Linear motor module

- Semi-closed structure
- Max stroke: 3814mm
- Max speed: 5m/s
- Motor continuous thrust range:76N-303N
- Guide rail specs:15-2 pcs

• Ordering Rules

CFX14 - A 2 - L1000 - C - JN 3 - T - 01

Series	Slide length	Qty	Base length	Encode code	Sensor	Sensor qty	Guide rail	Custom
CFX	A:CFS055A(100mm)	2	360-3944mm	C:incremental magnetic 1μm	JN: F&C NPN	Total sensor qty	01	
14: Base Width 135mm	B:CFS055B(165mm)	*1 " None "	* Base Length L = 64 mm + n × 64 mm	J:absolute magnetic 1μm	JP: F&C PNP		T:THK	Cust. S/N
	C:CFS055C(235mm)			S:incremental optical 1μm	ON: Omron NPN			
	D:CFS055D(295mm)			C05:incremental magnetic 0.5μm	OP: Omron PNP			
				J05:absolute magnetic 0.5μm				
				S05:incremental optical 0.5μm				

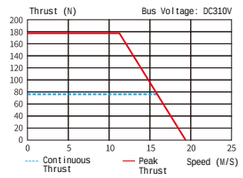
• Basic Parameters

Item		Motor model	CFS055A	CFS055B	CFS055C	CFS055D
Slide length		mm	90	152	235	300
Continuous thrust		N	65	130	194	259
Peak thrust		N	171	341	512	683
Max load*1	500mm/s	kg	13	28	40	55
	1000mm/s		8	16	23	32
Numbers of slides			2	4	4	6
Moving*2 part mass		kg	2	3	4	5
Incremental Encoder*3	Magnetic		Resolution:1um Repeat accuracy ±5um Max speed:5m/s			
	Optical		Resolution:0.5um Repeat accuracy ±2um, Max speed:3m/s			
Ambient temp&humidity			0-40℃、20-80%RH (Non-condensing)			
Encoder extension cable*4			E-FN09-26-Lxx-TC1/D-FN16-Lxx-T01 Standard cable length(m):Lxx:03、05、08、10、12			
Applicable driver*5			Pulse:AKS-4D52AAPDB Bus: AKS-4D52AECDB			
Module wiring			Standard wiring: 0.5 meters			

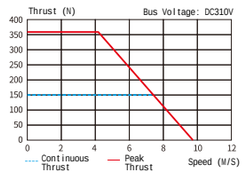
1. Maximum load is acceleration 1G, stopping 0.5s, 1000mm stroke, theoretical value(horizontal direction). The actual load is affected by factors such as motion speed, acceleration, and motor power.
2. Including motor, slide, worktable, encoder and other component weights; excluding cable weight.
3. This data is measured by RENISHAW laser interferometer at 20° C ambient temperature, with a travel range of 1000mm;
4. If extension cables are needed, please consult CF
5. Driver model, please consult CF

• Motor Performance Parameters

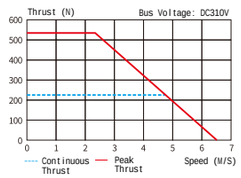
CFS055A Slide 220V Thrust Diagram



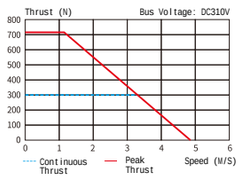
CFS055B Slide 220V Thrust Diagram



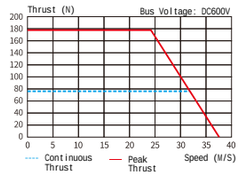
CFS055C Slide 220V Thrust Diagram



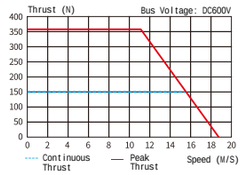
CFS055D Slide 220V Thrust Diagram



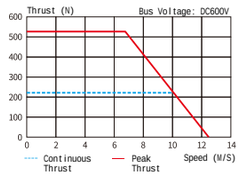
CFS055A Slide 380V Thrust Diagram



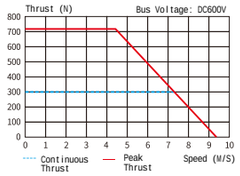
CFS055B Slide 380V Thrust Diagram



CFS055C Slide 380V Thrust Diagram



CFS055D Slide 380V Thrust Diagram



Specs / Motor Model	Continuous Thrust	Peak Thrust	Continuous Current	Peak Current	Thrust Constant ±10%	Back EMF Constant ±10%	Motor Constant ±10%	Resistance ±10%	Inductance ±30%	Electrical Time Constant	Rated Power	Maximum Power	Magnetic Pitch	Thermal Dissipation Coefficient	Magnetic Attraction Force	Mover Weight	Max Temperature
	N	N	A	A	N/A	V/m/s	N/√W	Ohm	mH	ms	W	W	mm	W/℃	KN	Kg	℃
CFS055A	76	178	4.5	13.5	18.3	15.9	9.7	3.54	11.32	3.2	108	1202	32	1.8	0.5	0.71	120
CFS055B	152	356	4.5	13.5	36.6	31.8	14.1	6.31	20.19	3.2	205	2283	32	3.4	0.8	1.2	120
CFS055C	227	534	4.5	13.5	54.9	47.7	17.2	9.78	31.28	3.2	308	3424	32	5.1	1.1	1.69	120
CFS055D	303	712	4.5	13.5	73.2	63.7	19.9	13.87	44.37	3.2	411	4566	32	6.8	1.4	2.18	120

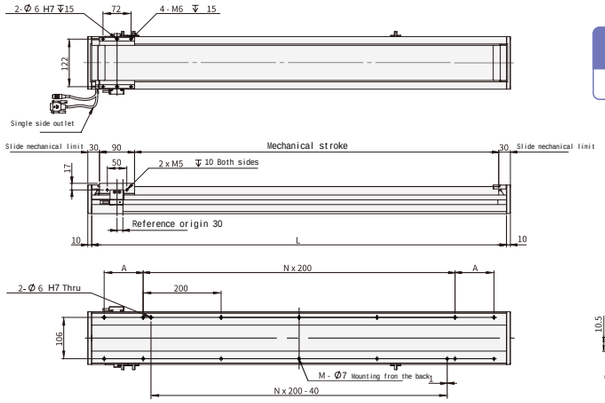
*1. Measurement ambient temperature 25°C, fixed on heat dissipation environment *2. Use 0.5m standard cable for voltage measurement. *3. Inductance measured at 1 kHz.

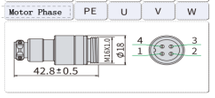
*4. Unmarked dimensions tolerance ±0.1mm. *4. Peak thrust duration: 1 s *6. Related parameters are subject to change without notice

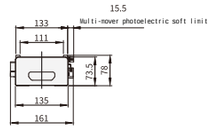
• CFS055A Dimension Parameters

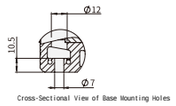
Digital Signal Encoder Output Signal (ABZ)			
	D-sub 9Pt(公头)		
Pin No.	1	2	3
Signal	0V	A+	Z+
Pin No.	4	5	6
Signal	B+	5V	A-
Pin No.	7	8	9
Signal	Z-	B-	-
Applicable to CF Optical & Magnetic Encoder			

Motor Connector (Male): 16M-4K				
Max Length: 42.8 ± 0.5	max diameter: ø 18			
External Thread:	M16X1.0			
Pin No.	1	2	3	4
Motor Phase	PE	U	V	W









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