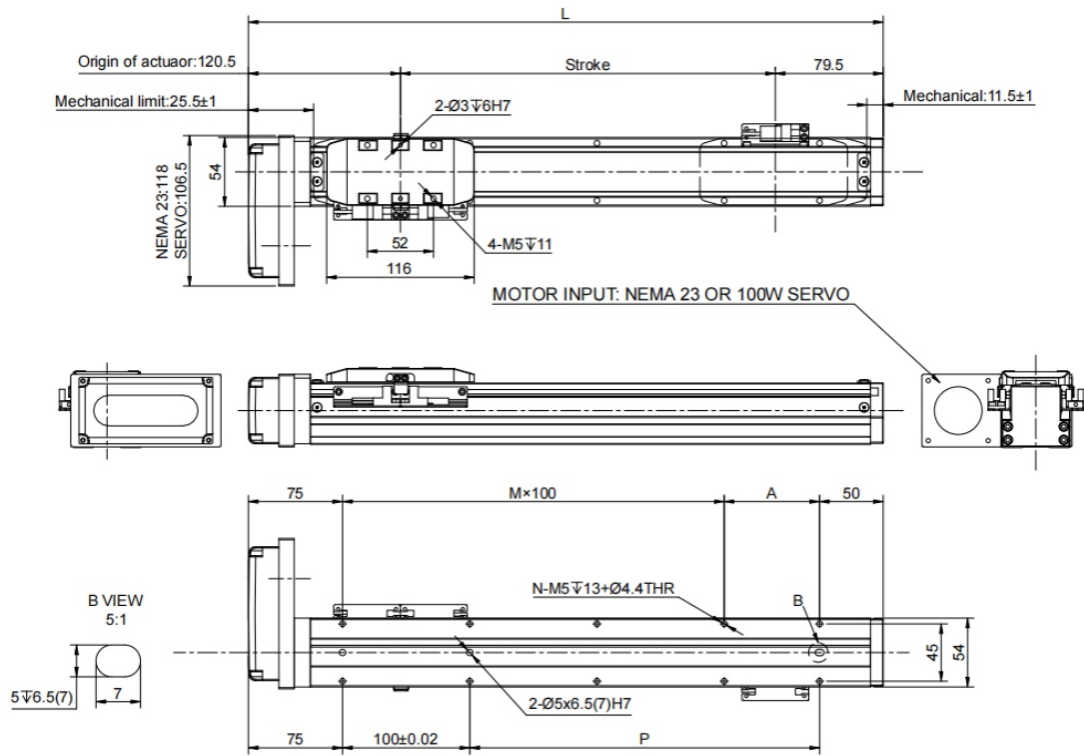


NEMA 23

(100W)40mm Servo

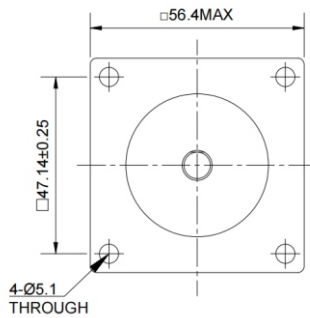


### 3.L: Left Fold

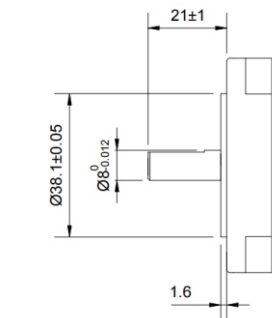


| Stroke | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L      | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  | 850  | 900  | 950  | 1000 |
| A      | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   |
| M      | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 6    | 6    | 7    | 7    | 8    | 8    |
| N      | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   | 16   | 16   | 18   | 18   | 20   | 20   |
| P      | 25   | 75   | 125  | 175  | 225  | 275  | 325  | 375  | 425  | 475  | 525  | 575  | 625  | 675  | 725  | 775  |
| KG     | 1.68 | 1.80 | 2.03 | 2.14 | 2.42 | 2.53 | 2.58 | 2.78 | 2.89 | 2.98 | 3.18 | 3.31 | 3.47 | 3.60 | 3.74 | 4.12 |

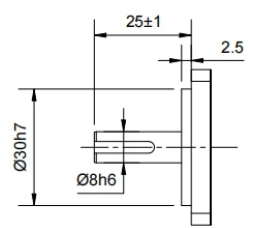
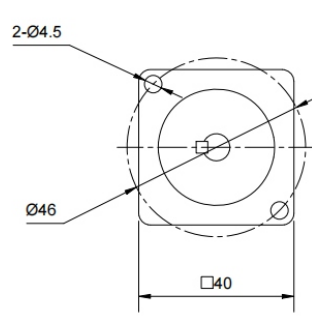
### Reference motor size:

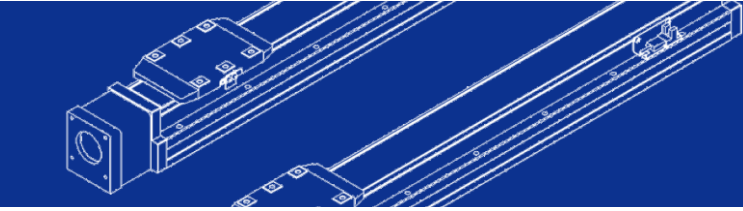


NEMA 23

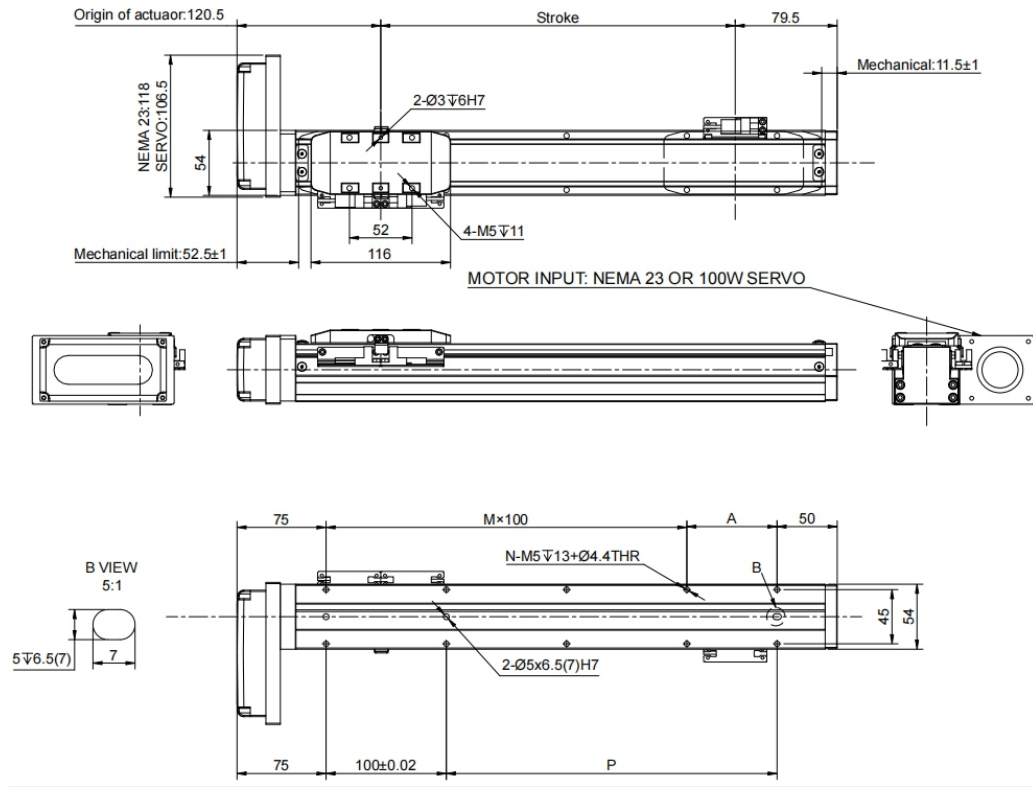


(100W)40mm Servo



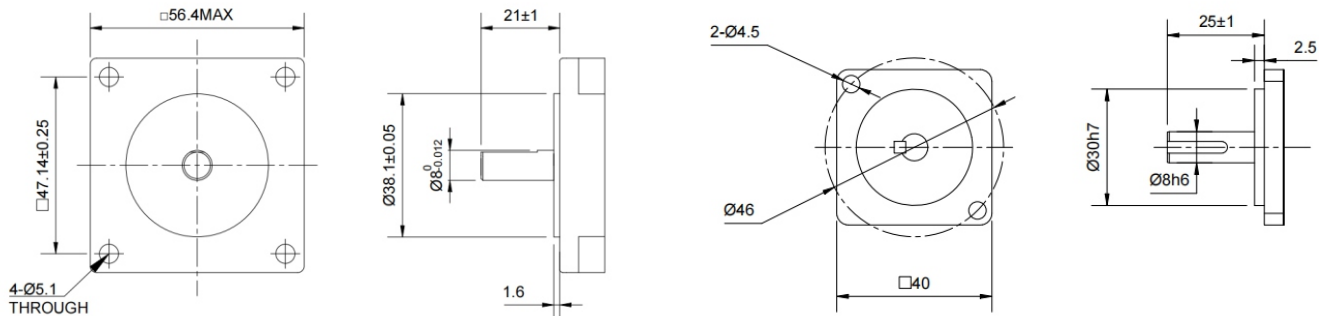


## 4. R: Right Fold



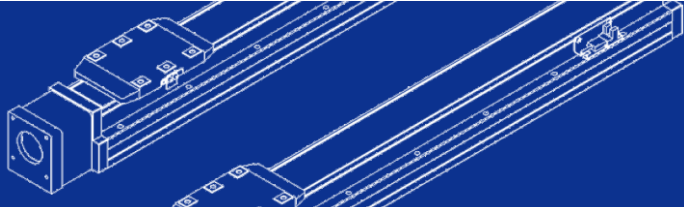
| Stroke | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L      | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  | 850  | 900  | 950  | 1000 |
| A      | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   |
| M      | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 6    | 6    | 7    | 7    | 8    | 8    |
| N      | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   | 16   | 16   | 18   | 18   | 20   | 20   |
| P      | 25   | 75   | 125  | 175  | 225  | 275  | 325  | 375  | 425  | 475  | 525  | 575  | 625  | 675  | 725  | 775  |
| KG     | 1.68 | 1.80 | 2.03 | 2.14 | 2.42 | 2.53 | 2.58 | 2.78 | 2.89 | 2.98 | 3.18 | 3.31 | 3.47 | 3.60 | 3.74 | 4.12 |

## Reference motor size:

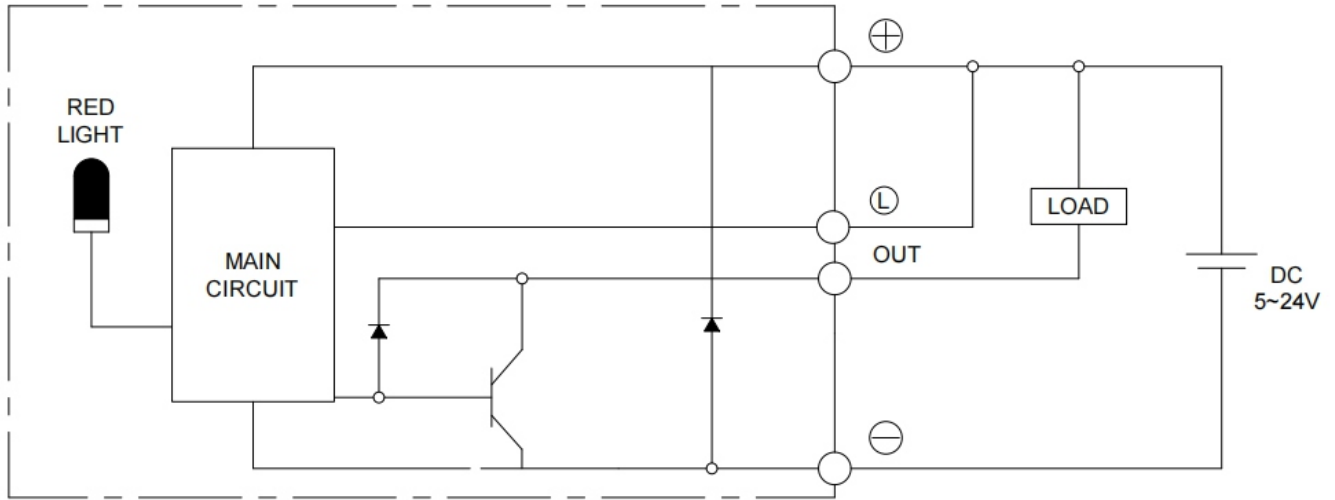


NEMA 23

(100W)40mm Servo



## Sensor Wiring

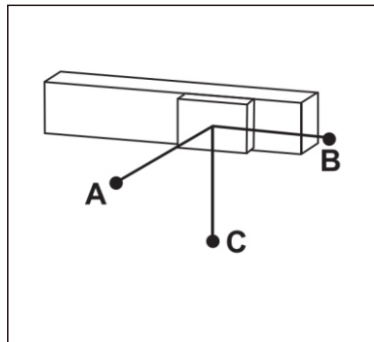


### Horizontal installation



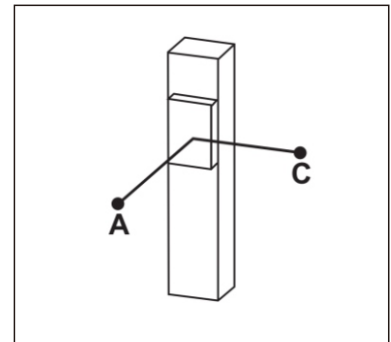
|         |      | A   | B   | C   |
|---------|------|-----|-----|-----|
| Lead 2  | 10KG | 900 | 100 | 135 |
|         | 20KG | 700 | 45  | 60  |
|         | 30KG | 550 | 25  | 35  |
| Lead 5  | 10KG | 650 | 75  | 100 |
|         | 20KG | 440 | 32  | 45  |
|         | 30KG | 270 | 19  | 25  |
| Lead 10 | 5KG  | 600 | 145 | 185 |
|         | 10KG | 370 | 70  | 85  |
|         | 15KG | 250 | 42  | 52  |
| Lead 20 | 5KG  | 320 | 120 | 130 |
|         | 8KG  | 220 | 70  | 80  |
|         | 10KG | 175 | 55  | 60  |

### Wall installation



|         |      | A   | B   | C   |
|---------|------|-----|-----|-----|
| Lead 2  | 10KG | 135 | 100 | 900 |
|         | 20KG | 60  | 45  | 700 |
|         | 30KG | 37  | 27  | 550 |
| Lead 5  | 10KG | 100 | 75  | 650 |
|         | 20KG | 45  | 32  | 420 |
|         | 30KG | 25  | 19  | 260 |
| Lead 10 | 5KG  | 180 | 145 | 600 |
|         | 10KG | 85  | 68  | 370 |
|         | 15KG | 52  | 42  | 250 |
| Lead 20 | 5KG  | 130 | 120 | 320 |
|         | 8KG  | 75  | 70  | 220 |
|         | 10KG | 60  | 55  | 170 |

### Vertical installation



|         |       | A   | C   |
|---------|-------|-----|-----|
| Lead 2  | 6KG   | 180 | 180 |
|         | 8KG   | 135 | 135 |
|         | 10KG  | 110 | 110 |
| Lead 5  | 6KG   | 145 | 145 |
|         | 8KG   | 110 | 110 |
|         | 10KG  | 90  | 90  |
| Lead 10 | 1KG   | 800 | 800 |
|         | 3KG   | 260 | 260 |
|         | 5KG   | 155 | 155 |
| Lead 20 | 1KG   | 600 | 600 |
|         | 2KG   | 300 | 300 |
|         | 2.5KG | 250 | 250 |

(Unit: mm)

The torque value in the chart indicate the center of gravity;  
 Operation life is 10,000km when the product is using under the specified conditions.