

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator Series



Size (mm)	Repetability (in mm)	Ball Screw lead (mm)	Max Speed (mm/s)	Max.Payload (Kg)		Stroke (mm)
				Horizontal	Vertical	
44	±0.01	2	100	25	8	50 - 800
		6	300	20	8	
		12	600	12	3.5	
54		2	100	30	10	50 - 800
		5	250	30	10	
		10	500	15	5	
		20	1000	10	2.5	
82		5	250	50	15	50 - 1100
		10	500	30	8	
		20	1000	18	3	
120		5	250	110	33	50 - 1250
		10	500	88	22	
	20	1000	40	10		
	32	1600	30	8		

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator - 44mm

#### Features

- ❑ Compact Robust Design
- ❑ Highly flexible mounting
- ❑ More Precise & positioning
- ❑ Ease of positioning
- ❑ Ease of Maintenance



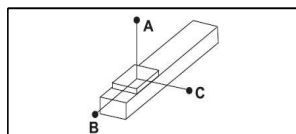
#### Technical Specifications

Repeatability (mm)		±0.01		
Motor Power (AC Servo in W)		100		
Ball screw lead (mm)		2	6	12
Maximum speed (mm/s) *		100	300	600
Maximum payload	Horizontal (Kg)	25	20	12
	Vertical (Kg)	8	8	3.5
Rated thrust (N)		854	285	142
Stroke (mm)**		50-800mm		
Ball screw Ø (mm)		C7 Ø 10		
Coupling (mm)		7x8		
Home sensor	Outside	EE-SX674 (NPN)		

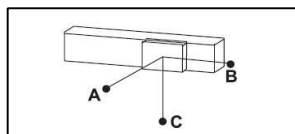
\* Acceleration and deceleration value is set 0.2 second

\*\* When the stroke is over 550mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

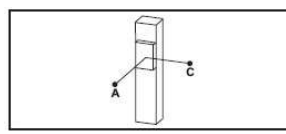
#### Allowable Moment



Unit:mm

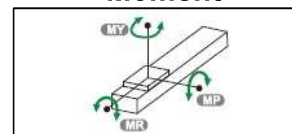


Unit:mm



Unit:mm

#### Static Loading Moment



Unit:Nm

Horizontal Installation		A	B	C
2 Lead	12Kg	1000	55	80
	18Kg	750	35	50
	25Kg	500	23	32
6 Lead	10Kg	550	53	70
	15Kg	350	32	45
	20Kg	250	22	31
12 Lead	8Kg	305	59	75
	10Kg	240	45	57
	12Kg	195	37	47

Wall Installation		A	B	C
2 Lead	12Kg	80	55	1000
	18Kg	50	35	750
	25Kg	32	23	500
6 Lead	10Kg	72	52	550
	15Kg	45	32	345
	20Kg	31	22	250
12 Lead	8Kg	75	59	300
	10Kg	58	45	240
	12Kg	47	37	190

Vertical Installation		A	C
2 Lead	4Kg	195	195
	8Kg	100	100
	-	-	-
6 Lead	3Kg	150	150
	8Kg	75	75
	-	-	-
12 Lead	2Kg	260	260
	3.5Kg	150	150
	-	-	-

MY	79
MP	79
MR	116

Note:

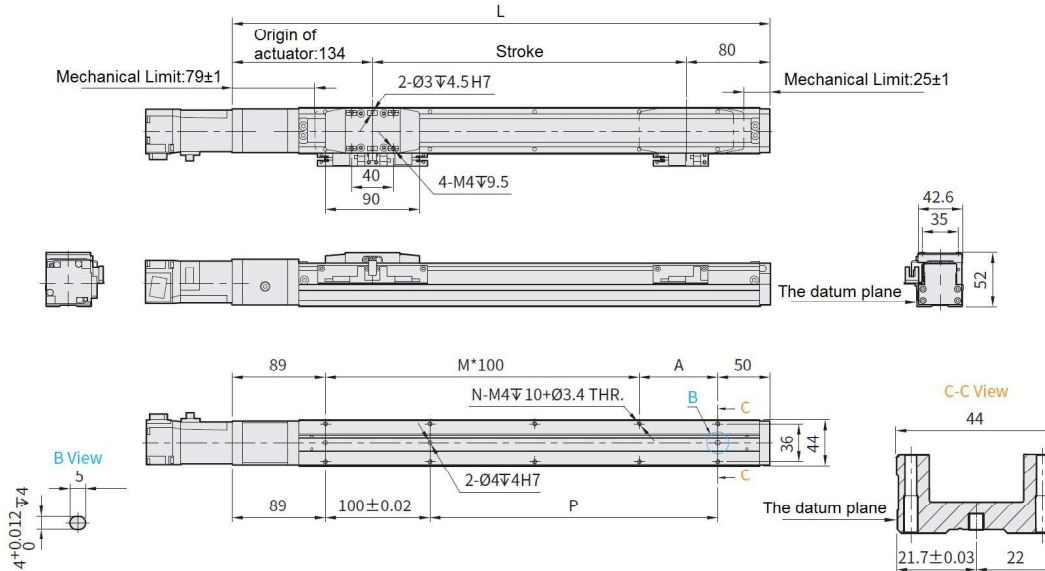
- The torque value in the chart indicates the center of gravity.
- Operation life is 10,000Km when the product is using under the specified conditions.
- Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage

# Linear Electric Actuator

## Series AELS

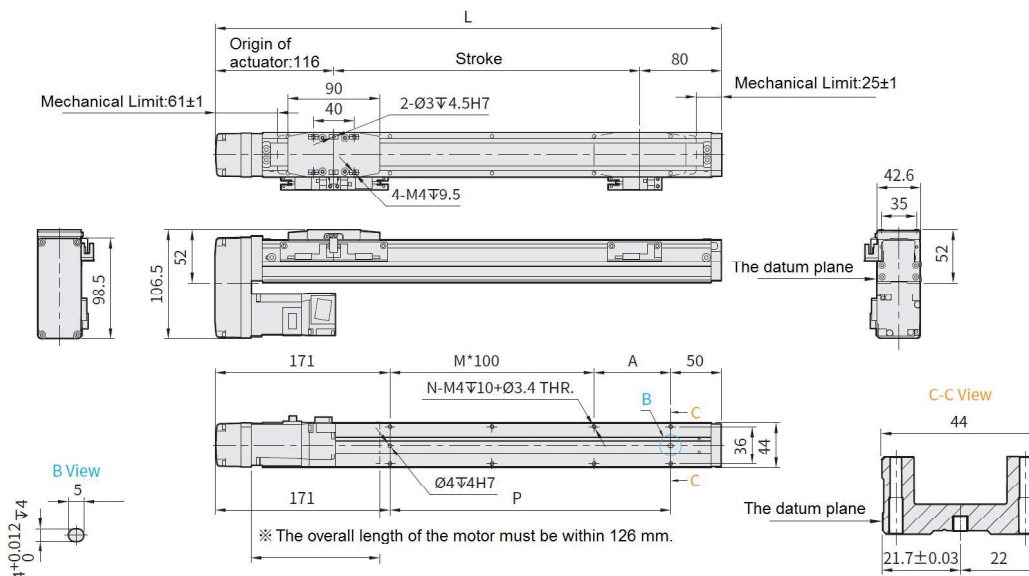
Cat :

### Motor Direct - D



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014
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
Weight(Kg)	0.95	1.12	1.29	1.47	1.65	1.83	2.01	2.19	2.37	2.55	2.73	2.91	3.09	3.27	3.45	3.63

### Motor Bottom Side - B



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
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
Weight(Kg)	1.04	1.22	1.4	1.58	1.76	1.94	2.12	2.3	2.48	2.66	2.84	3.02	3.2	3.38	3.56	3.74

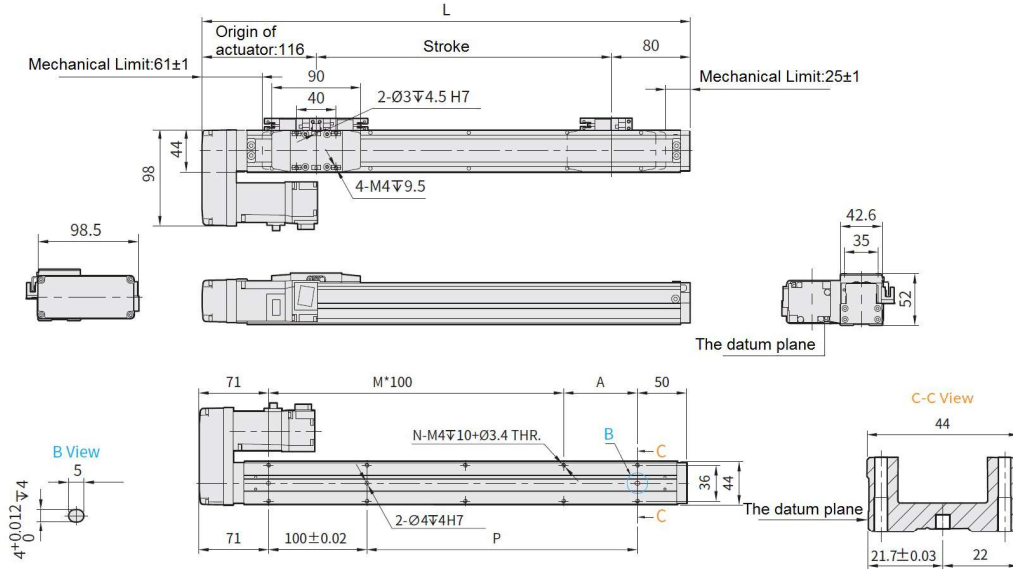
(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

# Linear Electric Actuator

## Series AELS

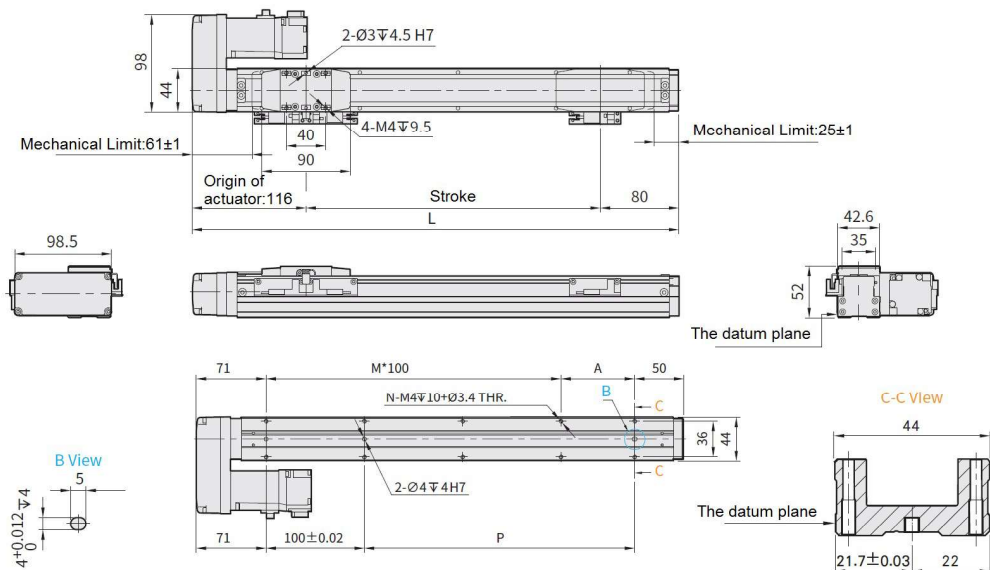
Cat :

### Motor Left Side - L



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
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
Weight(Kg)	1.04	1.22	1.40	1.58	1.76	1.94	2.12	2.30	2.48	2.66	2.84	3.02	3.20	3.38	3.56	3.74

### Motor Right Side - R



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
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
Weight(Kg)	1.04	1.22	1.40	1.58	1.76	1.94	2.12	2.30	2.48	2.66	2.84	3.02	3.20	3.38	3.56	3.74

# Linear Electric Actuator

## Series AELS

Cat :

### How to order

**AELS044**

Lead	
02	2mm
06	6mm
12	12mm

Stroke	
0050-0800mm	

Motor Position	
D	Direct
L	Left Side
R	Right Side
B	Bottom Side

Motor Specification	
AC Servo	
D	Delta
Y	Yaskawa
M	Mitsubishi
P	Panasonic
V	INVT
T	Others

Motor Power	
AC Servo	
B	100W

Brake	
	Without Brake
B	With Brake

Encoder Type	
	Incremental
A	Absolute

Communication Type	
Basic Type	
C0	Modbus
C1	CAN Open
C2	Ether CAT
C3	PROFINET
C4	PROFIBUS
C5	Ethernet/IP
C6	Other Protocol - 1
C7	Other Protocol - 2
C8	Own Protocol -1*
C9	Own Protocol -2*

Motor & Encoder Cable	
1	1m
3	3m
5	5m
T	10m

I/O Cable	
Without Cable (Stand.)	
1	1m
A	1.5m
2	2m

**Note :** \* Based on Motor make

Customization Order no	
XXXX	Special Requirements

### Example :1

Order no. for Rod less type ball screw electric actuator 44mm size, 2mm Lead, 50mm stroke with delta 100W servo motor mounted at the motor Direct, With 3m Motor & Encoder cable.

**AELS044020050D-DB-3N**

### Example :2

Order no. for Rod less type ball screw electric actuator 44mm size, 2mm Lead, 50mm stroke without delta 100W servo motor mounted at the motor Direct.

**AELS044020050D-DB**

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator - 54mm

#### Features

- ❑ Compact Robust Design
- ❑ Highly flexible mounting
- ❑ More Precise & positioning
- ❑ Ease of positioning
- ❑ Ease of Maintenance



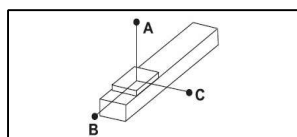
#### Technical Specifications

Repeatability (mm)		±0.01			
Motor Power (AC Servo in W)		100			
Ball Screw Lead (mm)		2	5	10	20
Maximum Speed (mm/s)*		100	250	500	1000
Maximum Payload	Horizontal (Kg)	30	30	15	10
	Vertical (Kg)	10	10	5	2.5
Rated Thrust (N)		854	341	170	85
Stroke (mm)**		50-800mm			
Ball Screw Ø (mm)		C7 Ø 12			
Coupling (mm)		7x8			
Home Sensor	Outside	EE-SX674 (NPN)			

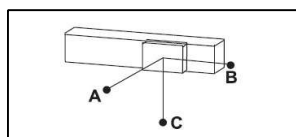
\* Acceleration and deceleration value is set 0.2 second

\*\* When the stroke is over 600mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

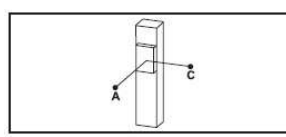
#### Allowable Moment



Unit:mm

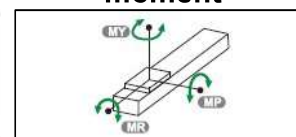


Unit:mm



Unit:mm

#### Static loading moment



Unit:Nm

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

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

Vertical Installation		A	C
2 Lead	6Kg	180	180
	8Kg	135	135
	10Kg	110	110
5 Lead	6Kg	145	145
	8Kg	110	110
	10Kg	90	90
10 Lead	1Kg	800	800
	3Kg	260	260
	5Kg	155	155
20 Lead	1Kg	600	600
	2Kg	300	300
	2.5Kg	250	250

MY	103
MP	103
MR	144

Note:

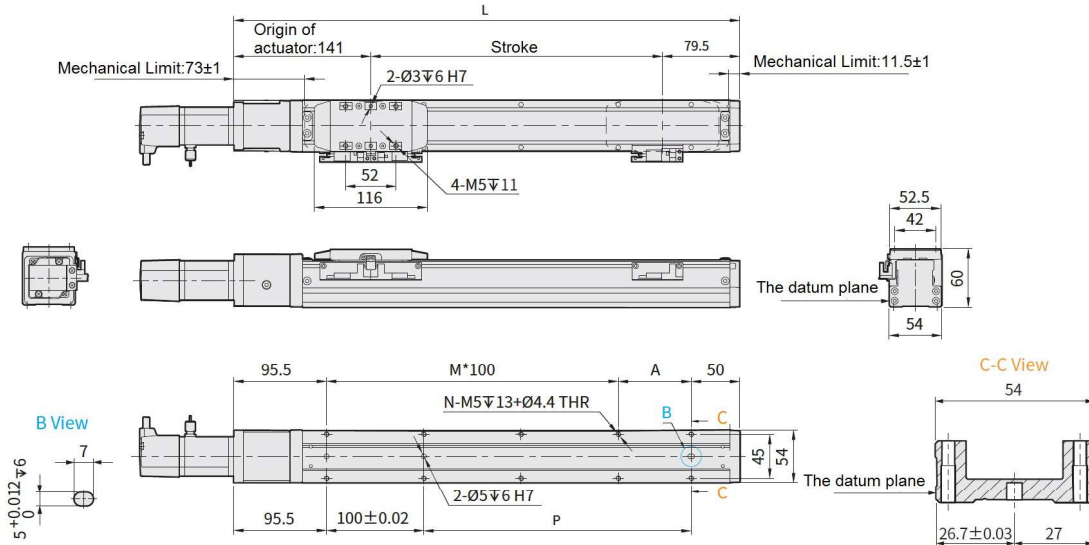
- The torque value in the chart indicates the center of gravity.
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# Linear Electric Actuator

## Series AELS

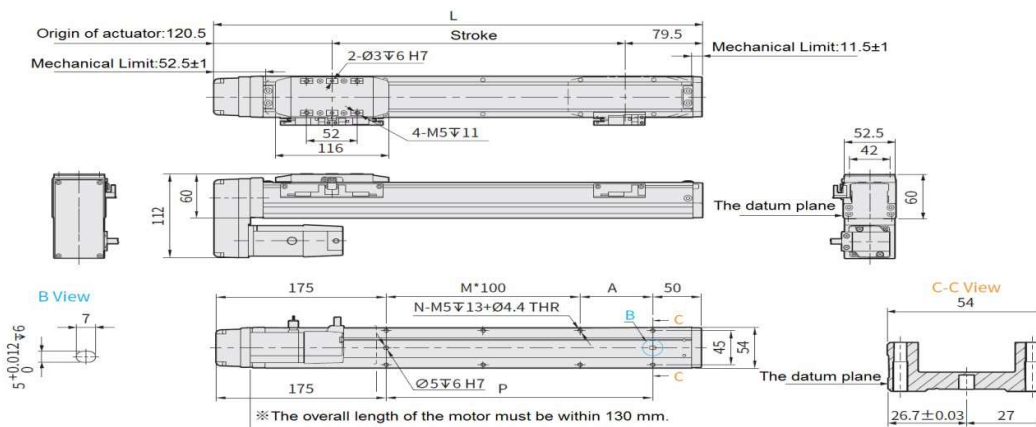
Cat :

### Motor Direct - D



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	720.5	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
Weight(Kg)	1.65	1.79	1.92	2.11	2.39	2.5	2.52	2.75	2.86	2.95	3.15	3.28	3.44	3.58	3.71	4.09

### Motor Bottom Side - B



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
Weight(Kg)	1.68	1.8	2.03	2.14	2.42	2.53	2.58	2.78	2.89	2.98	3.18	3.31	3.47	3.6	3.74	4.12

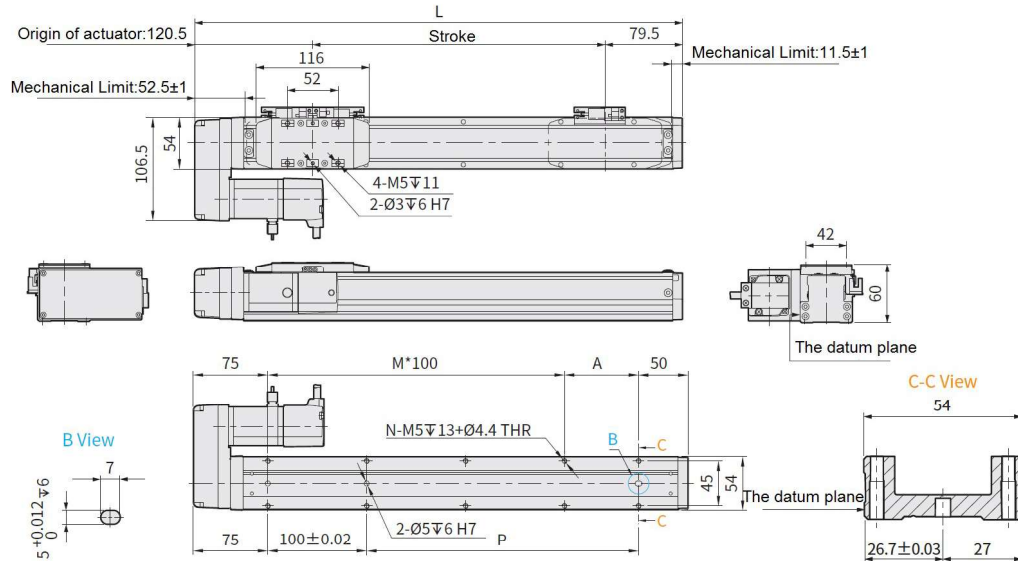
(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

# Linear Electric Actuator

## Series AELS

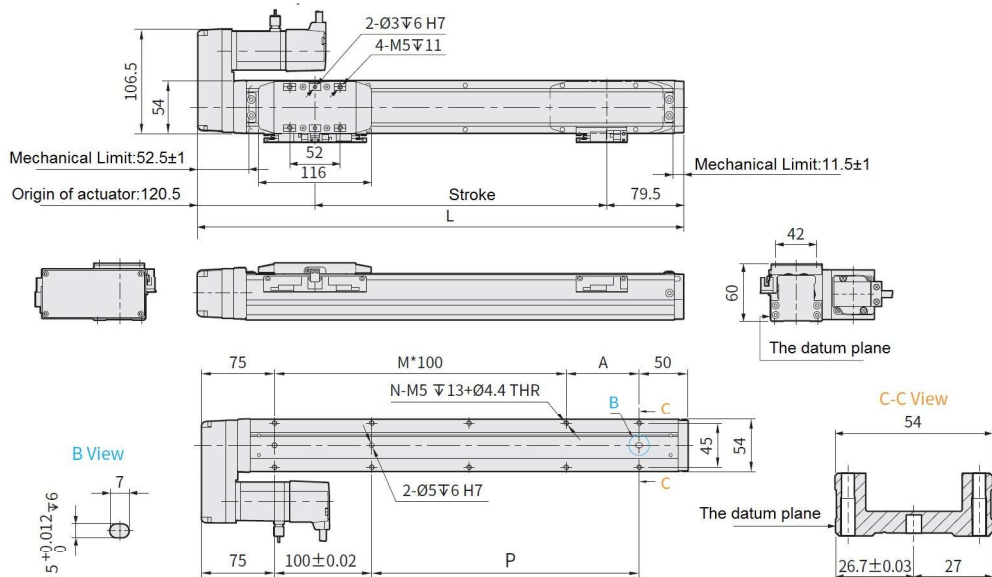
Cat :

### Motor Left Side - L



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
Weight(Kg)	1.68	1.8	2.03	2.14	2.42	2.53	2.58	2.78	2.89	2.98	3.18	3.31	3.47	3.6	3.74	4.12

### Motor Right Side - R



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
Weight(Kg)	1.68	1.8	2.03	2.14	2.42	2.53	2.58	2.78	2.89	2.98	3.18	3.31	3.47	3.6	3.74	4.12

# Linear Electric Actuator

## Series AELS

Cat :

### How to order

**AELS054**

Lead	
02	2mm
05	5mm
10	10mm
20	20mm

Stroke	
0050-0800mm	

Motor Position	
D	Direct
L	Left Side
R	Right Side
B	Bottom Side

Motor Specification	
AC Servo	
D	Delta
Y	Yaskawa
M	Mitsubishi
P	Panasonic
V	INVT
T	Others

Motor Power	
AC Servo	
B	100W

Brake	
	Without Brake
B	With Brake

Encoder Type	
	Incremental
A	Absolute

Communication Type	
Basic Type	
C0	Modbus
C1	CAN Open
C2	Ether CAT
C3	PROFINET
C4	PROFIBUS
C5	Ethernet/IP
C6	Other Protocol - 1
C7	Other Protocol - 2
C8	Own Protocol -1*
C9	Own Protocol -2*

Motor & Encoder Cable	
1	1m
3	3m
5	5m
T	10m

I/O Cable	
Without Cable (Stand.)	
N	Without Cable (Stand.)
1	1m
A	1.5m
2	2m

**Note :** \* Based on Motor make

Customization Order no	
XXXX	Special Requirements

### Example :1

Order no. for Rod less type ball screw electric actuator 54mm size, 2mm Lead, 50mm stroke with delta 100W AC servo motor mounted at the motor Direct, With 3m Motor & Encoder cable.

**AELS054020050D-DB-3N**

### Example :2

Order no. for Rod less type ball screw electric actuator 54mm size, 2mm Lead, 50mm stroke without delta 100W AC servo motor mounted at the motor Direct.

**AELS054020050D-DB**

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator - 82mm

#### Features

- ❑ Compact Robust Design
- ❑ Highly flexible mounting
- ❑ More Precise & positioning
- ❑ Ease of positioning
- ❑ Ease of Maintenance



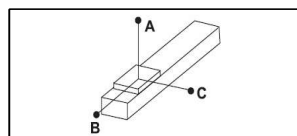
#### Technical Specifications

Repeatability (mm)	±0.01					
Motor Power (AC Servo in W)	200	400	200	400	200	400
Ball Screw Lead (mm)	5		10		20	
Maximum Speed (mm/s)*	250		500		1000	
Maximum Payload	Horizontal (Kg)		30		18	
	Vertical (Kg)		8		3	
Rated Thrust (N)	683	1388	341	694	174	347
Stroke (mm)**	50-1100mm					
Ball Screw Ø (mm)	C7 Ø 16					
Coupling (mm)	10x14					
Home Sensor	Outside		EE-SX674 (NPN)			

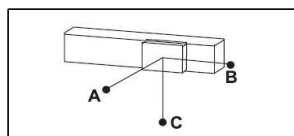
\* Acceleration and deceleration value is set 0.2 second

\*\* When the stroke is over 750mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

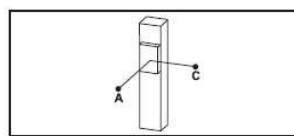
#### Allowable Moment



Unit:mm

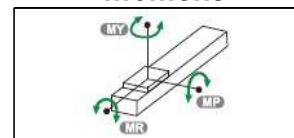


Unit:mm



Unit:mm

#### Static loading moment



Unit:Nm

Horizontal Installation		A	B	C
5 Lead	20Kg	1560	153	237
	35Kg	890	81	126
	50Kg	550	53	82
10 Lead	10Kg	1730	286	412
	20Kg	839	136	196
	30Kg	541	86	124
20 Lead	6Kg	1213	403	493
	9Kg	800	264	323
	18Kg	592	194	238

Wall Installation		A	B	C
5 Lead	20Kg	214	153	1435
	35Kg	113	81	845
	50Kg	74	53	506
10 Lead	10Kg	370	286	1400
	20Kg	176	136	800
	30Kg	112	86	495
20 Lead	6Kg	444	403	760
	9Kg	292	264	650
	18Kg	214	194	544

Vertical Installation		A	C
5 Lead	10Kg	331	331
	15Kg	220	220
	-	-	-
10 Lead	5Kg	589	589
	8Kg	368	368
	-	-	-
20 Lead	3Kg	935	935
	-	-	-
	-	-	-

MY	318
MP	318
MR	626

Note:

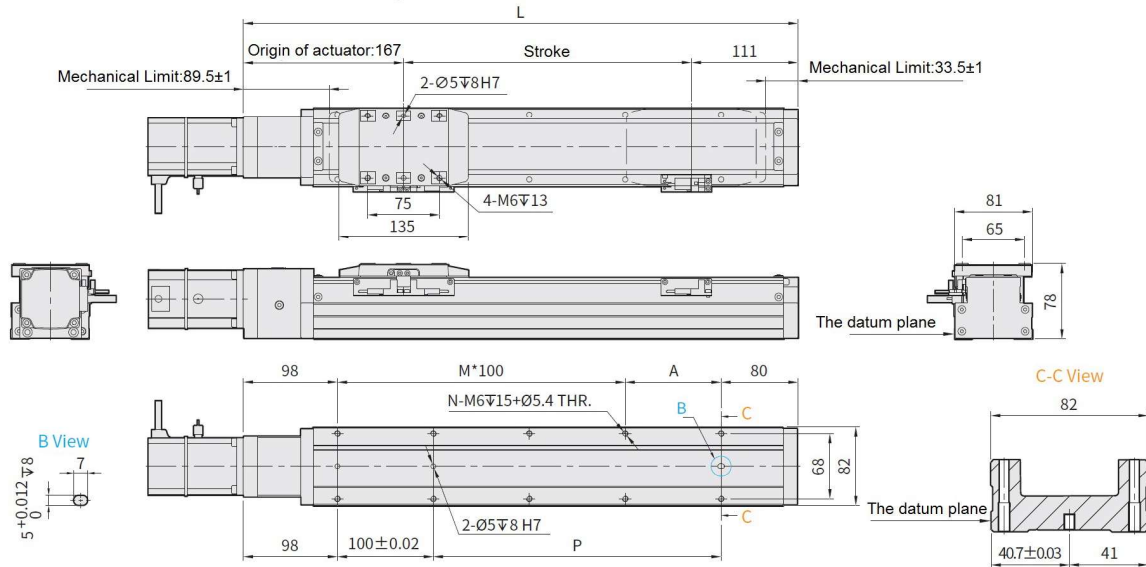
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- Operation life is 10,000Km when the product is using under the specified conditions.
- Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage

# Linear Electric Actuator

## Series AELS

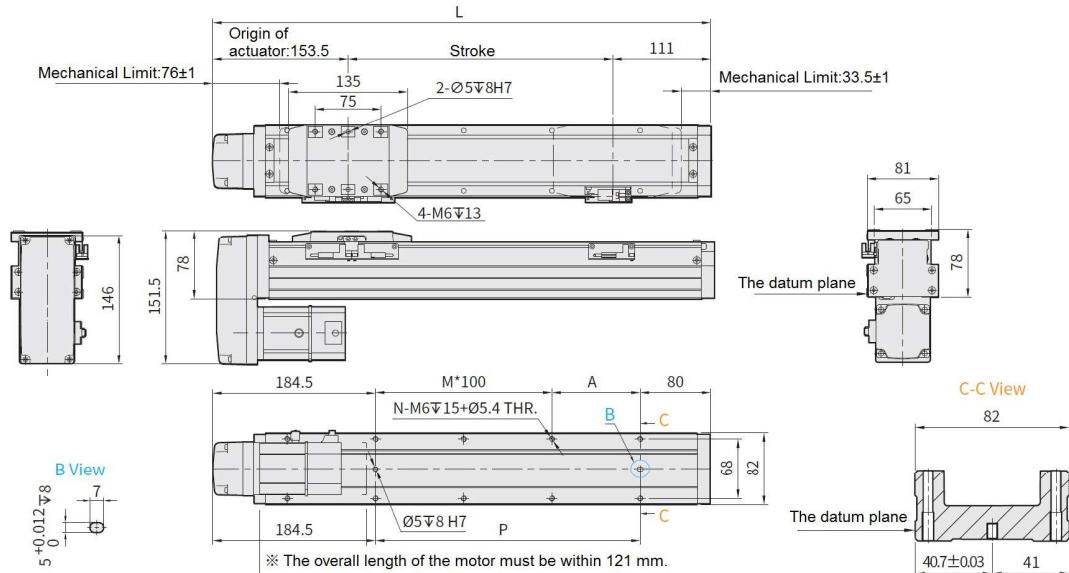
Cat :

### Motor Direct - D



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight(Kg)	3.91	4.29	4.70	5.00	5.35	5.68	6.00	6.35	6.64	6.97	7.41	7.71	8.12	8.41	8.65	8.96	9.37	9.62	10.01	10.28	10.70	11.12

### Motor Bottom Side -B



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight(Kg)	3.95	4.33	4.74	5.09	5.39	5.72	6.04	6.39	6.68	7.01	7.45	7.75	8.16	8.45	8.69	9.00	9.41	9.66	10.08	10.32	10.74	11.16

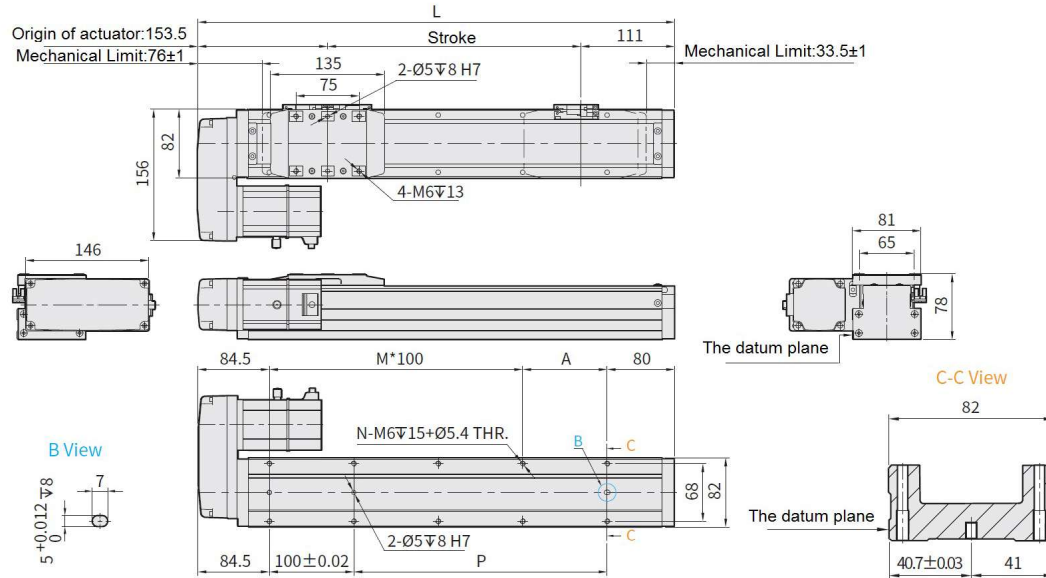
(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

# Linear Electric Actuator

## Series AELS

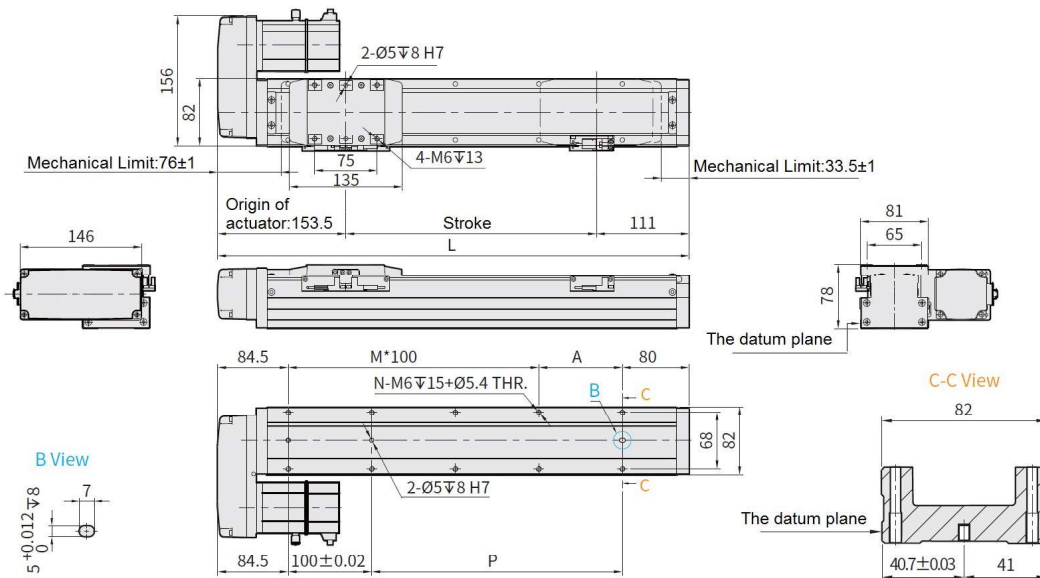
Cat :

### Motor Left Side - L



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight(Kg)	3.95	4.33	4.74	5.09	5.39	5.72	6.04	6.39	6.68	7.01	7.45	7.75	8.16	8.45	8.69	9.00	9.41	9.66	10.08	10.32	10.74	11.16

### Motor Right Side - R



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight(Kg)	3.95	4.33	4.74	5.09	5.39	5.72	6.04	6.39	6.68	7.01	7.45	7.75	8.16	8.45	8.69	9.00	9.41	9.66	10.08	10.32	10.74	11.16

# Linear Electric Actuator

## Series AELS

Cat :

### How to order

**AELS082**

Lead	
05	5mm
10	10mm
20	20mm

Stroke	
0050-1100mm	

Motor Position	
D	Direct
L	Left Side
R	Right Side
B	Bottom Side

Motor Specification	
AC Servo	
D	Delta
Y	Yaskawa
M	Mitsubishi
P	Panasonic
V	INVT
T	Others

Motor Power	
AC Servo	
C	200W
D	400W

Brake	
	Without Brake
B	With Brake

Encoder Type	
	Incremental
A	Absolute

Communication Type	
Basic Type	
C0	Modbus
C1	CAN Open
C2	Ether CAT
C3	PROFINET
C4	PROFIBUS
C5	Ethernet/IP
C6	Other Protocol - 1
C7	Other Protocol - 2
C8	Own Protocol -1*
C9	Own Protocol -2*

Motor & Encoder Cable	
1	1m
3	3m
5	5m
T	10m

I/O Cable	
N	Without Cable (Stand.)
1	1m
A	1.5m
2	2m

**Note :** \* Based on Motor make

Customization Order no	
XXXX	Special Requirements

### Example :1

Order no. for Rodless type ball screw electric actuator 82mm size, 5mm Lead, 50mm stroke with delta 200W AC servo motor mounted at the motor Direct, With 3m Motor & Encoder cable.

**AELS082050050D-DC-3N**

### Example :2

Order no. for Rodless type ball screw electric actuator 82mm size, 5mm Lead, 50mm stroke without delta 200W AC servo motor mounted at the motor Direct.

**AELS082050050D-DC**

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator - 120mm

#### Features

- ❑ Compact Robust Design
- ❑ Highly flexible mounting
- ❑ More Precise & positioning
- ❑ Ease of positioning
- ❑ Ease of Maintenance



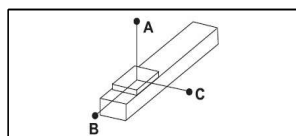
#### Technical Specifications

Repeatability (mm)		±0.01			
Motor Power (AC Servo in W)		400			
Ball Screw Lead (mm)		5	10	20	32
Maximum Speed (mm/s)*		250	500	1000	1600
Maximum Payload	Horizontal (Kg)	110	88	40	30
	Vertical (Kg)	33	22	10	8
Rated Thrust (N)		1388	694	347	218
Stroke (mm)**		50-1250mm			
Ball Screw Ø (mm)		C7 Ø 16			
Coupling (mm)		10x14			
Home Sensor	Outside	EE-SX674 (NPN)			

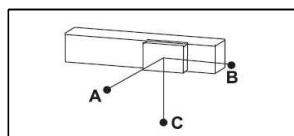
\* Acceleration and deceleration value is set 0.2 second

\*\* When the stroke is over 800mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

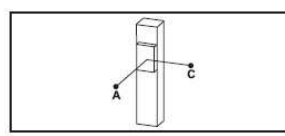
#### Allowable Moment



Unit:mm

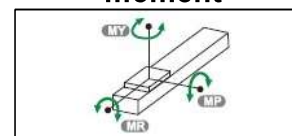


Unit:mm



Unit:mm

#### Static loading moment



Unit:Nm

Horizontal Installation		A	B	C
5 Lead	60Kg	2850	250	340
	80Kg	2100	180	250
	110K	1500	120	170
10 Lead	30Kg	2850	490	600
	50Kg	1700	280	350
	88Kg	950	140	190
20 Lead	10Kg	3400	1250	1400
	22Kg	1650	550	620
	40Kg	900	290	330
32 Lead	15Kg	1100	570	550
	25Kg	620	330	320
	30Kg	520	270	260

Wall Installation		A	B	C
5 Lead	55Kg	280	280	3300
	75Kg	200	195	2400
	110Kg	130	125	1550
10 Lead	35Kg	400	410	2500
	55Kg	245	250	1550
	88Kg	150	150	950
20 Lead	12Kg	900	1070	3000
	20Kg	550	630	1800
	40Kg	260	300	900
32 Lead	15Kg	440	570	1050
	30Kg	210	270	520
	-	-	-	-

Vertical Installation		A	C
5 Lead	15Kg	1200	1200
	22Kg	820	820
	33Kg	550	550
	10Kg	1600	1600
10 Lead	14Kg	1150	1150
	22Kg	730	730
	7Kg	1800	1800
20 Lead	10Kg	1250	1250
	-	-	-
32 Lead	5Kg	1600	1600
	8Kg	1000	1000
	-	-	-

MY	606
MP	606
MR	1168

#### Note:

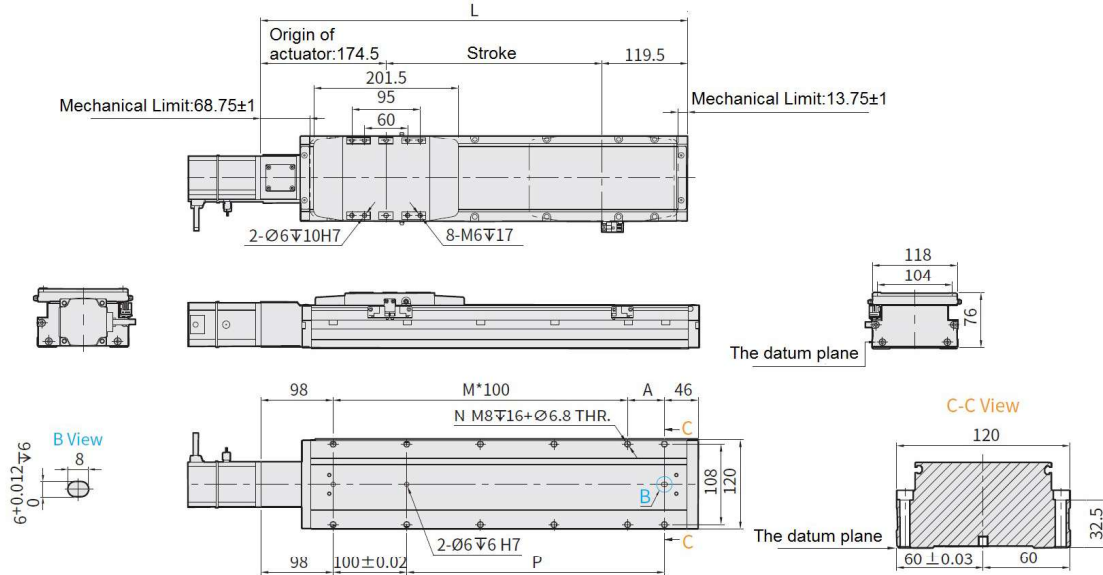
- The torque value in the chart indicates the center of gravity.
- Operation life is 10,000Km when the product is using under the specified conditions.
- Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage

# Linear Electric Actuator

## Series AELS

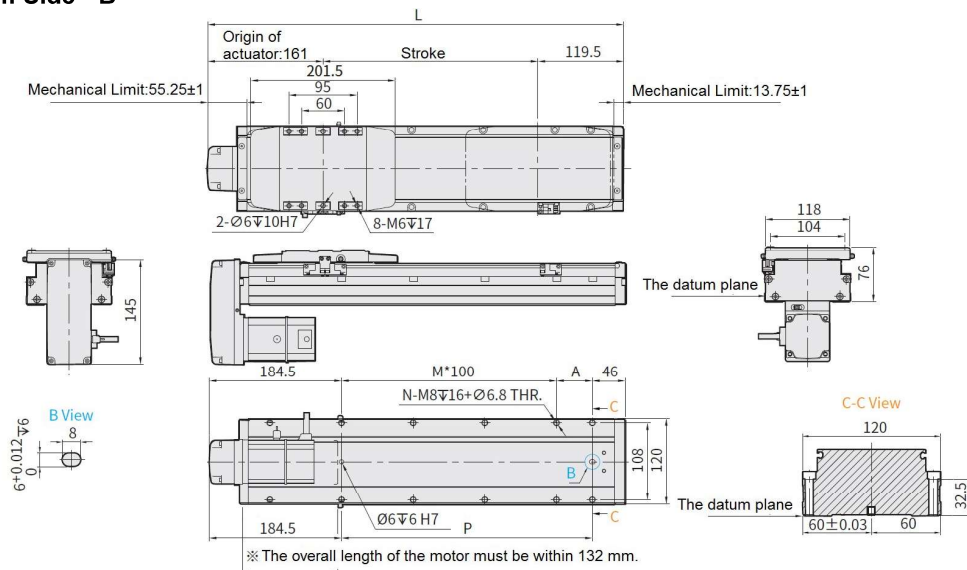
Cat :

### Motor Direct - D



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Weight(Kg)	5.05	5.4	5.75	6.1	6.45	6.8	7.15	7.5	7.85	8.2	8.55	8.9	9.25	9.6	9.95	10.3	10.65	11	11.35	11.7	12.05	12.4	12.75	13.1	13.45

### Motor Bottom Side - B



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5	1130.5	1180.5	1230.5	1280.5	1330.5	1380.5	1430.5	1480.5	1530.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Weight(Kg)	5.21	5.56	5.91	6.26	6.61	6.96	7.31	7.66	8.01	8.36	8.71	9.06	9.41	9.76	10.11	10.46	10.81	11.16	11.51	11.86	12.21	12.56	12.91	13.26	13.61

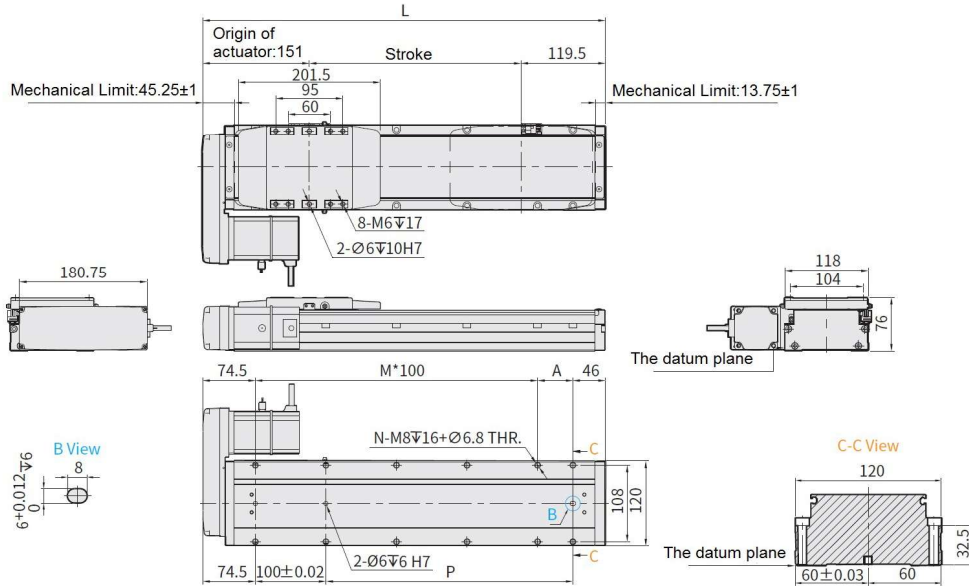
(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

# Linear Electric Actuator

## Series AELS

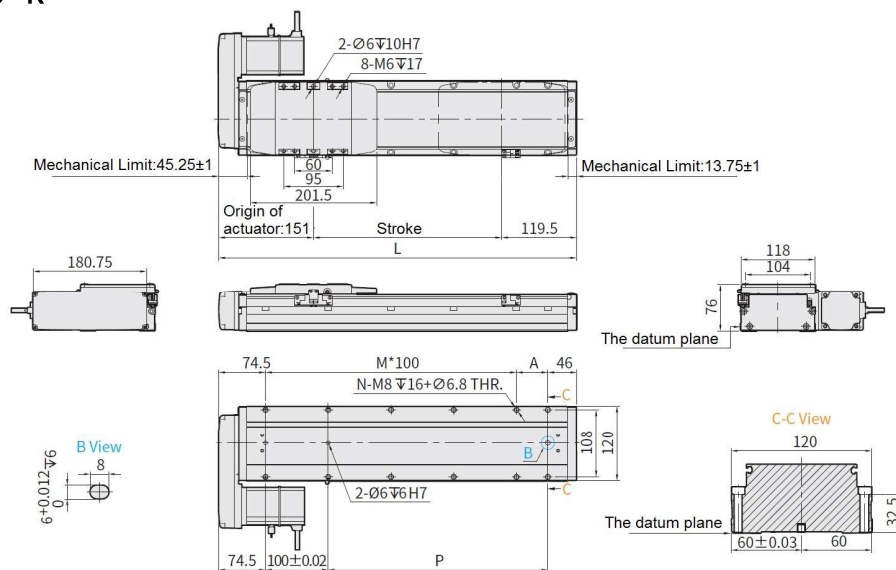
Cat :

### Motor Left Side - L



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Weight(Kg)*	5.25	5.6	5.95	6.3	6.65	7	7.35	7.7	8.05	8.4	8.75	9.1	9.45	9.8	10.15	10.85	11.2	11.55	11.9	12.25	12.6	12.56	12.91	13.26	13.61

### Motor Right Side - R



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
Weight(Kg)	5.25	5.6	5.95	6.3	6.65	7	7.35	7.7	8.05	8.4	8.75	9.1	9.45	9.8	10.15	10.85	11.2	11.55	11.9	12.25	12.6	12.56	12.91	13.26	13.61

# Linear Electric Actuator

## Series AELS

Cat :

### How to order

**AELS120**

Lead	
05	5mm
10	10mm
20	20mm
32	32mm

Stroke	
0050-1200mm	

Motor Position	
D	Direct
L	Left Side
R	Right Side
B	Bottom Side

Motor Specification	
AC Servo	
D	Delta
Y	Yaskawa
M	Mitsubishi
P	Panasonic
V	INVT
T	Others

Motor Power	
AC Servo	
D	400W

Brake	
	Without Brake
B	With Brake

Encoder Type	
	Incremental
A	Absolute

Communication Type	
Basic Type	
C0	Modbus
C1	CAN Open
C2	Ether CAT
C3	PROFINET
C4	PROFIBUS
C5	Ethernet/IP
C6	Other Protocol - 1
C7	Other Protocol - 2
C8	Own Protocol -1*
C9	Own Protocol -2*

Motor & Encoder Cable	
1	1m
3	3m
5	5m
T	10m

I/O Cable	
N	Without Cable (Stand.)
1	1m
A	1.5m
2	2m

**Note :** \* Based on Motor make

Customization Order no	
XXXX	Special Requirements

#### Example :1

Order no. for Rodless type ball screw electric actuator 120mm size, 5mm Lead, 50mm stroke with delta 400W AC servo motor mounted at the motor Direct, With 3m Motor & Encoder cable.

**AELS120050050D-DD-3N**

#### Example :2

Order no. for Rodless type ball screw electric actuator 120mm size, 5mm Lead, 50mm stroke without delta 400W AC servo motor mounted at the motor Direct.

**AELS120050050D-DD**

# Linear Electric Actuator

## Series AELS

Cat :

**Speed Stroke Characteristics:**

Size (mm)	Motor Output (W)	Ball Screw lead (mm)	Max. Payload (Kg)		Max Speed* (mm/s)	Stroke (mm) & Max. Speed (mm/s)**																												
			Horizontal	Vertical		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250				
			44	100		2	25	8	100	100										90	80	70	60	50										
		6	20	8	300	300										270	270	240	210	180														
		12	12	3.5	600	600										540	540	480	420	360														
54	100	2	30	10	100	100										90	80	70	60															
		5	30	10	250	250										270	200	175	150															
		10	15	5	500	500										450	400	350	300															
		20	10	2.5	1000	1000										900	800	700	600															
82	200/400	5	50	15	250	250										225	200	175	150	125	100	75												
		10	30	8	500	500										450	400	350	300	250	200	150												
		20	18	3	1000	1000										900	800	700	600	500	400	300												
120	400	5	110	33	250	250										225	200	175	167	158	150	133	125	117										
		10	88	22	500	500										450	400	350	333	317	300	267	250	233										
		20	40	10	1000	1000										900	800	700	667	633	600	533	500	467										
		32	30	8	1600	1600										1440	1280	1120	1067	1013	900	853	800	747										

\* The highest speed is based on the maximum servo motor's rpm (3000)  
 \*\* Written here is the standard stroke's maximum safe speed. If over speed, it may cause serious vibration.

# Linear Electric Actuator

Series AELS

Cat :

## Rodless Type Ball Screw Actuator Series



Size (in mm)	Repeatability (in mm)	Ball screw Lead (in mm)	Max Speed (in mm/s)	Max. Pay load (in kg)		Stroke (in mm)
				Horizontal	Vertical	
44	±0.01	2	≤ 100	≤ 25	≤ 8	50-1000
		6	≤ 300	≤ 20	≤ 8	
		12	≤ 600	≤ 12	≤ 3.5	
54		2	≤ 100	≤ 30	≤ 10	50-1050
		5	≤ 250	≤ 30	≤ 10	
		10	≤ 500	≤ 15	≤ 5	
		20	≤ 1000	≤ 10	≤ 2.5	

# Linear Electric Actuator

## Series AELS

Cat :

### Rodless Type Ball Screw Actuator - 44mm (Step-servo)

#### Features

- Compact Robust Design
- Highly flexible mounting
- More Precise & positioning
- Ease of positioning
- Ease of Maintenance



#### Technical Specifications

Repeatability (mm)		±0.01		
Ball screw lead (mm)		2	6	12
Maximum speed*	Horizontal (mm/s)	≤ 100	≤ 300	≤ 600
	Vertical (mm/s)	≤ 100	≤ 300	≤ 600
Maximum payload**	Horizontal (Kg)	≤ 25	≤ 20	≤ 12
	Vertical (Kg)	≤ 8	≤ 8	≤ 3.5
Rated thrust (N)		1094	365	182
Stroke (mm)***		50-1000mm		
Ball screw Ø (mm)		C7 Ø 10 mm		
Motor dimension (mm)		35□		

\* The maximum speed shown here is when software speed setting is 100%.

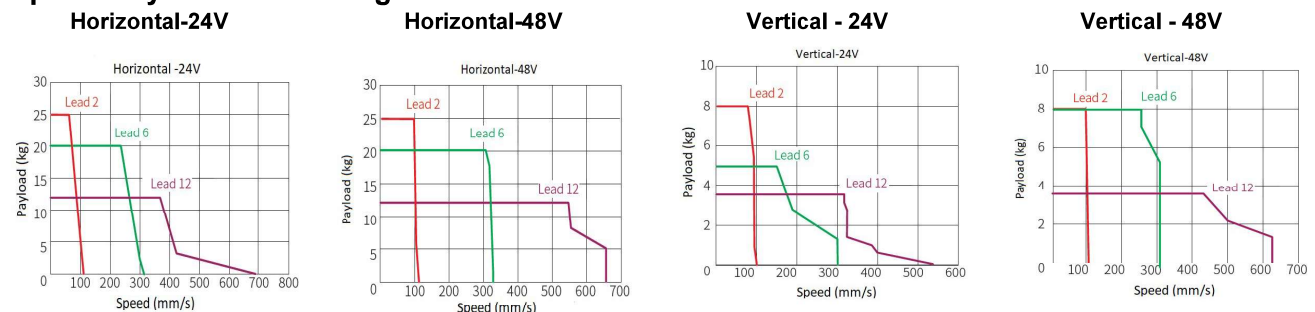
\*\* The maximum speed and maximum payload cannot exist at the same time. Please refer to diagram of speed and payload curve before using.

\*\*\* When the stroke is over 550mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

#### Corresponding Controller Chart

Controller	Controller model	Controller mode	Features	Electrical specification
	JC100	Pulse control Mode	Support line driver and open controller max. pulse receiving speed 200k/60k Hz	The voltage of control circuit is 24V. Operating voltage DC24V, rated current 2A, peak current 3A.
		IO control mode	By IO Control, max.127 position points, can be executed.	Operating voltage DC48V, rated current 1A, peak current 2A.
		Communication control mode	Use Mod bus as the interface of RS485(Connect max.16 controllers) and 1 set mini USB	When the voltage is DC48V but same torque, the rotation speed will be raised.

#### Speed-Payload Curve Diagram

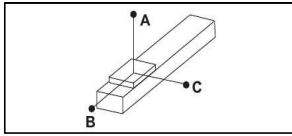


# Linear Electric Actuator

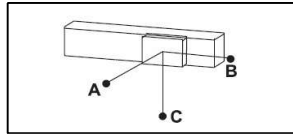
## Series AELS

Cat :

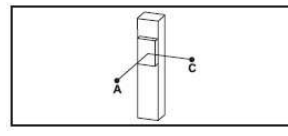
### Allowable Moment



Unit:mm

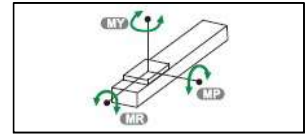


Unit:mm



Unit:mm

### Static Loading Moment



Unit:Nm

Horizontal Installation		A	B	C
2 Lead	12Kg	640	64	94
	18Kg	400	40	59
	25Kg	280	28	42
6 Lead	8Kg	770	77	107
	12Kg	480	48	68
	20Kg	280	28	39
12 Lead	6Kg	990	99	135
	9Kg	610	61	77
	12Kg	440	44	55

Wall Installation		A	B	C
2 Lead	12Kg	93	64	640
	18Kg	58	40	400
	25Kg	41	28	280
6 Lead	8Kg	107	77	770
	12Kg	68	48	480
	20Kg	39	28	280
12 Lead	6Kg	135	99	990
	9Kg	88	61	610
	12Kg	63	44	440

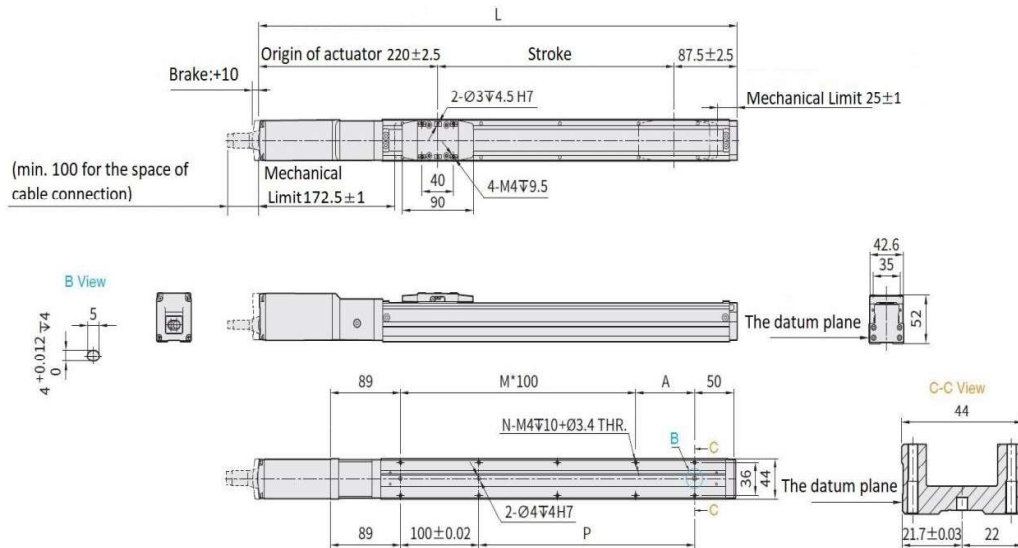
Vertical Installation		A	C
2 Lead	3.6kg	246	246
	5.4kg	165	165
	8kg	116	116
6 Lead	3.2kg	215	215
	5.4kg	140	140
	8kg	99	99
12 Lead	1kg	646	646
	2.3kg	288	288
	3.5kg	190	190

MY	79
MP	79
MR	116

Note:

- The torque value in the chart indicates the center of gravity.
- Operation life is 10,000Km when the product is using under the specified conditions.
- Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage

### Motor Direct - D



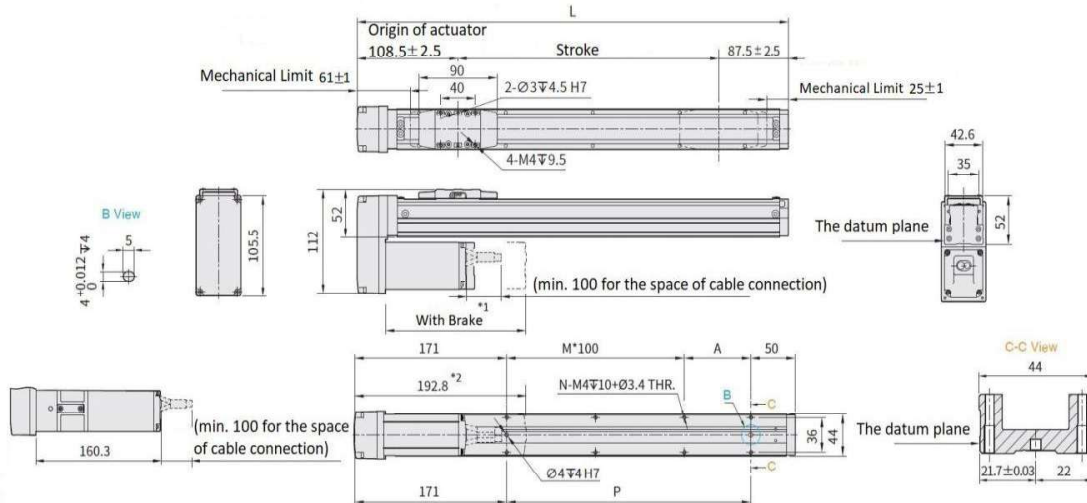
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5	1057.5	1107.5	1157.5	1207.5	1257.5	1307.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
*Weight(kg)	1.2	1.45	1.7	1.95	2.19	2.44	2.69	2.94	3.18	3.43	3.68	3.93	4.18	4.43	4.68	4.93	5.18	5.43	5.68	5.93

# Linear Electric Actuator

## Series AELS

Cat :

### Motor Bottom Side - B

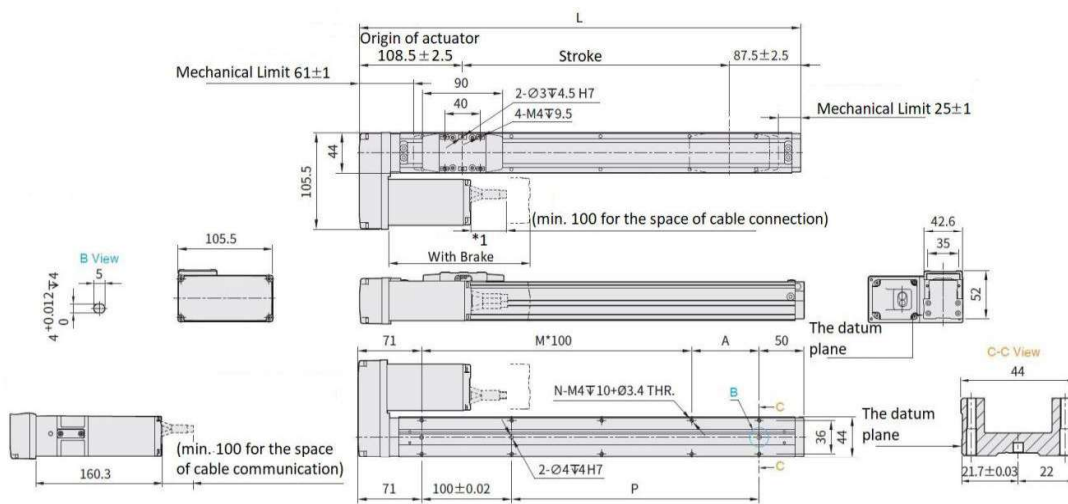


\*1. When the brake is added, dimension and outside will be changed as above \*2. When choosing brake, please check if the fixed holes match demand.

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	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	8	8	9	9
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
*Weight(kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19

(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

### Motor Left Side - L



\*1. When the brake is added, dimension and outside will be changed as below

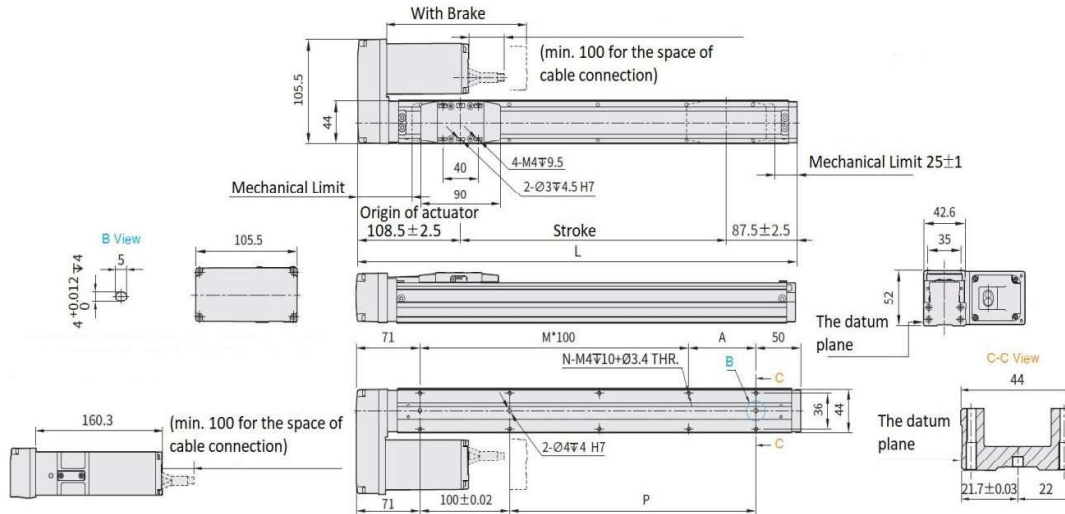
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
*Weight(kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19

# Linear Electric Actuator

## Series AELS

Cat :

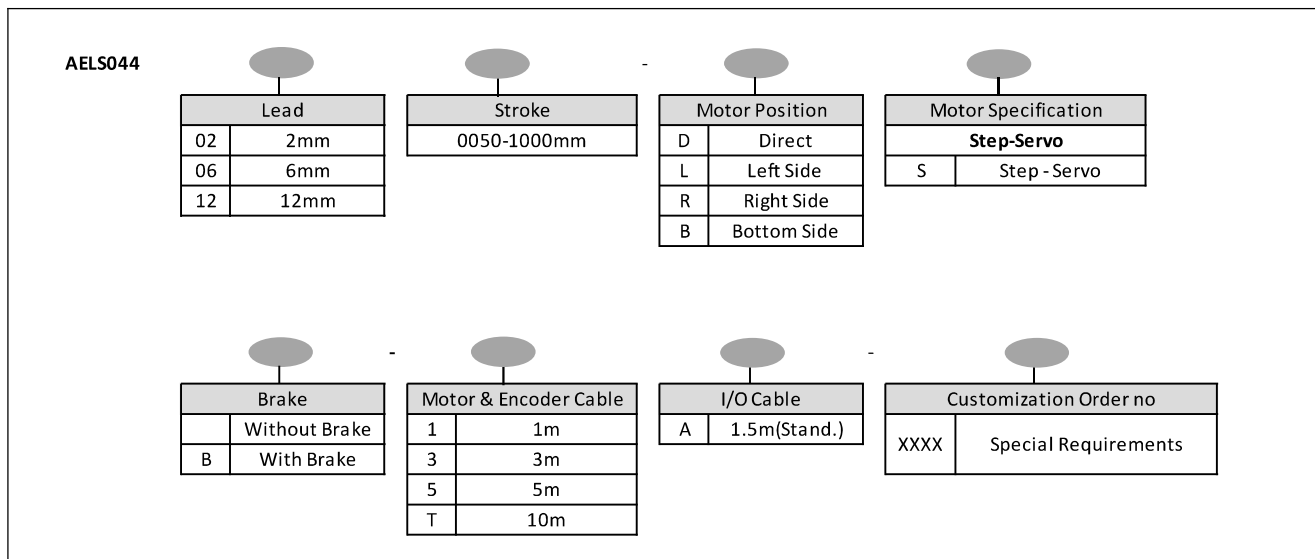
### Motor Right Side - R



\*1. When the brake is added, dimension and outer side will be changed as below

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
A	25	75	25	75	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	9	9	10	10
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
*Weight(kg)	1.46	1.71	1.96	2.2	2.45	2.7	2.95	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94	5.19	5.44	5.69	5.94	6.19

### How to order



### Example :

Order no. for Rodless type ball screw electric actuator 44mm size, 2mm Lead, 50mm stroke with step-servo motor mounted at the motor Direct, With 3m Motor & Encoder cable and 1.5m I/O cable.

**AELS044020050D-S-3A**

# Linear Electric Actuator

## Series AELS

Cat :

### Rod less Type Ball Screw Actuator - 54mm(Step-servo)

#### Features

- Compact Robust Design
- Highly flexible mounting
- More Precise & positioning
- Ease of positioning
- Ease of Maintenance



#### Technical Specifications

Repeatability (mm)		±0.01			
Ball Screw Lead (mm)		2	5	10	20
Maximum Speed *	Horizontal (mm/s)	≤ 100	≤ 250	≤ 500	≤ 1000
	Vertical (mm/s)	≤ 100	≤ 250	≤ 500	≤ 1000
Maximum Payload	Horizontal (Kg)	≤ 30	≤ 30	≤ 15	≤ 10
	Vertical (Kg)	≤ 10	≤ 10	≤ 5	≤ 2.5
Rated Thrust (N)		1147	459	229	115
Stroke(mm)**		50-1050mm			
Ball Screw Ø (mm)		C7 Ø 12			
Motor dimension (mm)		42□			

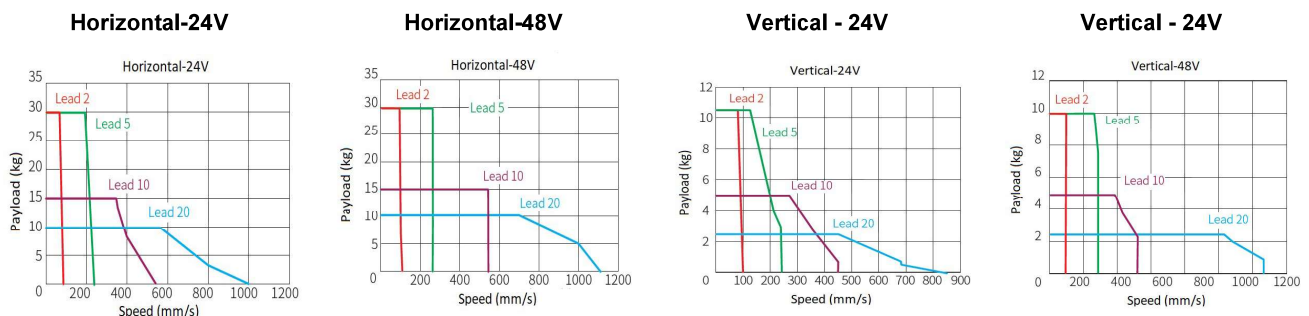
\* Acceleration and deceleration value is set 0.2 second

\*\* When the stroke is over 600mm the run-out of the ball screw will occur. We recommend to low down the working speed under circumstances. Please refer to P1.18 for details.

#### Corresponding Controller Chart

Controller	Controller model	Controller mode	Features	Electrical specification
	JC100	Pulse control Mode	Support line driver and open controller max. pulse receiving speed 200k/60k Hz	The voltage of control circuit is 24V. Operating voltage DC24V, rated current 2A, peak current 3A.
		IO control mode	By IO Control, max.127 position points, can be executed.	Operating voltage DC48V, rated current 1A, peak current 2A.
		Communication control mode	Use Mod bus as the interface of RS485(Connect max.16 controllers) and 1 set mini USB	When the voltage is DC48V but same torque, the rotation speed will be raised.

#### Speed-Payload Curve Diagram

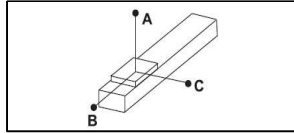


# Linear Electric Actuator

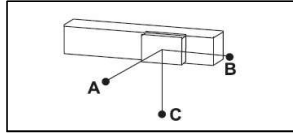
## Series AELS

Cat :

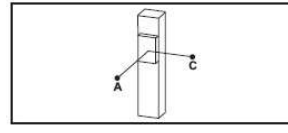
### Allowable Moment



Unit:mm

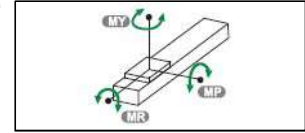


Unit:mm



Unit:mm

### Static loading moment



Unit:Nm

Horizontal Installation		A	B	C
2 Lead	10Kg	1290	129	180
	18Kg	680	68	95
	30Kg	380	38	53
5 Lead	9Kg	1140	114	155
	18Kg	540	54	74
	30Kg	290	29	41
10 Lead	6Kg	1414	59	204
	9Kg	1060	106	139
	15Kg	610	61	81
20 Lead	5Kg	1660	166	198
	7Kg	1200	120	145
	10Kg	700	88	112

Wall Installation		A	B	C
2 Lead	10Kg	180	129	1290
	18Kg	95	68	680
	30Kg	53	38	380
5 Lead	9Kg	155	114	1140
	18Kg	74	54	540
	30Kg	41	29	290
10 Lead	6Kg	204	159	1414
	9Kg	139	106	1060
	15Kg	81	61	610
20 Lead	5Kg	198	166	829
	7Kg	145	120	660
	10Kg	112	88	700

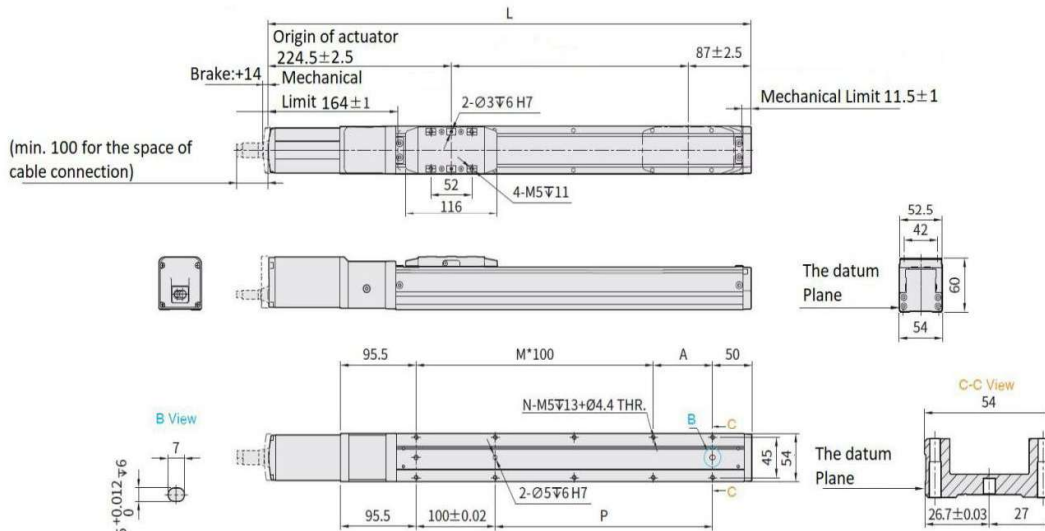
Vertical Installation		A	C
2 Lead	5.4Kg	257	257
	8.1Kg	175	175
	10Kg	143	143
5 Lead	4.5Kg	277	277
	8.1Kg	161	161
	10Kg	123	123
10 Lead	0.9Kg	1120	1120
	2.7Kg	392	392
	5Kg	217	217
20 Lead	0.9Kg	1023	1023
	1.4Kg	677	677
	2.5Kg	396	396

MY	103
MP	103
MR	144

Note:

- The torque value in the chart indicates the center of gravity.
- Operation life is 10,000Km when the product is using under the specified conditions.
- Data information is not for ceiling-mount inverse use. Contact us for the details if you want to apply ceiling-mount inverse usage

### Motor Direct - D



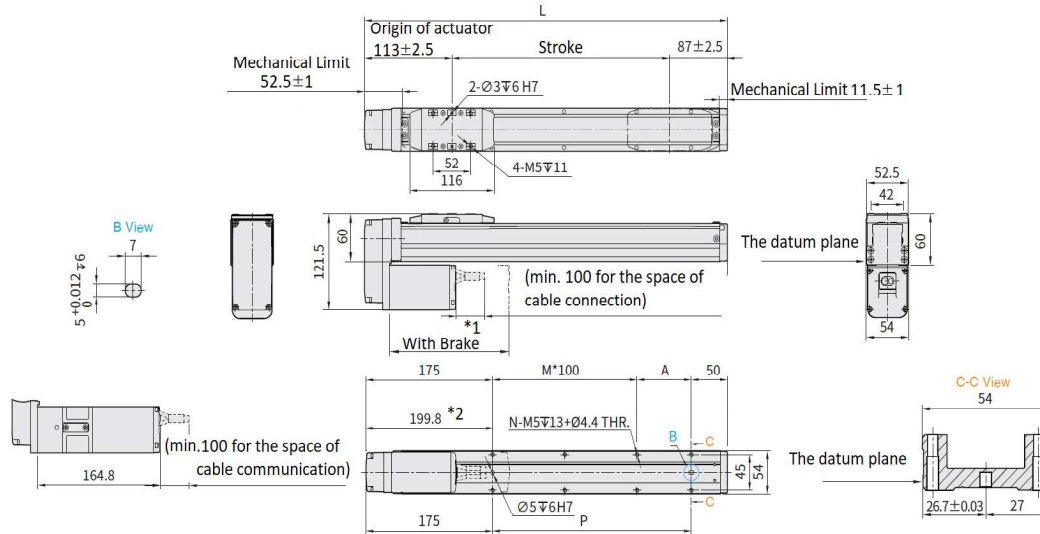
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
*Weight(kg)	1.97	2.18	2.4	2.62	2.83	3.05	3.27	3.48	3.7	3.92	4.13	4.35	4.57	4.78	5	5.22	5.44	5.66	5.88	6.1	6.32

# Linear Electric Actuator

## Series AELS

Cat :

### Motor Bottom Side - B



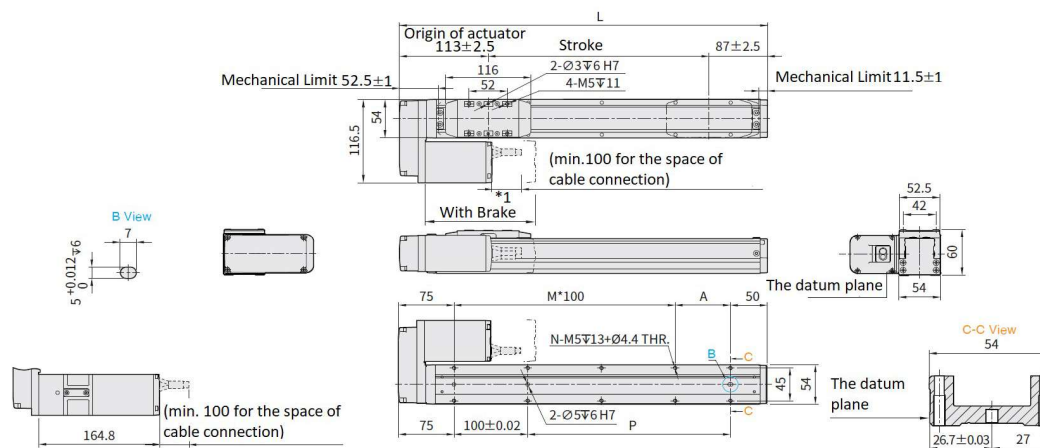
\*1. When the brake is added, dimension and outer side will be changed as above

\*2. When choosing brake, please check if fixed holes match demand

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
*Weight(kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29

(Note : When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pin hole. Please contact us if you need more information.)

### Motor Left Side - L



\*1. When the brake is added, dimension and outside will be changed as below:

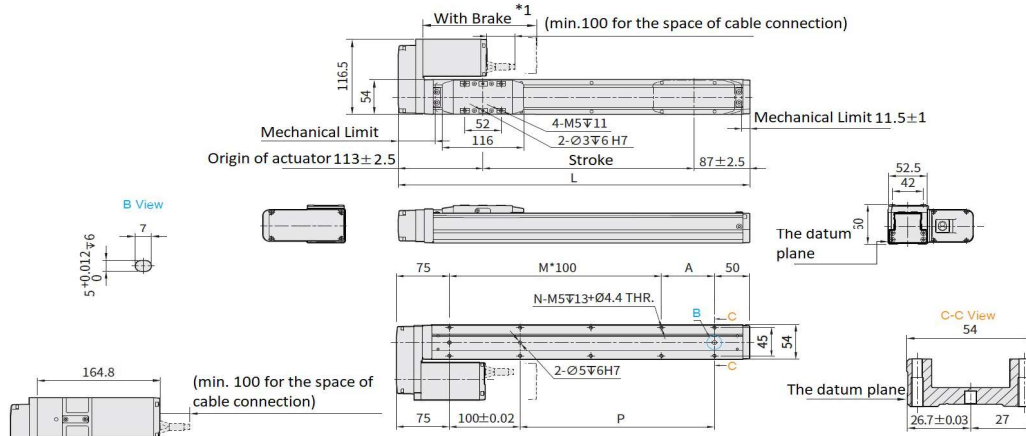
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
*Weight(kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29

# Linear Electric Actuator

## Series AELS

Cat :

### Motor Right Side - R



\*1. When the brake is added, dimension and outside will be changed as below:

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
*Weight(kg)	2.34	2.54	2.73	2.93	3.13	3.32	3.52	3.72	3.91	4.11	4.31	4.5	4.7	4.9	5.09	5.29	5.49	5.69	5.89	6.09	6.29

### How to order

AELS054		Stroke		Motor Position		Motor Specification	
02	2mm	0050-1050mm		D	Direct	Step-Servo	
05	5mm			L	Left Side	S	Step - Servo
10	10mm			R	Right Side		
20	20mm			B	Bottom Side		
		Motor & Encoder Cable		I/O Cable		Customization Order no	
		1	1m	A	1.5m (Stand.)	XXXX	Special Requirements
		3	3m				
		5	5m				
		T	10m				

### Example :

Order no. for Rodless type ball screw electric actuator 54mm size, 2mm Lead, 50mm stroke with delta 100W servo motor mounted at the motor Direct, With 3m Motor & Encoder cable and 1.5m I/O cable.

**AELS054020050D-DB-3A**

# Linear Electric Actuator

## Series AELS

Cat :

**Speed Stroke Characteristics:**

Size (mm)	Motor Dimension (mm)	Ball Screw Lead (mm)	Max. Payload (kg)		Max. Speed* (mm/s)	Stroke(mm) & MaxSpeed (m/s)**																					
			Horizontal	Vertical		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
44	35	2	25	8	100	≤ 100										≤90	≤80	≤70	≤60	≤50	≤43	≤40	≤36	≤33			
		6	20	8	300	≤ 300										≤270	≤240	≤210	≤180	≤150	≤130	≤120	≤110	≤100			
		12	12	305	600	≤ 600										≤540	≤480	≤420	≤360	≤300	≤260	≤240	≤220	≤200			
54	42	2	30	10	100	≤ 100										≤90	≤80	≤70	≤60	≤50	≤43	≤40	≤36	≤33			
		5	30	10	250	≤ 250										≤225	≤200	≤175	≤150	≤125	≤116	≤100	≤91	≤83			
		10	15	5	500	≤ 500										≤450	≤400	≤350	≤300	≤250	≤233	≤200	≤183	≤166			
		20	10	2.5	1000	≤ 1000										≤900	≤800	≤700	≤600	≤500	≤466	≤400	≤366	≤333			

\*The Working Condition of Max.Speed is restricted limited.Please refer to the curve graph of speed and loading in this catalog

\*\*Written here is the standard stroke's maximum safe speed with in stroke. If over this speed, it may cause serious vibration.

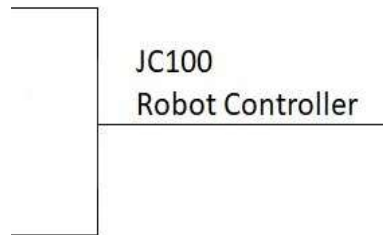
# The values in this table represent the maximum linear speed under zero load condition.

# Linear Electric Actuator JC 100 Controller

Cat :

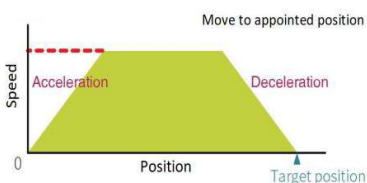
## JC100

JC100 compatible to all series of module



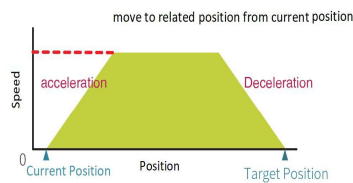
## Main operation modes

### ABS mode



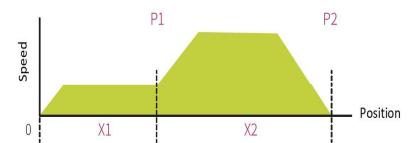
use ORG as origin, move to the appointed position.

### INC mode



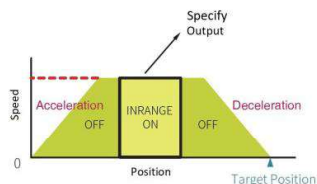
Use current position as origin, move to the relative position.

### Continuous operation function (support ABS-R/INC-R mode simultaneously)



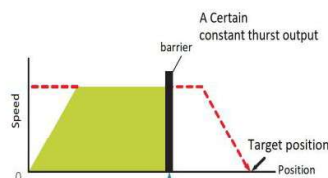
Change speed under non-stop status, the continuous operation function allow actuator moving among multiple coordinate points.

### TSL thrust mode



Set up a special range. The "INRANGE" signal will be output when moving in the range. The "OFF" signal will be output when moving in the range. The "OFF" signal will be output when it is outside of the range.

### Output signal in specified range



when current exceed set value, output TRQLIM  
Set a max. Current value, when the current reach the value, it will not proceed further.

# Linear Electric Actuator

## JC 100 Controller

Cat :

Setting	Content
Operating mode	Position setting mode, total 7 types including INC and ABS...etc.
Moving position	Set absolute position or moving amount.
Moving speed	Set speed of movement (%)
Torque limit	Set operational current limit
Minimum Value of trigger range	Set the max and min value of the trigger range
Maximum Value of trigger range	
Acc time(m sec)	The time from accelerate speed to the setting speed
Dec time(m sec)	The time from setting speed to stop
Dowel time	Set dowel time after movement
Next item number	Jump to the next operational item after current one has ended.

### Operational current auto setting

Operational current is the main factor determining the efficiency and lifetime of the robot. If the operational current is set too high, the extra performance will be wasted, or even the motor might be burnt. JC series controller can adjust operational current automatically based on the moving load, motor output and life time of the rail.

### Flexible control Interface

One single unit can support 3 different control interfaces.

- **Pulse control:** Support Line Driver and Open collector Max.pulse receiving speed: 200k/60k Hz.
- **I/O control:** By I/O control, max. 127 positioning points can be executed.
- **Communication control:** use Mod bus as the interface of RS485(connect max.16 controllers) and 1 set mini USB.

### Various control mode

Following control modes can be combined randomly to maximize the action mode.

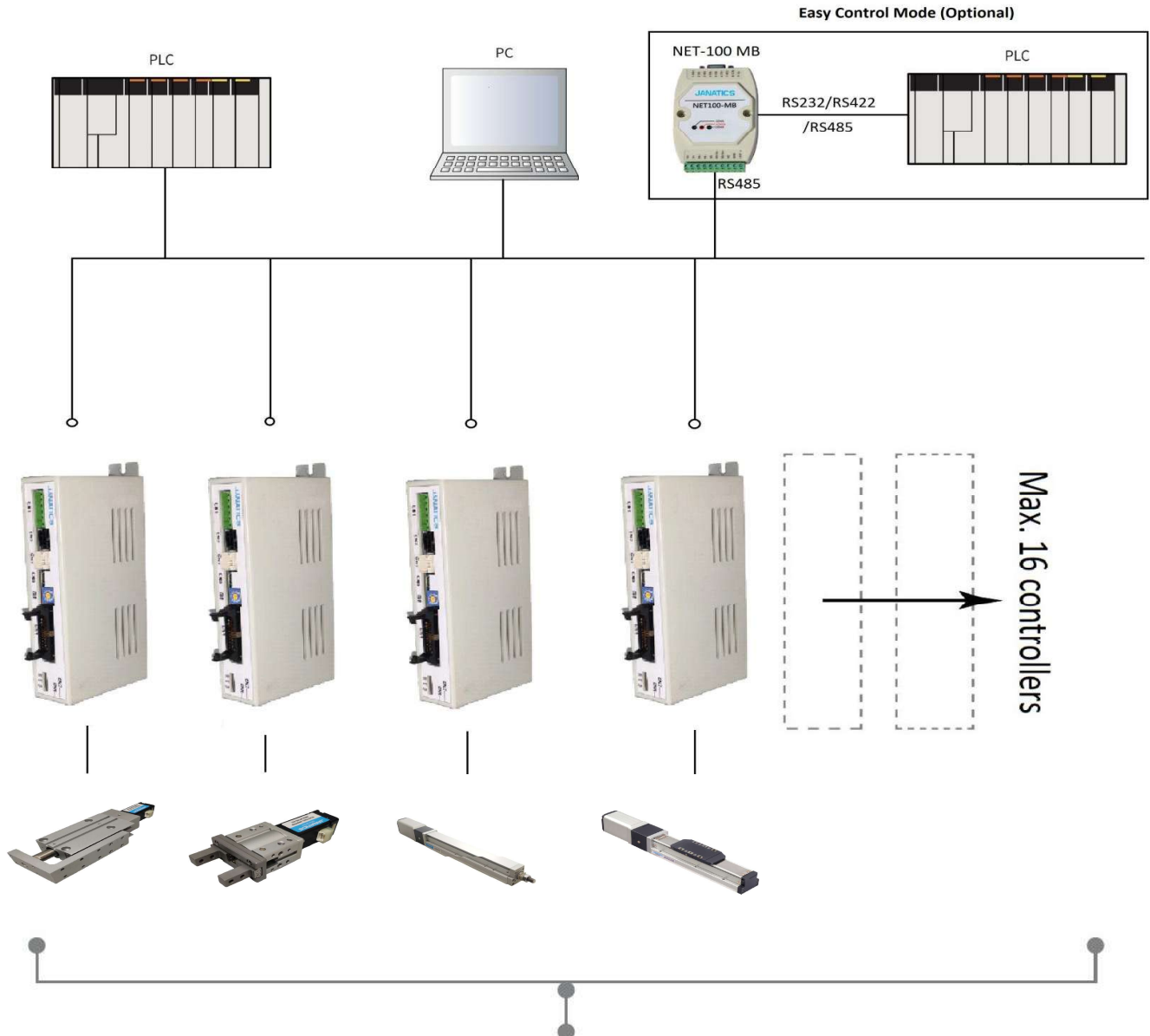
- Position control
- Speed control
- Gripping force control (Electric Gripper only)
- Measure control (Electric Gripper only)
- Pushing force control

# Linear Electric Actuator JC 100 Controller

Cat :

## Possible to connect 16 stations via RS-485

The user can connect PC, PLC or other devices which can transfer data via RS-485 to JC100 controller. It is very convenient to do the setting, Controlling and monitoring up to 16 units of JC100 at once.



The maximum number of connecting unit is 16.

# Linear Electric Actuator

## JC 100 Controller

Cat :

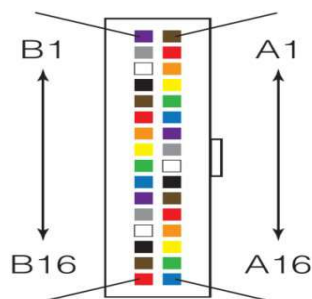
### JC 100

JC100 Specification and connectors

### Specification

Item		Specification
Input power	Control power	DC 24V (±10%)
	power supply	DC 24V (±10%) / DC 48V (±10%)
Number of controlled axis		1 Single axis
Motor	Appropriate motor	Two phrase stepping motor
	Dimension	56\42\35\25\20
	Rated output	2Ao-p Peak value of sine wave current
	Instant maximum Output	3Ao-p Peak value of sine wave current
Motion control mode		ABS Mode
		INC Mode
		INC-R Continuous Mode
		ABS-R Continuous Mode
		TSL Thrust Mode
Position	Total number of points	1~127 points
	Points setting method	Communication setting point position I/O point position teaching
Encoder	Position management	Incremental
	Position checking	Incremental
	Resolution	16000ppr(56,42)□/12800ppr(35□)/9600ppr(25□)/1600(20□)
General DI/DO signal		DI (14 points)/DO (10 points) NPN Modify definition through parameter
Brake		Optional (Please inform before buying)
Error history		Maximum storage for 50 error code
Safety circuit		Emergency stop switch (servo OFF)
Communication		USB (virtual COM port): Mini USB/RS485(half duplex):RJ-45
LED status display		PWR power supply(green): permanent radiating when drive + control power supply input, green flashing when the drive power supply was turned off.
		SON servo(green): permanent radiating when servo ON, extinguished when the error shows.
		ERR error: (red): use the times of flashing to decide the error messages.
Station number setting		Rotating DIP switch (0-f), 16 station

### IO Plug



# Linear Electric Actuator

## JC 100 Controller

Cat :

### JC100 Dimension and Terminal

#### Ordering model Controller

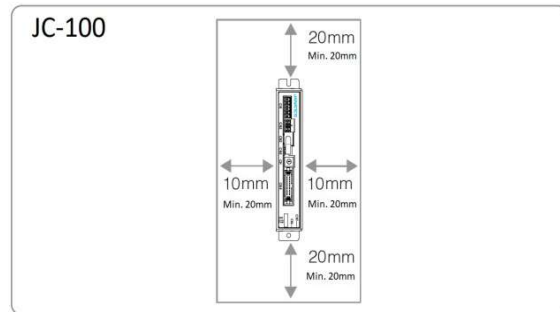
Motor Specification	
Step-Servo	
JC100	JC100 Step - Servo Controller

#### Controller Cables

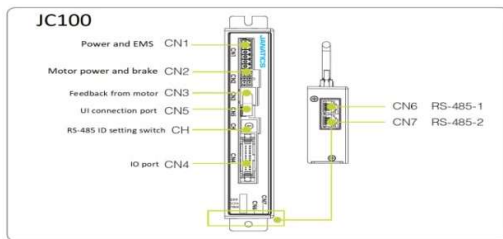
Motor & Encoder Cable	
1	1m
3	3m
5	5m
T	10m

I/O Cable	
0	Without cable
A	1.5m (Standard)

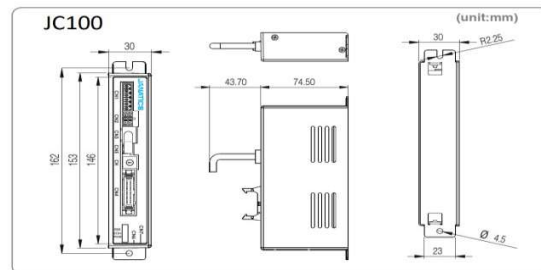
#### Recommended assembly method



#### Port explanation



#### Controller dimension



#### Restricted setting condition

1. Environment with corrosive explosive and flammable gas and combustible liquids.
2. Environment with heavy dust.
3. Locations where can be polluted by other equipment's coolant.
4. Locations with high vibrations (0.5G or above).
5. Please locate the controller as shown on the right for correct Installation Position.

#### IO Signal (Factory default)

No	Signal name	Content description	Note	NO	Signal name	Content description	Note
A1	COM+	I/O+24V Power	+24V±10%  Unset parameter: ORG_SIG MANUAL JOG+ JOG- TEACH BK_OFF CONT_MODE FULL_COUNT	B1	OUT1	ORG-S	Unset parameter: ALARM MOVE PRGSEL6-S TRQLIM ERR0 : ERR3 INRANGE NEAR SOFTLMT
A2	COM-	I/O 0V Power		B2	OUT2	INP	
A3	IN1	ORG		B3	OUT3	READY	
A4	IN2	SERVO		B4	OUT4	SERVO-S	
A5	IN3	ALM_RESET		B5	OUT5	PRGSEL0-S	
A6	IN4	START		B6	OUT6	PRGSEL1-S	
A7	IN5	PRGSEL0		B7	OUT7	PRGSEL2-S	
A8	IN6	PRGSEL1		B8	OUT8	PRGSEL3-S	
A9	IN7	PRGSEL2		B9	OUT9	PRGSEL4-S	
A10	IN8	PRGSEL3		B10	OUT10	PRGSEL5-S	
A11	IN9	PRGSEL4		B11	P1+	CW \ PULSE	
A12	IN10	PRGSEL5		B12	P1-		
A13	IN11	PRGSEL6		B13	P2+	CCW \ DIR	
A14	IN12	LOCK		B14	P2-		
A15	IN13	-	B15	Reserved	-		
A16	IN14	-	B16	FG	Shielded web/ground		

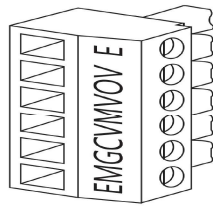
# Linear Electric Actuator

## JC 100 Controller

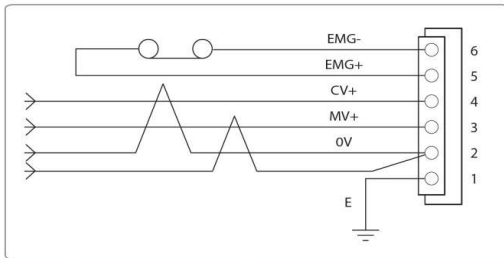
Cat :

### Pin Designation

NO	Signal Name	Explanation
1	E	Grounding (Ensure to connect to ground to avoid disturbance)
2	0V	GND
3	MV +	Main power supply : DC24V ± 10% : DC48 ± 10%
4	CV +	Controlling power : DC24V ± 10%
5	EMG +	EMS(please use normal close connection) (Relay)
6	EMG -	

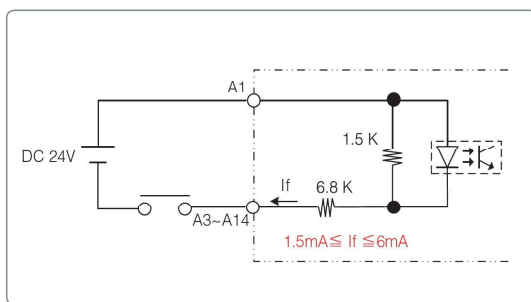


### EMS and Power wiring

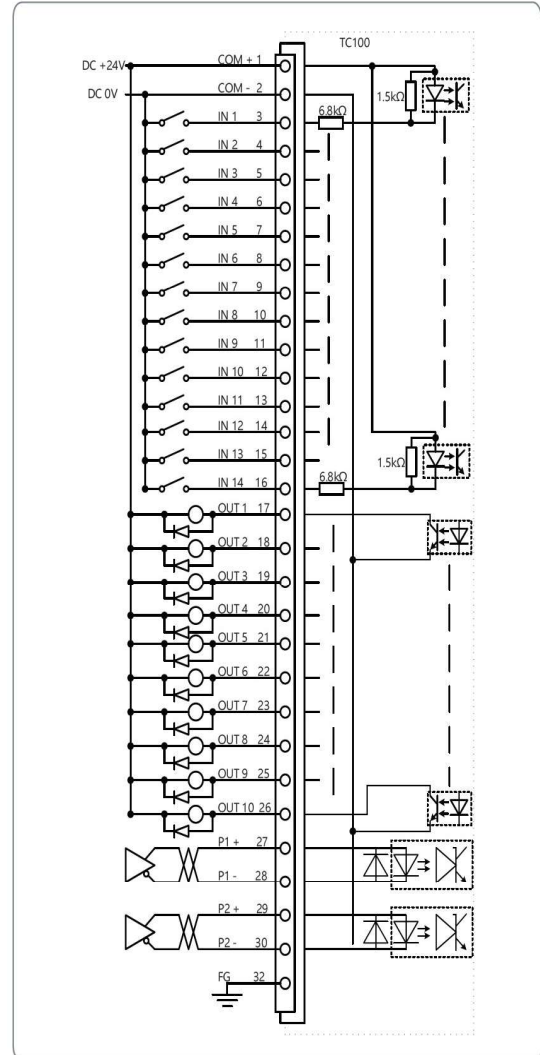


### Relay Wiring

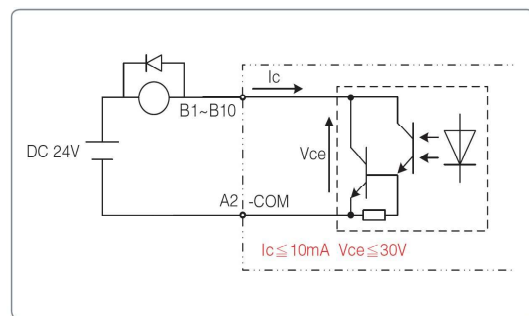
#### Input Circuit



### IN/OUT(NPN) IO wiring (NPN)



#### Output Circuit



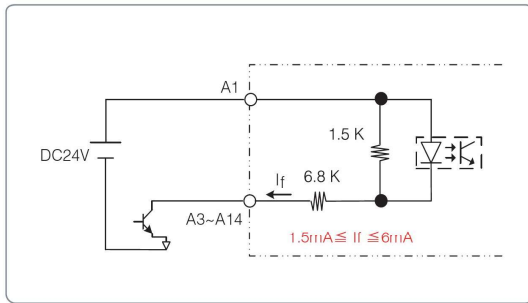
# Linear Electric Actuator

## JC 100 Controller

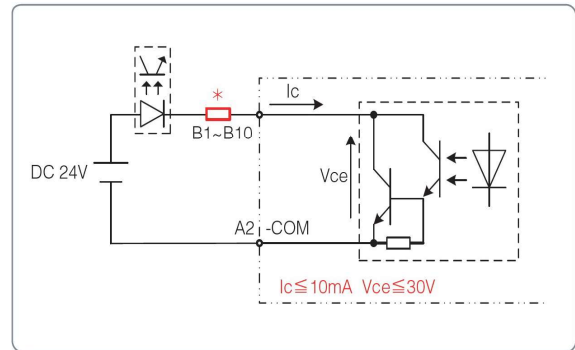
Cat :

### Transistor wiring

#### Input Circuit

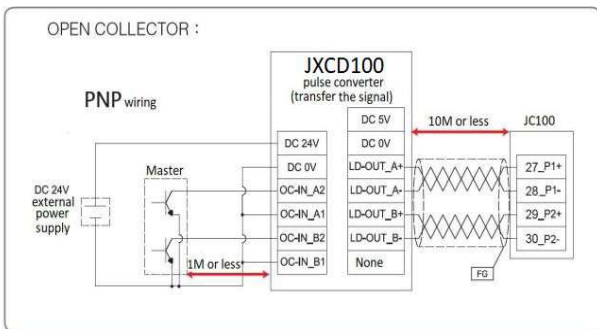
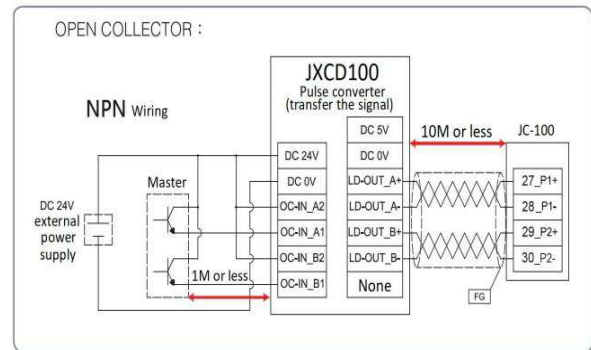


#### Output Circuit



\* Note: Please consider the output saturation voltage of optocoupler 1Vtype (when output current is 10mA).

### Pulse output wiring










At the external Pulse mode, after homing completed, assigned current position and current position cannot be clear to 0. it is normal situation, it will not affect the process of pulse sending.

# Linear Electric Actuator

## JC 100 Controller

Cat :

### Accessories list

Power supply connector	IO Cable (Shielded type)	Motor & Encoder cable	Pulse Transfer Module	Mini USB cable for supporting software	RJ-45 cable for RS-485 connections	Communication Module		
								
JC100-CON-POW-00	JC100-SD-IO-CAB-A	JC100-CAB-STA-T		JC100-OPEN TO LINE	JC100-CAB-PCL-01	JC100-CAB-485-T		JC100-CM-100-MB
		1	1m			1	1m	
		3	3m			3	3m	
		5	5m			5	5m	
T	10m	T	10m					