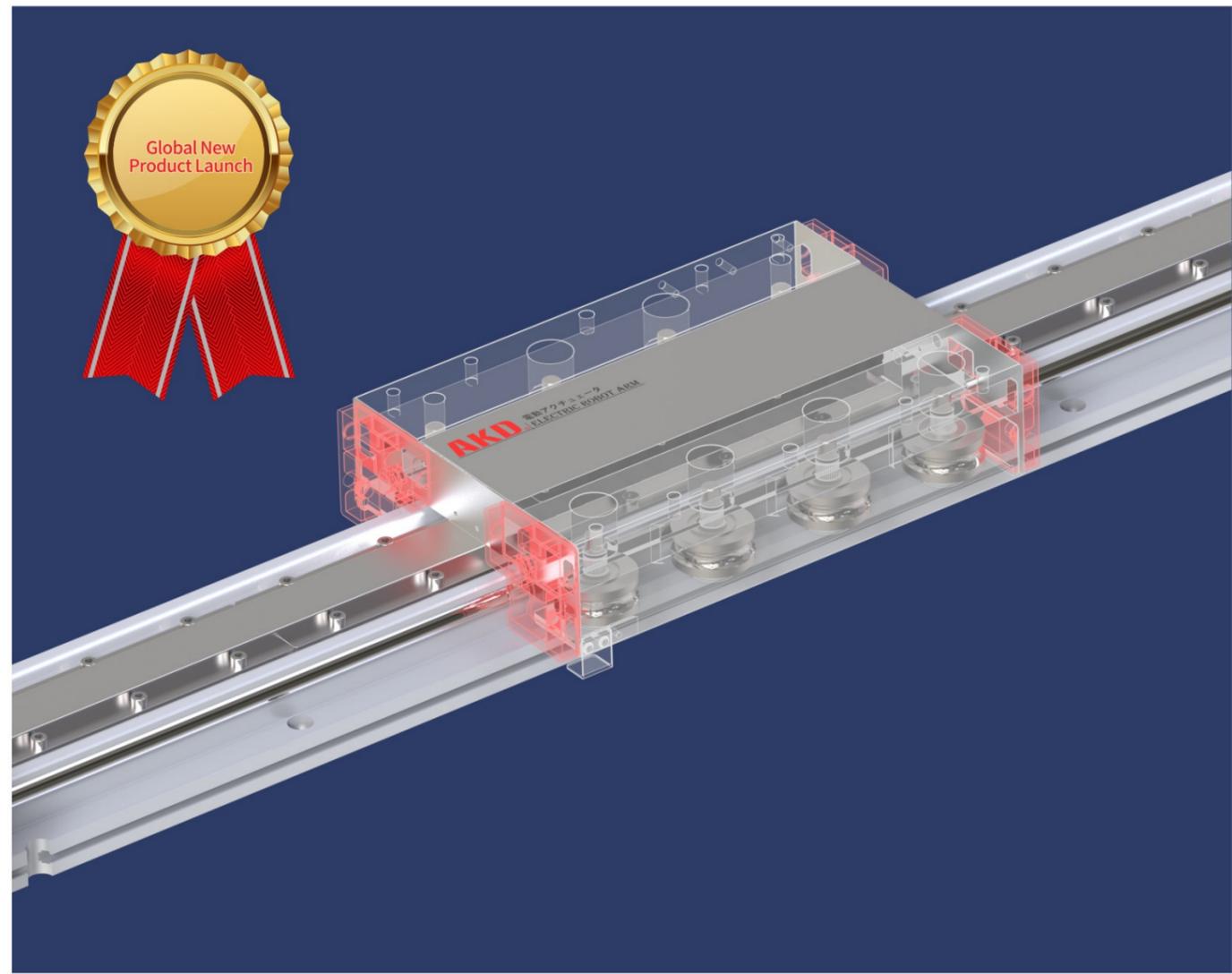


# TFL Series

## Silent Linear Motor Module

### Innovative Patent Product

- \*Unique tourbillon design, dual guide shafts, multiple rollers for smoother operation
- \*Ultra-high precision (repeatability:  $\pm 0.005\text{mm}$ )
- \*Ultra-quiet operation, as low as 40 decibels
- \*Maximum speed of 6m/s, acceleration of 4g
- \*Endurance tested over 10,000,000 meters, stable and fault-free operation
- \*Multiple thrust options and protective configurations available
- \*Maximum thrust of 1503N

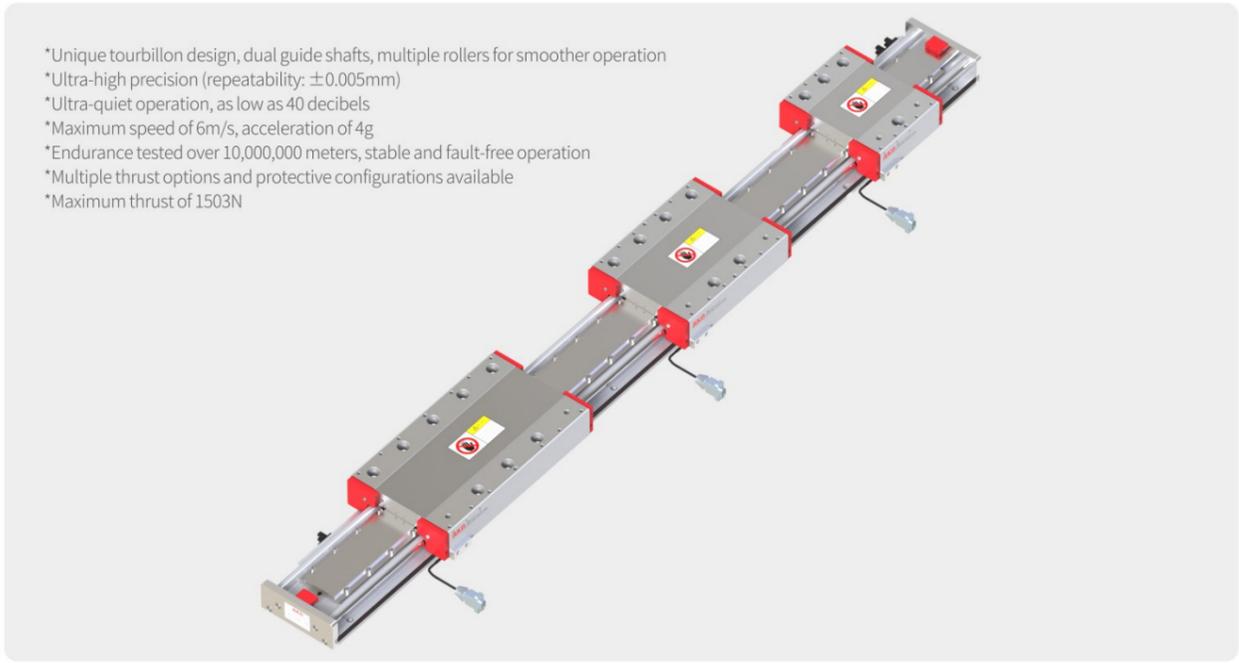


TFL Series			TFL*H Series (with cover plate)	
TFL105-A	Continuous Thrust: 81N	Peak Thrust: 234N	TFL105H-A	
TFL105-B	Continuous Thrust: 162N	Peak Thrust: 468N	TFL105H-B	
TFL105-C	Continuous Thrust: 243N	Peak Thrust: 702N	TFL105H-C	
TFL135-A	Continuous Thrust: 186N	Peak Thrust: 501N	TFL135H-A	
TFL135-B	Continuous Thrust: 372N	Peak Thrust: 1002N	TFL135H-B	
TFL135-C	Continuous Thrust: 558N	Peak Thrust: 1503N	TFL135H-C	

Silent Linear Motor Module, Does not support cantilever with center of gravity beyond 300mm.

TFL Silent Linear Motor Module

TFL Silent Linear Motor Module



- \*Unique tourbillon design, dual guide shafts, multiple rollers for smoother operation
- \*Ultra-high precision (repeatability: ±0.005mm)
- \*Ultra-quiet operation, as low as 40 decibels
- \*Maximum speed of 6m/s, acceleration of 4g
- \*Endurance tested over 10,000,000 meters, stable and fault-free operation
- \*Multiple thrust options and protective configurations available
- \*Maximum thrust of 1503N

Product Series	Thrust	Cross-sectional Dimensions	Slider Length
TFL105-A	Continuous Thrust: 81N		158
	Peak Thrust: 234N		
TFL105-B	Continuous Thrust: 162N		248
	Peak Thrust: 468N		
TFL105-C	Continuous Thrust: 243N		338
	Peak Thrust: 702N		
TFL135-A	Continuous Thrust: 186N		158
	Peak Thrust: 501N		
TFL135-B	Continuous Thrust: 372N		248
	Peak Thrust: 1002N		
TFL135-C	Continuous Thrust: 558N		338
	Peak Thrust: 1503N		

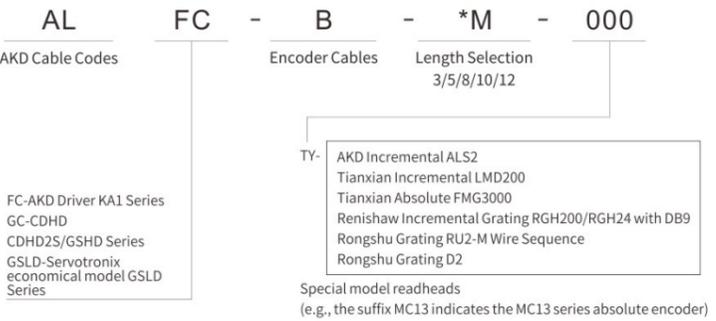
Ordering Method

**TFL105 - 400 A 1 - Y1 - S000 - ZL/JD-\*\***

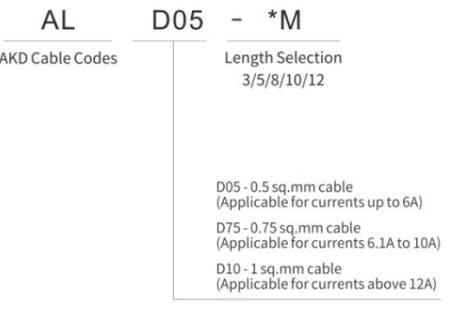
Model	Rail/Module Total Length	Mover Type	Mover Quantity	Quantity of 674 Sensors	Stroke	Special Order No.
TFL 105	Please refer to individual motor specifications	A Low Thrust	1 1 Single Mover	0 Without Sensor	Calculated based on guide rail length and mover quantity	ZL Incremental Magnetic Scale
TFL 135		B High Thrust	2 2 Single Mover	1 1 Sensor		JD Absolute Magnetic Scale
	C High Thrust	3 3 Single Mover	2 2 Sensor			
				3 3 Sensor		

- The AKD linear motor is equipped by default with a magnetic grating encoder with a resolution of 1µm. If a special model is required, please note the readhead model at the end of the part number.
- The AKD linear motor is equipped by default with an AKD photoelectric sensor.
- The default cable length for the AKD linear motor is 0.3m. Please configure extension cables as needed. If a specific cable length is required, please indicate the direct motor cable length at the end of the part number.

Encoder Cable Naming Rules



Power Cable Naming Rules



Pay attention to

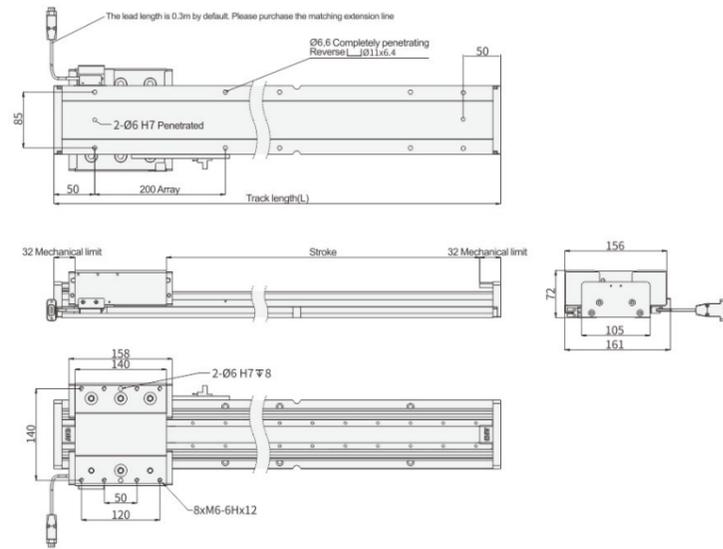
- Motor parameters are measured at an ambient temperature of 25°C. Actual performance depends on the heat dissipation conditions in use.
- Resistance is measured using a DC motor, including the 0.3-meter standard cable.
- Inductance is measured at a frequency of 1 kHz.
- The sliding body weight includes the mass of the motor, slider, mounting platform, encoder, and other components.
- Unless otherwise specified, the tolerance is ±0.1 mm.
- Load/speed parameters are theoretical values for horizontal placement, tested with a 0.5s dwell time over a 500mm travel distance, and are for reference only. Actual load capacity is influenced by speed, acceleration, friction, installation conditions, motor thrust, and other factors.
- The Tourbillon TFL series linear motor modules are equipped with AKD roller guides, magnetic scales, and photoelectric sensors as standard. For other configurations, please contact a sales engineer.
- The company reserves the right to change relevant parameters without prior notice.

TFL105-A Silent Linear Motor Module

TFL105 - Track length A - Number of rotors - Y - Number of sensors - S - Stroke

TFL105-B Silent Linear Motor Module

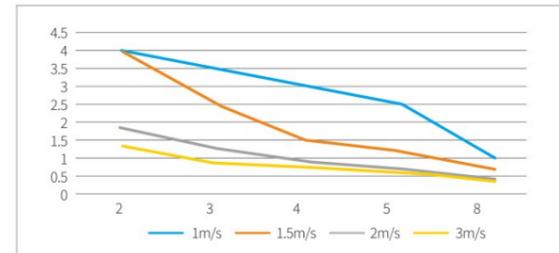
TFL105 - Track length B - Number of rotors - Y - Number of sensors - S - Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	195	6	25	8.5
450	245	6.45	75	8.95
500	295	6.9	125	9.4
550	345	7.35	175	9.85
600	395	7.8	225	10.3
650	445	8.25	275	10.75
700	495	8.7	325	11.2
750	545	9.15	375	11.65
800	595	9.6	425	12.1
850	645	10.05	475	12.55
900	695	10.5	525	13
950	745	10.95	575	13.45
1000	795	11.4	625	13.9
1100	895	12.3	725	14.8
1200	995	13.2	825	15.7
1300	1095	14.1	925	16.6
1400	1195	15	1025	17.5
1500	1295	15.9	1125	18.4
1600	1395	16.8	1225	19.3
1700	1495	17.7	1325	20.2
1800	1595	18.6	1425	21.1
1900	1695	19.5	1525	22
2000	1795	20.4	1625	22.9
2100	1895	21.3	1725	23.8
2200	1995	22.2	1825	24.7
2300	2095	23.1	1925	25.6
2400	2195	24	2025	26.5
2500	2295	24.9	2125	27.4
2600	2395	25.8	2225	28.3
2700	2495	26.7	2325	29.2
2800	2595	27.6	2425	30.1
2900	2695	28.5	2525	31
3000	2795	29.4	2625	31.9
3100	2895	30.3	2725	32.8
3200	2995	31.2	2825	33.7
3300	3095	32.1	2925	34.6
3400	3195	33	3025	35.5
3500	3295	33.9	3125	36.4
3600	3395	34.8	3225	37.3
3700	3495	35.7	3325	38.2
3800	3595	36.6	3425	39.1
3900	3695	37.5	3525	40
4000	3795	38.4	3625	40.9

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	234N
Continuous thrust	81 N
Motor force constant	22.85N/Arms
Interphase resistance	2.5 Ω
Interphase inductance	15.53 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	158 mm
Mass of actuator mass	2.5 kg

Load acceleration curve



TFL105-A Motor load quick model selection

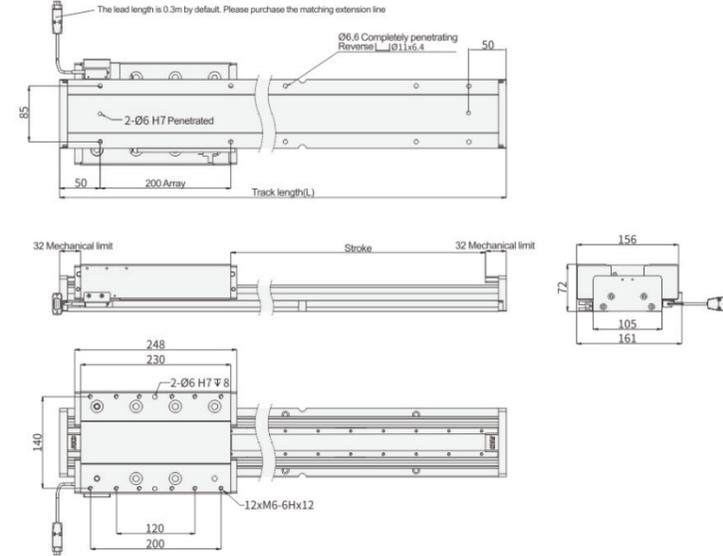
Load	1m/s	1.5m/s	2m/s	3m/s
2kg	4g	4g	1.85g	1.3g
3kg	3.5g	2.5g	1.25g	0.9g
4kg	3g	1.5g	0.9g	0.75g
5kg	2g	1.2g	0.7g	0.6g
8kg	1g	0.7g	0.4g	0.38g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL105-A motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

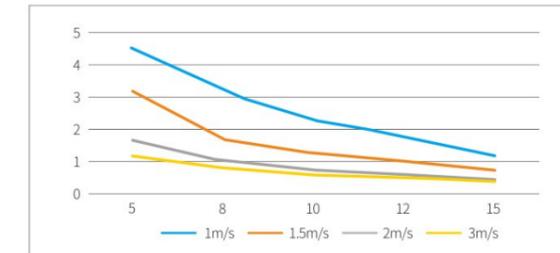
AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	105	7.5		
450	155	7.95		
500	205	8.4		
550	255	8.85		
600	305	9.3	45	13.3
650	355	9.75	95	13.75
700	405	10.2	145	14.2
750	455	10.65	195	14.65
800	505	11.1	245	15.1
850	555	11.55	295	15.55
900	605	12	345	16
950	655	12.45	395	16.45
1000	705	12.9	445	16.9
1100	805	13.8	545	17.8
1200	905	14.7	645	18.7
1300	1005	15.6	745	19.6
1400	1105	16.5	845	20.5
1500	1205	17.4	945	21.4
1600	1305	18.3	1045	22.3
1700	1405	19.2	1145	23.2
1800	1505	20.1	1245	24.1
1900	1605	21	1345	25
2000	1705	21.9	1445	25.9
2100	1805	22.8	1545	26.8
2200	1905	23.7	1645	27.7
2300	2005	24.6	1745	28.6
2400	2105	25.5	1845	29.5
2500	2205	26.4	1945	30.4
2600	2305	27.3	2045	31.3
2700	2405	28.2	2145	32.2
2800	2505	29.1	2245	33.1
2900	2605	30	2345	34
3000	2705	30.9	2445	34.9
3100	2805	31.8	2545	35.8
3200	2905	32.7	2645	36.7
3300	3005	33.6	2745	37.6
3400	3105	34.5	2845	38.5
3500	3205	35.4	2945	39.4
3600	3305	36.3	3045	40.3
3700	3405	37.2	3145	41.2
3800	3505	38.1	3245	42.1
3900	3605	39	3345	43
4000	3705	39.9	3445	43.9

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	468N
Continuous thrust	162N
Motor force constant	45.7N/Arms
Interphase resistance	4.9 Ω
Interphase inductance	29.84 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	248 mm
Mass of actuator mass	4 kg

Load acceleration curve



TFL105-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	3.2g	1.7g	1.2g
8kg	3.2g	1.7g	1g	0.8g
10kg	2.3g	1.3g	0.75g	0.6g
12kg	1.8g	1g	0.6g	0.5g
15kg	1.2g	0.75g	0.5g	0.4g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL105-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

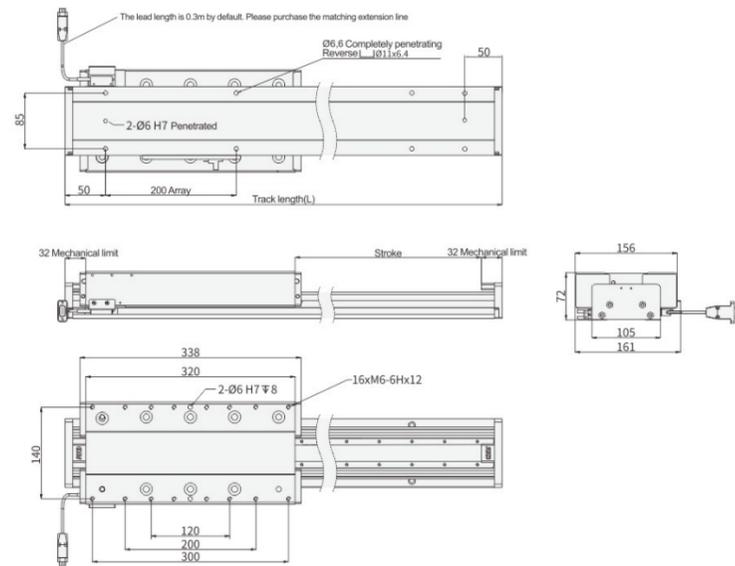
AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

TFL105-C Silent Linear Motor Module

TFL105 - Track length C Number of rotors - Y Number of sensors - S Stroke

TFL135-A Silent Linear Motor Module

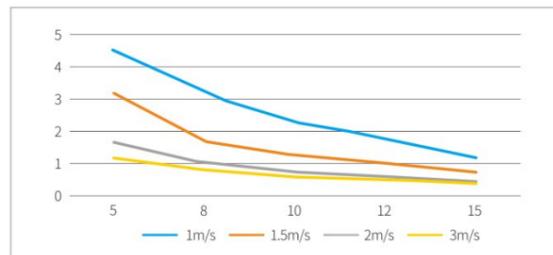
TFL135 - Track length A Number of rotors - Y Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	15	9		
450	65	9.45		
500	115	9.9		
550	165	10.35		
600	215	10.8		
650	265	11.25		
700	315	11.7		
750	365	12.15	15	17.65
800	415	12.6	65	18.1
850	465	13.05	115	18.55
900	515	13.5	165	19
950	565	13.95	215	19.45
1000	615	14.4	265	19.9
1100	715	15.3	365	20.8
1200	815	16.2	465	21.7
1300	915	17.1	565	22.6
1400	1015	18	665	23.5
1500	1115	18.9	765	24.4
1600	1215	19.8	865	25.3
1700	1315	20.7	965	26.2
1800	1415	21.6	1065	27.1
1900	1515	22.5	1165	28
2000	1615	23.4	1265	28.9
2100	1715	24.3	1365	29.8
2200	1815	25.2	1465	30.7
2300	1915	26.1	1565	31.6
2400	2015	27	1665	32.5
2500	2115	27.9	1765	33.4
2600	2215	28.8	1865	34.3
2700	2315	29.7	1965	35.2
2800	2415	30.6	2065	36.1
2900	2515	31.5	2165	37
3000	2615	32.4	2265	37.9
3100	2715	33.3	2365	38.8
3200	2815	34.2	2465	39.7
3300	2915	35.1	2565	40.6
3400	3015	36	2665	41.5
3500	3115	36.9	2765	42.4
3600	3215	37.8	2865	43.3
3700	3315	38.7	2965	44.2
3800	3415	39.6	3065	45.1
3900	3515	40.5	3165	46
4000	3615	41.4	3265	46.9

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4Arms
Persistent current	3.2Arms
Peak thrust	702N
Continuous thrust	243N
Motor force constant	68.56N/Arms
Interphase resistance	7.47 Ω
Interphase inductance	43.77 Mh
Pole pitch	25mm
Machinery specifications	
Length of actuator mass	338mm
Mass of actuator mass	5.6kg

Load acceleration curve



TFL105-C Motor load quick model selection

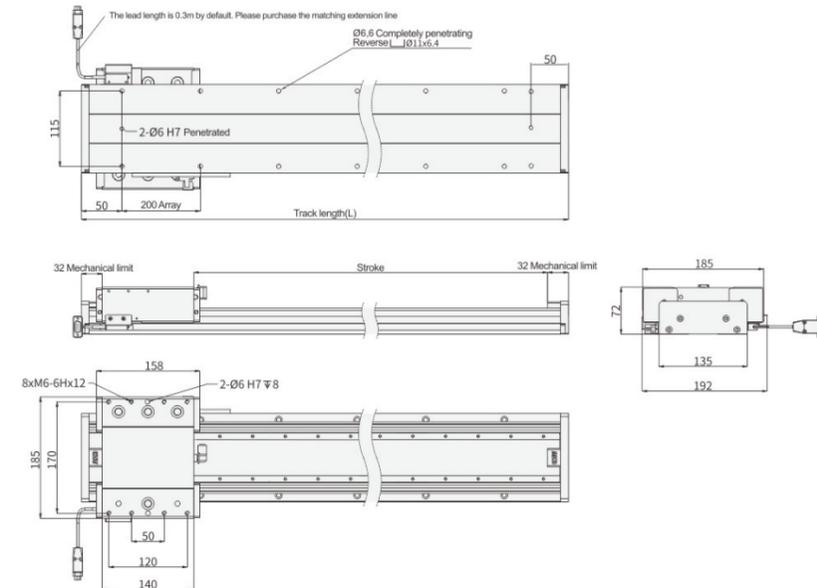
Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.8g	2.2g
8kg	3.5g	2.8g	2g	1.2g
10kg	2.9g	2.1g	1.3g	0.9g
15kg	1.8g	1.1g	0.8g	0.6g
20kg	1g	0.6g	0.5g	0.4g
25kg	0.75g	0.48g	0.35g	0.32g
30kg	0.5g	0.4g	0.32g	0.3g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL105-C motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

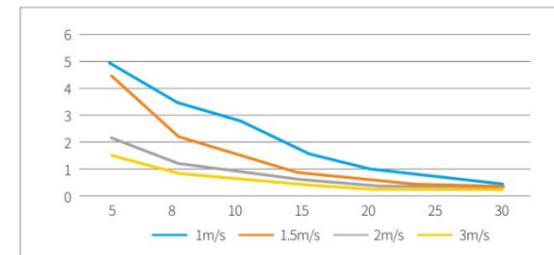
Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.



Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4Arms
Persistent current	3.2 Arms
Peak thrust	501N
Continuous thrust	186 N
Motor force constant	54.05 N/Arms
Interphase resistance	5.20Ω
Interphase inductance	30.02 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	158mm
Mass of actuator mass	4.1kg

Load acceleration curve



TFL135-A Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.2g	1.55g
8kg	3.5g	2.3g	1.25g	0.95g
10kg	2.8g	1.5g	0.95g	0.75g
15kg	1.6g	0.85g	0.6g	0.5g
20kg	1g	0.65g	0.43g	0.35g
25kg	0.7g	0.45g	0.34g	0.3g
30kg	0.5g	0.35g	0.28g	0.25g

Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	195	7.7	25	10.7
450	245	8.3	75	11.3
500	295	8.9	125	11.9
550	345	9.5	175	12.5
600	395	10.1	225	13.1
650	445	10.7	275	13.7
700	495	11.3	325	14.3
750	545	11.9	375	14.9
800	595	12.5	425	15.5
850	645	13.1	475	16.1
900	695	13.7	525	16.7
950	745	14.3	575	17.3
1000	795	14.9	625	17.9
1100	895	16.1	725	19.1
1200	995	17.3	825	20.3
1300	1095	18.5	925	21.5
1400	1195	19.7	1025	22.7
1500	1295	20.9	1125	23.9
1600	1395	22.1	1225	25.1
1700	1495	23.3	1325	26.3
1800	1595	24.5	1425	27.5
1900	1695	25.7	1525	28.7
2000	1795	26.9	1625	29.9
2100	1895	28.1	1725	31.1
2200	1995	29.3	1825	32.3
2300	2095	30.5	1925	33.5
2400	2195	31.7	2025	34.7
2500	2295	32.9	2125	35.9
2600	2395	34.1	2225	37.1
2700	2495	35.3	2325	38.3
2800	2595	36.5	2425	39.5
2900	2695	37.7	2525	40.7
3000	2795	38.9	2625	41.9
3100	2895	40.1	2725	43.1
3200	2995	41.3	2825	44.3
3300	3095	42.5	2925	45.5
3400	3195	43.7	3025	46.7
3500	3295	44.9	3125	47.9
3600	3395	46.1	3225	49.1
3700	3495	47.3	3325	50.3
3800	3595	48.5	3425	51.5
3900	3695	49.7	3525	52.7
4000	3795	50.9	3625	53.9

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL135-A motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

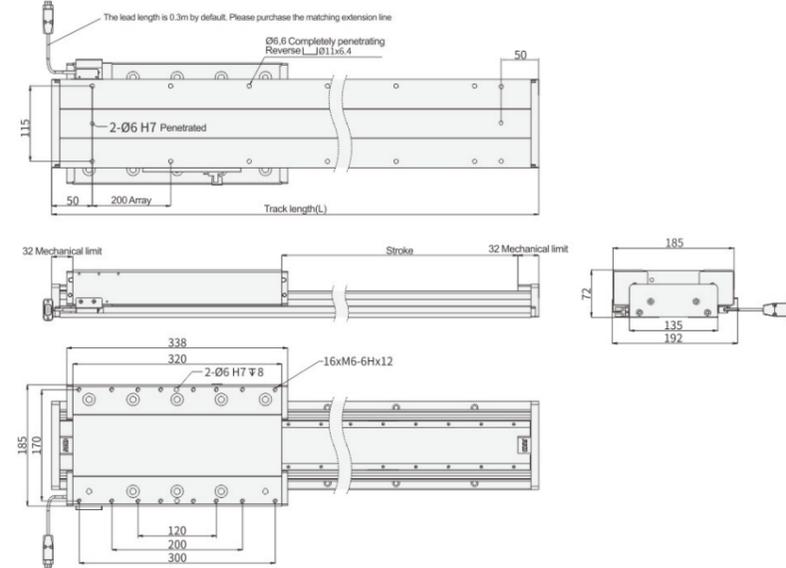
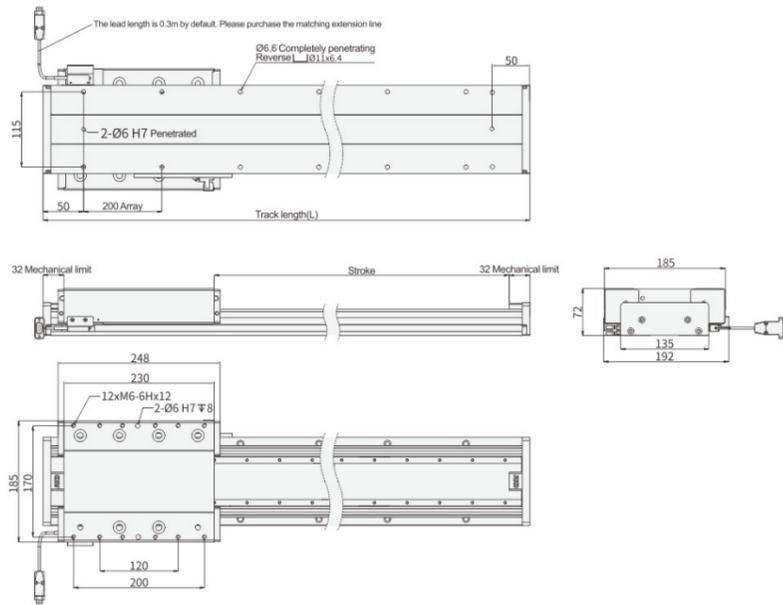
AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

TFL135-B Silent Linear Motor Module

TFL135 - Track length B - Y - S Stroke

TFL135-C Silent Linear Motor Module

TFL135 - Track length C - Y - S Stroke

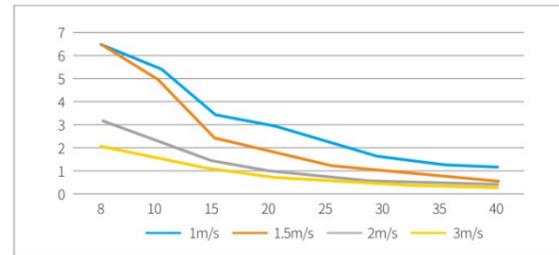


Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	105	9.7		
450	155	10.3		
500	205	10.9		
550	255	11.5		
600	305	12.1	45	17.1
650	355	12.7	95	17.7
700	405	13.3	145	18.3
750	455	13.9	195	18.9
800	505	14.5	245	19.5
850	555	15.1	295	20.1
900	605	15.7	345	20.7
950	655	16.3	395	21.3
1000	705	16.9	445	21.9
1100	805	18.1	545	23.1
1200	905	19.3	645	24.3
1300	1005	20.5	745	25.5
1400	1105	21.7	845	26.7
1500	1205	22.9	945	27.9
1600	1305	24.1	1045	29.1
1700	1405	25.3	1145	30.3
1800	1505	26.5	1245	31.5
1900	1605	27.7	1345	32.7
2000	1705	28.9	1445	33.9
2100	1805	30.1	1545	35.1
2200	1905	31.3	1645	36.3
2300	2005	32.5	1745	37.5
2400	2105	33.7	1845	38.7
2500	2205	34.9	1945	39.9
2600	2305	36.1	2045	41.1
2700	2405	37.3	2145	42.3
2800	2505	38.5	2245	43.5
2900	2605	39.7	2345	44.7
3000	2705	40.9	2445	45.9
3100	2805	42.1	2545	47.1
3200	2905	43.3	2645	48.3
3300	3005	44.5	2745	49.5
3400	3105	45.7	2845	50.7
3500	3205	46.9	2945	51.9
3600	3305	48.1	3045	53.1
3700	3405	49.3	3145	54.3
3800	3505	50.5	3245	55.5
3900	3605	51.7	3345	56.7
4000	3705	52.9	3445	57.9

Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	15	11.6		
450	65	12.2		
500	115	12.8		
550	165	13.4		
600	215	14		
650	265	14.6		
700	315	15.2		
750	365	15.8	15	22.8
800	415	16.4	65	23.4
850	465	17	115	24
900	515	17.6	165	24.6
950	565	18.2	215	25.2
1000	615	18.8	265	25.8
1100	715	20	365	27
1200	815	21.2	465	28.2
1300	915	22.4	565	29.4
1400	1015	23.6	665	30.6
1500	1115	24.8	765	31.8
1600	1215	26	865	33
1700	1315	27.2	965	34.2
1800	1415	28.4	1065	35.4
1900	1515	29.6	1165	36.6
2000	1615	30.8	1265	37.8
2100	1715	32	1365	39
2200	1815	33.2	1465	40.2
2300	1915	34.4	1565	41.4
2400	2015	35.6	1665	42.6
2500	2115	36.8	1765	43.8
2600	2215	38	1865	45
2700	2315	39.2	1965	46.2
2800	2415	40.4	2065	47.4
2900	2515	41.6	2165	48.6
3000	2615	42.8	2265	49.8
3100	2715	44	2365	51
3200	2815	45.2	2465	52.2
3300	2915	46.4	2565	53.4
3400	3015	47.6	2665	54.6
3500	3115	48.8	2765	55.8
3600	3215	50	2865	57
3700	3315	51.2	2965	58.2
3800	3415	52.4	3065	59.4
3900	3515	53.6	3165	60.6
4000	3615	54.8	3265	61.8

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	1002 N
Continuous thrust	372 N
Motor force constant	162.12 N/Arms
Interphase resistance	13.13 Ω
Interphase inductance	88.72 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	248 mm
Mass of actuator mass	5.5 kg

Load acceleration curve



TFL135-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
8kg	4g	4g	3.2g	2.1g
10kg	4g	4g	2.4g	1.6g
15kg	3.5g	2.5g	1.4g	1.1g
20kg	3g	1.8g	1g	0.8g
25kg	2.3g	1.3g	0.75g	0.6g
30kg	1.6g	1g	0.6g	0.5g
35kg	1.3g	0.8g	0.5g	0.45g
40kg	1g	0.6g	0.45g	0.35g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

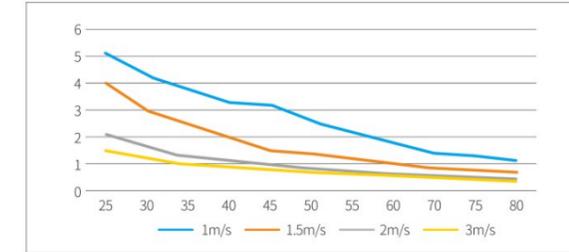
TFL135-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	1503 N
Continuous thrust	558 N
Motor force constant	162.12 N/Arms
Interphase resistance	13.13 Ω
Interphase inductance	88.72 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	338 mm
Mass of actuator mass	7.6 kg

Load acceleration curve



TFL135-C Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
25kg	5.1g	4g	2.1g	1.5g
30kg	4.3g	3g	1.6g	1.2g
35kg	3.8g	2.5g	1.3g	1g
40kg	3.3g	2g	1.1g	0.89g
45kg	3.2g	1.5g	0.95g	0.78g
50kg	2.6g	1.4g	0.85g	0.69g
55kg	2.2g	1.2g	0.75g	0.63g
60kg	1.8g	1g	0.65g	0.57g
70kg	1.4g	0.85g	0.55g	0.48g
75kg	1.3g	0.8g	0.5g	0.45g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

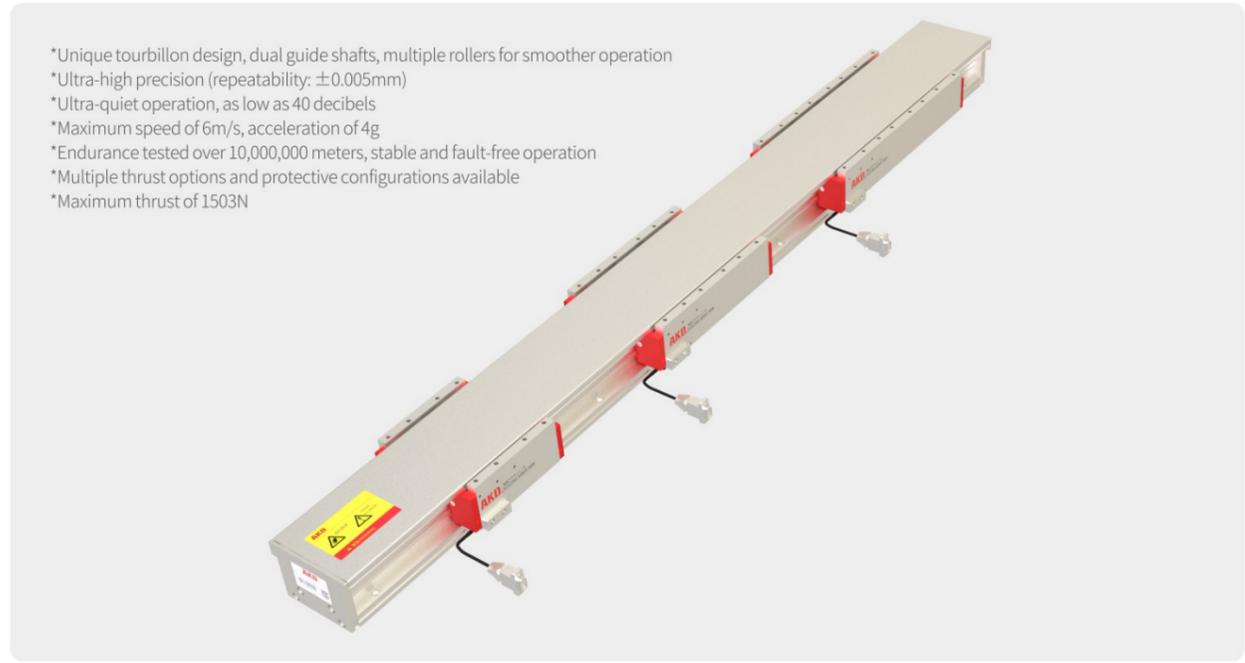
TFL135-C motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

**TFL\*H** With cover plate Silent Linear Motor Module

**TFL\*H** With cover plate Silent Linear Motor Module



- \*Unique tourbillon design, dual guide shafts, multiple rollers for smoother operation
- \*Ultra-high precision (repeatability: ±0.005mm)
- \*Ultra-quiet operation, as low as 40 decibels
- \*Maximum speed of 6m/s, acceleration of 4g
- \*Endurance tested over 10,000,000 meters, stable and fault-free operation
- \*Multiple thrust options and protective configurations available
- \*Maximum thrust of 1503N

Product Series	Thrust	Cross-sectional Dimensions	Slider Length
TFL105H-A (With cover plate)	Continuous Thrust: 81N		158
	Peak Thrust: 234N		
TFL105H-B (With cover plate)	Continuous Thrust: 162N		248
	Peak Thrust: 468N		
TFL105H-C (With cover plate)	Continuous Thrust: 243N		338
	Peak Thrust: 702N		

TFL135H-A (With cover plate)	Continuous Thrust: 186N		158
	Peak Thrust: 501N		
TFL135H-B (With cover plate)	Continuous Thrust: 372N		248
	Peak Thrust: 1002N		
TFL135H-C (With cover plate)	Continuous Thrust: 558N		338
	Peak Thrust: 1503N		

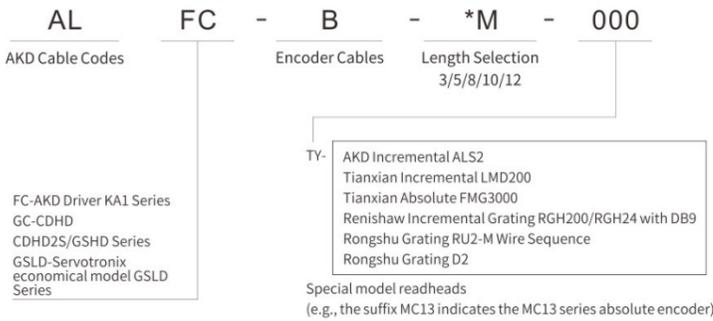
型號表示方式 Ordering Method

**TFL105H - 400 A 1 - Y1 - S000 - ZL/JD-\*\***

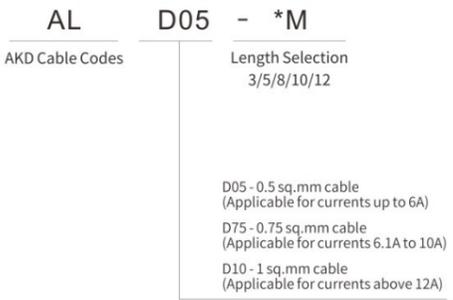
Model	Rail/Module Total Length	Mover Type	Mover Quantity	Quantity of 674 Sensors	Stroke	Special Order No.
TFL 105H	Please refer to individual motor specifications	A Low Thrust	1 1 Single Mover	0 Without Sensor	Calculated based on guide rail length and mover quantity	ZL Incremental Magnetic Scale
TFL 135H		B High Thrust	2 2 Single Mover	1 1 Sensor		JD Absolute Magnetic Scale
		C High Thrust	3 3 Single Mover	2 2 Sensor		
				3 3 Sensor		

- The AKD linear motor is equipped by default with a magnetic grating encoder with a resolution of 1µm. If a special model is required, please note the readhead model at the end of the part number.
- The AKD linear motor is equipped by default with an AKD photoelectric sensor.
- The default cable length for the AKD linear motor is 0.3m. Please configure extension cables as needed. If a specific cable length is required, please indicate the direct motor cable length at the end of the part number.

Encoder Cable Naming Rules



Power Cable Naming Rules

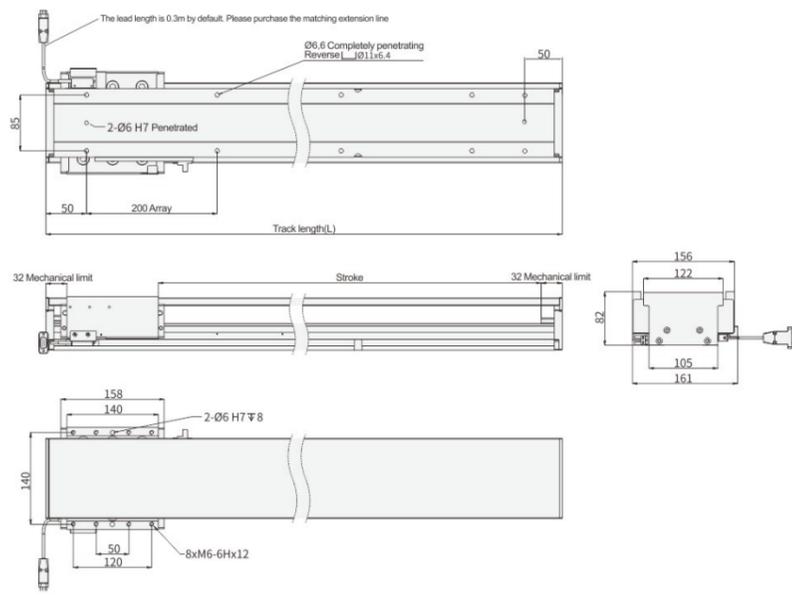


Pay attention to

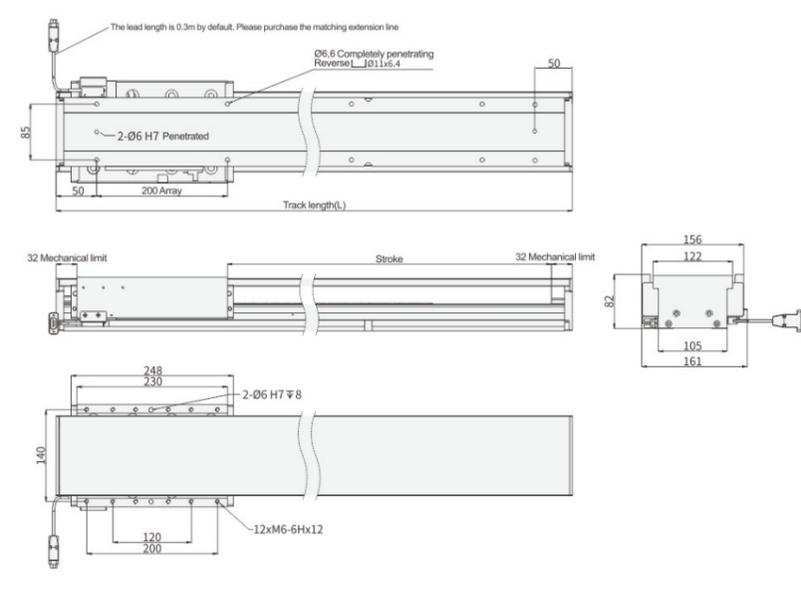
- Motor parameters are measured at an ambient temperature of 25°C. Actual performance depends on the heat dissipation conditions in use.
- Resistance is measured using a DC motor, including the 0.3-meter standard cable.
- Inductance is measured at a frequency of 1 kHz.
- The sliding body weight includes the mass of the motor, slider, mounting platform, encoder, and other components.
- Unless otherwise specified, the tolerance is ±0.1 mm.
- Load/speed parameters are theoretical values for horizontal placement, tested with a 0.5s dwell time over a 500mm travel distance, and are for reference only. Actual load capacity is influenced by speed, acceleration, friction, installation conditions, motor thrust, and other factors.
- The Tourbillon TFL series linear motor modules are equipped with AKD roller guides, magnetic scales, and photoelectric sensors as standard. For other configurations, please contact a sales engineer.
- The company reserves the right to change relevant parameters without prior notice.

TFL105H-A With cover plate Silent Linear Motor Module TFL105H - Track length A Number of rotors - Y Number of sensors - S Stroke

TFL105H-B With cover plate Silent Linear Motor Module TFL105H - Track length B Number of rotors - Y Number of sensors - S Stroke

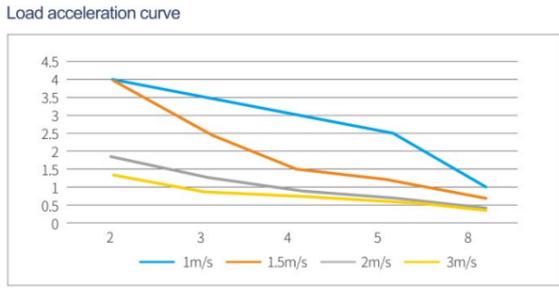


Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	195	6.4	25	8.9
450	245	6.9	75	9.4
500	295	7.4	125	9.9
550	345	7.9	175	10.4
600	395	8.4	225	10.9
650	445	8.9	275	11.4
700	495	9.4	325	11.9
750	545	9.9	375	12.4
800	595	10.4	425	12.9
850	645	10.9	475	13.4
900	695	11.4	525	13.9
950	745	11.9	575	14.4
1000	795	12.4	625	14.9
1100	895	13.4	725	15.9
1200	995	14.4	825	16.9
1300	1095	15.4	925	17.9
1400	1195	16.4	1025	18.9
1500	1295	17.4	1125	19.9
1600	1395	18.4	1225	20.9
1700	1495	19.4	1325	21.9
1800	1595	20.4	1425	22.9
1900	1695	21.4	1525	23.9
2000	1795	22.4	1625	24.9
2100	1895	23.4	1725	25.9
2200	1995	24.4	1825	26.9
2300	2095	25.4	1925	27.9
2400	2195	26.4	2025	28.9
2500	2295	27.4	2125	29.9
2600	2395	28.4	2225	30.9
2700	2495	29.4	2325	31.9
2800	2595	30.4	2425	32.9
2900	2695	31.4	2525	33.9
3000	2795	32.4	2625	34.9
3100	2895	33.4	2725	35.9
3200	2995	34.4	2825	36.9
3300	3095	35.4	2925	37.9
3400	3195	36.4	3025	38.9
3500	3295	37.4	3125	39.9
3600	3395	38.4	3225	40.9
3700	3495	39.4	3325	41.9
3800	3595	40.4	3425	42.9
3900	3695	41.4	3525	43.9
4000	3795	42.4	3625	44.9



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	105	7.9		
450	155	8.4		
500	205	8.9		
550	255	9.4		
600	305	9.9	45	13.9
650	355	10.4	95	14.4
700	405	10.9	145	14.9
750	455	11.4	195	15.4
800	505	11.9	245	15.9
850	555	12.4	295	16.4
900	605	12.9	345	16.9
950	655	13.4	395	17.4
1000	705	13.9	445	17.9
1100	805	14.9	545	18.9
1200	905	15.9	645	19.9
1300	1005	16.9	745	20.9
1400	1105	17.9	845	21.9
1500	1205	18.9	945	22.9
1600	1305	19.9	1045	23.9
1700	1405	20.9	1145	24.9
1800	1505	21.9	1245	25.9
1900	1605	22.9	1345	26.9
2000	1705	23.9	1445	27.9
2100	1805	24.9	1545	28.9
2200	1905	25.9	1645	29.9
2300	2005	26.9	1745	30.9
2400	2105	27.9	1845	31.9
2500	2205	28.9	1945	32.9
2600	2305	29.9	2045	33.9
2700	2405	30.9	2145	34.9
2800	2505	31.9	2245	35.9
2900	2605	32.9	2345	36.9
3000	2705	33.9	2445	37.9
3100	2805	34.9	2545	38.9
3200	2905	35.9	2645	39.9
3300	3005	36.9	2745	40.9
3400	3105	37.9	2845	41.9
3500	3205	38.9	2945	42.9
3600	3305	39.9	3045	43.9
3700	3405	40.9	3145	44.9
3800	3505	41.9	3245	45.9
3900	3605	42.9	3345	46.9
4000	3705	43.9	3445	47.9

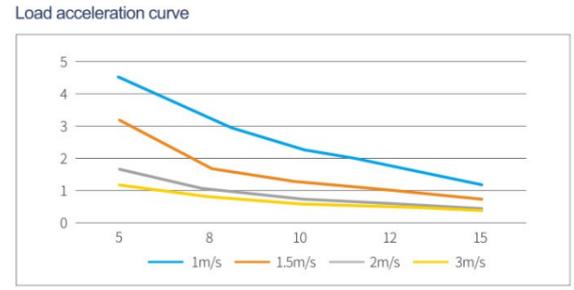
Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	234N
Continuous thrust	81 N
Motor force constant	22.85N/Arms
Interphase resistance	2.5 Ω
Interphase inductance	15.53 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	158 mm
Mass of actuator mass	2.5 kg



TFL105H-A Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
2kg	4g	4g	1.85g	1.3g
3kg	3.5g	2.5g	1.25g	0.9g
4kg	3g	1.5g	0.9g	0.75g
5kg	2g	1.2g	0.7g	0.6g
8kg	1g	0.7g	0.4g	0.38g

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	468N
Continuous thrust	162N
Motor force constant	45.7N/Arms
Interphase resistance	4.9Ω
Interphase inductance	29.84Mh
Pole pitch	25mm
Machinery specifications	
Length of actuator mass	248mm
Mass of actuator mass	4kg



TFL105H-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	3.2g	1.7g	1.2g
8kg	3.2g	1.7g	1g	0.8g
10kg	2.3g	1.3g	0.75g	0.6g
12kg	1.8g	1g	0.6g	0.5g
15kg	1.2g	0.75g	0.5g	0.4g

TFL105H-A motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

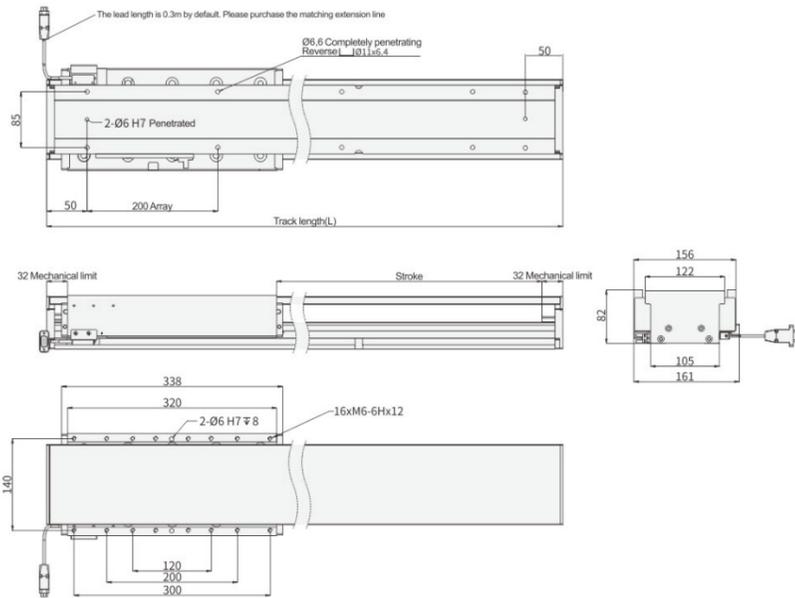
TFL105H-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

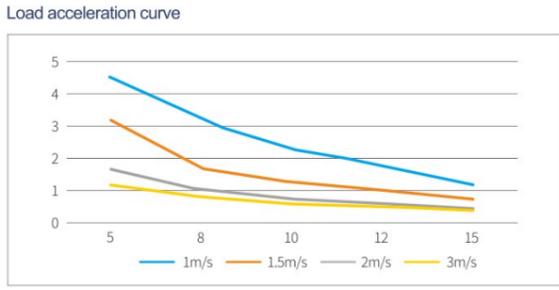
**TFL105H-C** With cover plate Silent Linear Motor Module TFL105H - Track length C Number of rotors - Y Number of sensors - S Stroke

**TFL135H-A** With cover plate Silent Linear Motor Module TFL135H - Track length A Number of rotors - Y Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	15	9		
450	65	9.5		
500	115	10		
550	165	10.5		
600	215	11		
650	265	11.5		
700	315	12		
750	365	12.5	15	18
800	415	13	65	18.5
850	465	13.5	115	19
900	515	14	165	19.5
950	565	14.5	215	20
1000	615	15	265	20.5
1100	715	16	365	21.5
1200	815	17	465	22.5
1300	915	18	565	23.5
1400	1015	19	665	24.5
1500	1115	20	765	25.5
1600	1215	21	865	26.5
1700	1315	22	965	27.5
1800	1415	23	1065	28.5
1900	1515	24	1165	29.5
2000	1615	25	1265	30.5
2100	1715	26	1365	31.5
2200	1815	27	1465	32.5
2300	1915	28	1565	33.5
2400	2015	29	1665	34.5
2500	2115	30	1765	35.5
2600	2215	31	1865	36.5
2700	2315	32	1965	37.5
2800	2415	33	2065	38.5
2900	2515	34	2165	39.5
3000	2615	35	2265	40.5
3100	2715	36	2365	41.5
3200	2815	37	2465	42.5
3300	2915	38	2565	43.5
3400	3015	39	2665	44.5
3500	3115	40	2765	45.5
3600	3215	41	2865	46.5
3700	3315	42	2965	47.5
3800	3415	43	3065	48.5
3900	3515	44	3165	49.5
4000	3615	45	3265	50.5

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4Arms
Persistent current	3.2Arms
Peak thrust	702N
Continuous thrust	243N
Motor force constant	68.56N/Arms
Interphase resistance	7.47 Ω
Interphase inductance	43.77 Mh
Pole pitch	25mm
Machinery specifications	
Length of actuator mass	338mm
Mass of actuator mass	5.6kg



**TFL105H-C Motor load quick model selection**

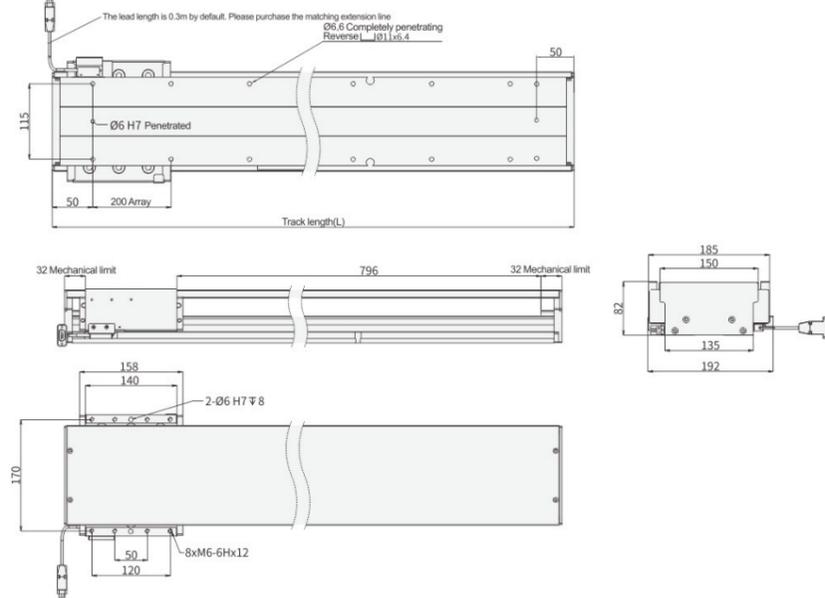
Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.8g	2.2g
8kg	3.5g	2.8g	2g	1.2g
10kg	2.9g	2.1g	1.3g	0.9g
15kg	1.8g	1.1g	0.8g	0.6g
20kg	1g	0.6g	0.5g	0.4g
25kg	0.75g	0.48g	0.35g	0.32g
30kg	0.5g	0.4g	0.32g	0.3g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

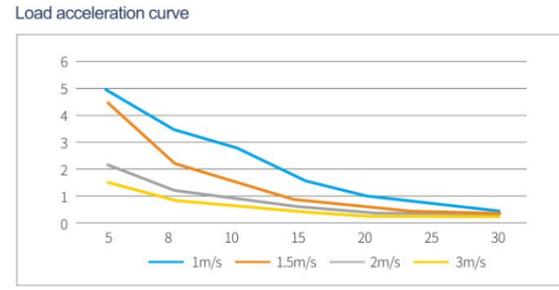
TFL105H-C motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.



Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4Arms
Persistent current	3.2 Arms
Peak thrust	501N
Continuous thrust	186 N
Motor force constant	54.05 N/Arms
Interphase resistance	5.20Ω
Interphase inductance	30.02 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	158mm
Mass of actuator mass	4.1kg



**TFL135H-A Motor load quick model selection**

Load	1m/s	1.5m/s	2m/s	3m/s
5kg	4g	4g	2.2g	1.55g
8kg	3.5g	2.3g	1.25g	0.95g
10kg	2.8g	1.5g	0.95g	0.75g
15kg	1.6g	0.85g	0.6g	0.5g
20kg	1g	0.65g	0.43g	0.35g
25kg	0.7g	0.45g	0.34g	0.3g
30kg	0.5g	0.35g	0.28g	0.25g

Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	195	8.2	25	11.2
450	245	8.9	75	11.9
500	295	9.5	125	12.5
550	345	10.2	175	13.2
600	395	10.8	225	13.8
650	445	11.5	275	14.5
700	495	12.2	325	15.2
750	545	12.8	375	15.8
800	595	13.5	425	16.5
850	645	14.1	475	17.1
900	695	14.8	525	17.8
950	745	15.5	575	18.5
1000	795	16.1	625	19.1
1100	895	17.4	725	20.4
1200	995	18.8	825	21.8
1300	1095	20.1	925	23.1
1400	1195	21.4	1025	24.4
1500	1295	22.7	1125	25.7
1600	1395	24.0	1225	27.0
1700	1495	25.4	1325	28.4
1800	1595	26.7	1425	29.7
1900	1695	28.0	1525	31.0
2000	1795	29.3	1625	32.3
2100	1895	30.6	1725	33.6
2200	1995	32.0	1825	35.0
2300	2095	33.3	1925	36.3
2400	2195	34.6	2025	37.6
2500	2295	35.9	2125	38.9
2600	2395	37.2	2225	40.2
2700	2495	38.6	2325	41.6
2800	2595	39.9	2425	42.9
2900	2695	41.2	2525	44.2
3000	2795	42.5	2625	45.5
3100	2895	43.8	2725	46.8
3200	2995	45.2	2825	48.2
3300	3095	46.5	2925	49.5
3400	3195	47.8	3025	50.8
3500	3295	49.1	3125	52.1
3600	3395	50.4	3225	53.4
3700	3495	51.8	3325	54.8
3800	3595	53.1	3425	56.1
3900	3695	54.4	3525	57.4
4000	3795	55.7	3625	58.7

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

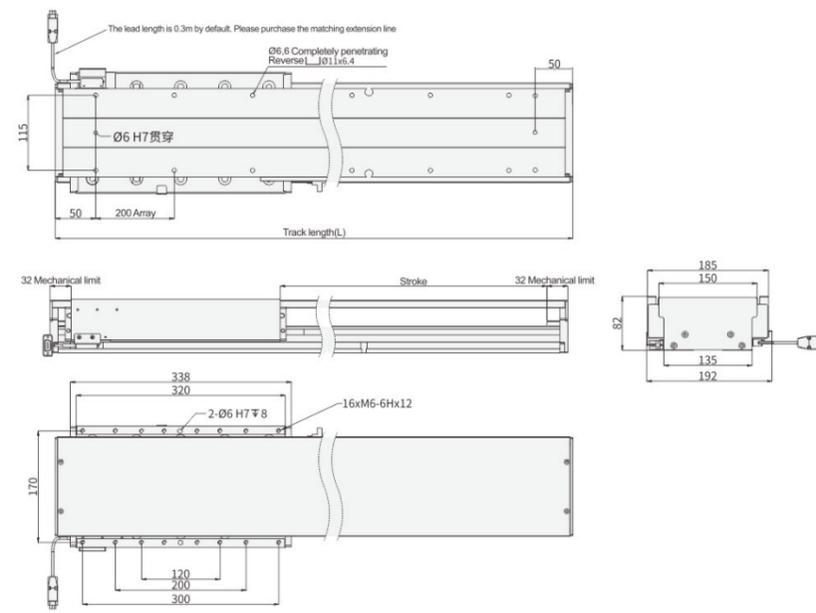
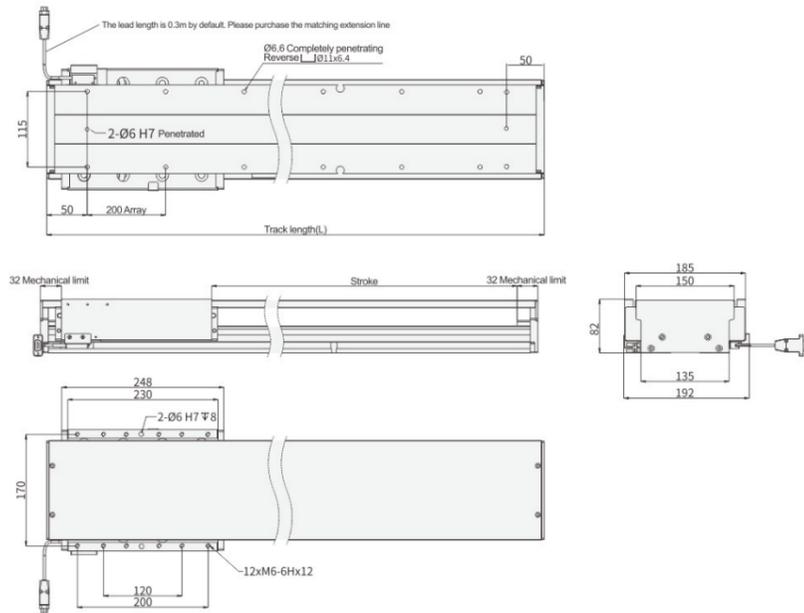
TFL135H-A motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronic economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

TFL135H-B With cover plate Silent Linear Motor Module TFL135H - Track length B Number of rotors - Y Number of sensors - S Stroke

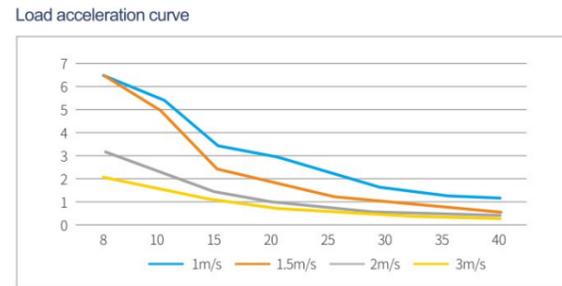
TFL135H-C With cover plate Silent Linear Motor Module TFL135H - Track length C Number of rotors - Y Number of sensors - S Stroke



Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	105	10.2		
450	155	10.9		
500	205	11.5		
550	255	12.2		
600	305	12.8	45	17.8
650	355	13.5	95	18.5
700	405	14.2	145	19.2
750	455	14.8	195	19.8
800	505	15.5	245	20.5
850	555	16.1	295	21.1
900	605	16.8	345	21.8
950	655	17.5	395	22.5
1000	705	18.1	445	23.1
1100	805	19.4	545	24.4
1200	905	20.8	645	25.8
1300	1005	22.1	745	27.1
1400	1105	23.4	845	28.4
1500	1205	24.7	945	29.7
1600	1305	26	1045	31
1700	1405	27.4	1145	32.4
1800	1505	28.7	1245	33.7
1900	1605	30	1345	35
2000	1705	31.3	1445	36.3
2100	1805	32.6	1545	37.6
2200	1905	34	1645	39
2300	2005	35.3	1745	40.3
2400	2105	36.6	1845	41.6
2500	2205	37.9	1945	42.9
2600	2305	39.2	2045	44.2
2700	2405	40.6	2145	45.5
2800	2505	41.9	2245	46.9
2900	2605	43.2	2345	48.2
3000	2705	44.5	2445	49.5
3100	2805	45.8	2545	50.8
3200	2905	47.2	2645	52.2
3300	3005	48.5	2745	53.5
3400	3105	49.8	2845	54.8
3500	3205	51.1	2945	56.1
3600	3305	52.4	3045	57.4
3700	3405	53.8	3145	58.8
3800	3505	55.1	3245	60.1
3900	3605	56.4	3345	61.4
4000	3705	57.7	3445	62.7

Track length (mm)	Stroke (mm)	Mass (kg)	Double rotor Stroke(mm)	Double rotor Mass(kg)
400	15	12.1		
450	65	12.8		
500	115	13.4		
550	165	14.1		
600	215	14.7		
650	265	15.4		
700	315	16.1		
750	365	16.7	15	23.7
800	415	17.4	65	24.4
850	465	18.0	115	25.0
900	515	18.7	165	25.7
950	565	19.4	215	26.4
1000	615	20.0	265	27.0
1100	715	21.3	365	28.3
1200	815	22.7	465	29.7
1300	915	24.0	565	31.0
1400	1015	25.3	665	32.3
1500	1115	26.6	765	33.6
1600	1215	27.9	865	34.9
1700	1315	29.3	965	36.3
1800	1415	30.6	1065	37.6
1900	1515	31.9	1165	38.9
2000	1615	33.2	1265	40.2
2100	1715	34.5	1365	41.5
2200	1815	35.9	1465	42.9
2300	1915	37.2	1565	44.2
2400	2015	38.5	1665	45.5
2500	2115	39.8	1765	46.8
2600	2215	41.1	1865	48.1
2700	2315	42.5	1965	49.5
2800	2415	43.8	2065	50.8
2900	2515	45.1	2165	52.1
3000	2615	46.4	2265	53.4
3100	2715	47.7	2365	54.7
3200	2815	49.1	2465	56.1
3300	2915	50.4	2565	57.4
3400	3015	51.7	2665	58.7
3500	3115	53.0	2765	60.0
3600	3215	54.3	2865	61.3
3700	3315	55.7	2965	62.7
3800	3415	57.0	3065	64.0
3900	3515	58.3	3165	65.3
4000	3615	59.6	3265	66.6

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4 Arms
Persistent current	3.2 Arms
Peak thrust	1002 N
Continuous thrust	372 N
Motor force constant	162.12 N/Arms
Interphase resistance	13.13 Ω
Interphase inductance	88.72 Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	248 mm
Mass of actuator mass	5.5 kg



TFL135H-B Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
8kg	4g	4g	3.2g	2.1g
10kg	4g	4g	2.4g	1.6g
15kg	3.5g	2.5g	1.4g	1.1g
20kg	3g	1.8g	1g	0.8g
25kg	2.3g	1.3g	0.75g	0.6g
30kg	1.6g	1g	0.6g	0.5g
35kg	1.3g	0.8g	0.5g	0.45g
40kg	1g	0.6g	0.45g	0.35g

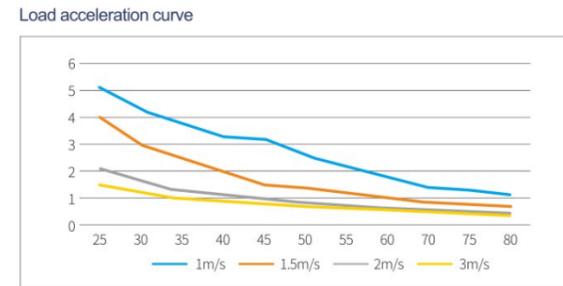
1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL135H-B motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.

Performance parameters	
Repeatability Accuracy	±5µm/500mm
Motor spec.	
Peak current	10.4Arms
Persistent current	3.2Arms
Peak thrust	1503N
Continuous thrust	558N
Motor force constant	162.12N/Arms
Interphase resistance	13.13 Ω
Interphase inductance	88.72Mh
Pole pitch	25 mm
Machinery specifications	
Length of actuator mass	338 mm
Mass of actuator mass	7.6 kg



TFL135H-C Motor load quick model selection

Load	1m/s	1.5m/s	2m/s	3m/s
25kg	5.1g	4g	2.1g	1.5g
30kg	4.3g	3g	1.6g	1.2g
35kg	3.8g	2.5g	1.3g	1g
40kg	3.3g	2g	1.1g	0.89g
45kg	3.2g	1.5g	0.95g	0.78g
50kg	2.6g	1.4g	0.85g	0.69g
55kg	2.2g	1.2g	0.75g	0.63g
60kg	1.8g	1g	0.65g	0.57g
70kg	1.4g	0.85g	0.55g	0.48g
75kg	1.3g	0.8g	0.5g	0.45g

1. The travel distance can be extended to greater lengths.  
2. Scan the QR code on the cover to download the 3D model from the official website.

TFL135H-C motor is adapted to a 750W servo driver, and AKD provides the following models of drivers.

Driver brand	Pulse model	Bus model	Matching encoder extension line	Matching power extension line
AKD	KA1-MC-ZJ6LD0	KA1-ZX-ZJ6LD0	ALFC-B-3M/5M/8M-TY	AL-D75-3M/5M/8M (The length of encoder extension line and the power extension line need to be the same)
Servotronics economical model	GSLD-0062AAP1	GSLD-0062AEC2-A	ALGSLD-B-3M/5M/8M-TY	

AKD linear motors are compatible with most brands and models of drivers on the market. For more information about the use and purchase of other brands of drivers, please consult AKD sales engineers for details.