

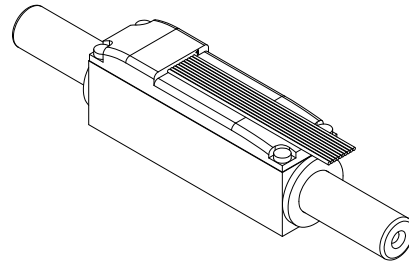
## LM 2070...11 with Analog Hall Sensors

推力 : 9.2 N

瞬間推力 : 27.6 N

解析度 : ~ 5.8 μm ( 使用內建 Analog Hall Sensor )

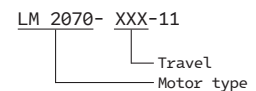
最高連續移動速度 : 2.8 m/s ( 依行程不同 )



德國 Faulhaber LM 微型伺服線性馬達  
內建 Analog Hall Sensor 做位置回饋

搭配控制器做閉迴路力量，速度與位置控制  
同時具備多種通訊界面供選擇

建議搭配光學尺和線軌發揮更佳定位精度與重現性



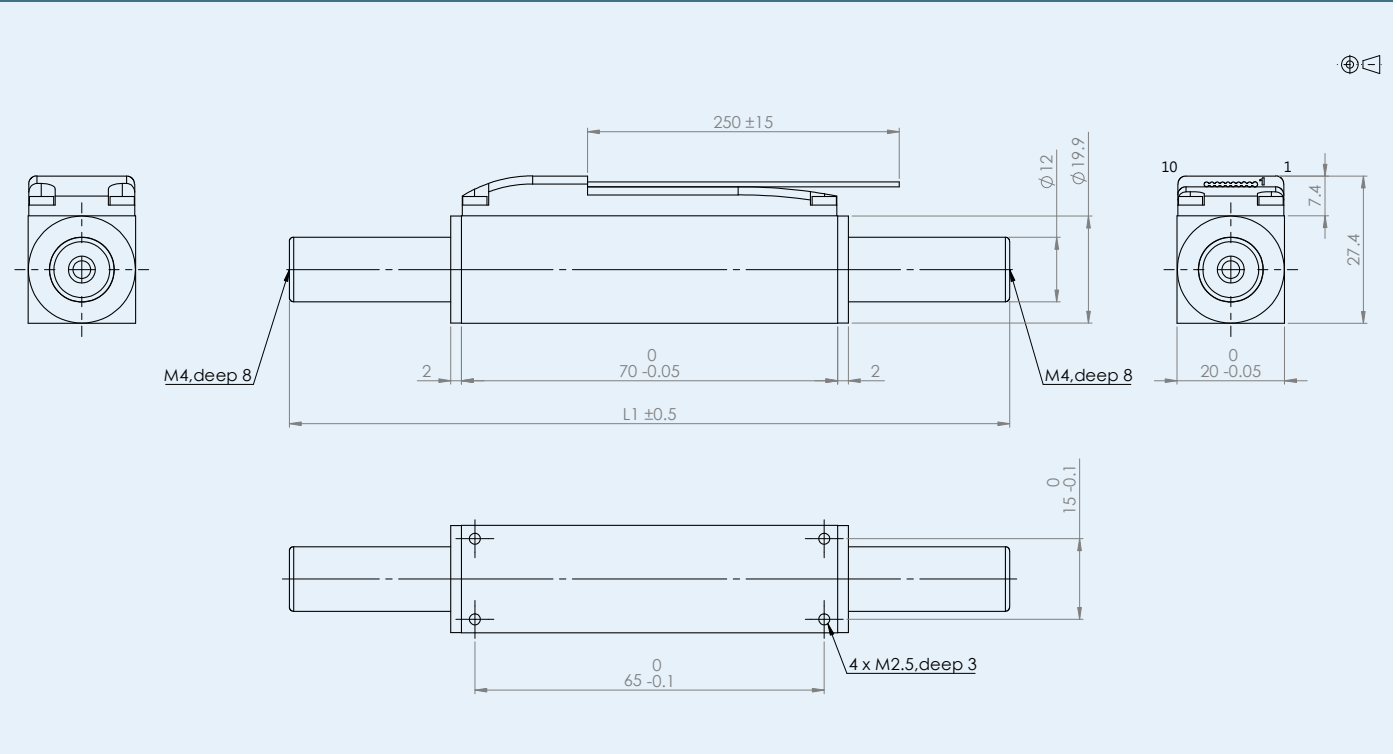
Technical Specification			Values at 22°C
Continuous force	$F_{e \max.}$	9.2	N
Peak force	$F_{p \max.}$	27.6	N
Continuous current	$I_{e \max.}$	0.79	A
Peak current	$I_{p \max.}$	2.4	A
Back-EMF constant	$k_E$	9.5	V/m/s
Force constant	$k_F$	11.64	N/A
Terminal resistance, phase-phase	R	10.83	Ω
Terminal inductance, phase-phase	L	1125	μH
Terminal resistance	$R_{th1}/R_{th2}$	3.1 / 9.3	K/W
Terminal time constant	$\tau_{w1} / \tau_{w2}$	30 / 1200	s
Operation temperature range		-20 ... +125	°C
Magnetic pitch	$\tau_m$	24	mm
Rod bearings		polymer sleeves	
Housing material		metal, non-magnetic	
Direction of movement		electronically reversible	

		040-11	080-11	120-11	160-11	220-11	
Stroke length	$S_{\max}$	40	80	120	160	220	mm
Repeatability	$O_r$	60	60	60	60	80	μm
Accuracy	$O_a$	200	300	400	500	600	μm
Acceleration	$a_{e \max.}$	83.7	61.3	51.1	43.8	35.4	m/s <sup>2</sup>
Speed	$v_{e \max.}$	1.8	2.2	2.6	2.6	2.8	m/s
Rod length	L1	134	182	218	254	314	mm
Rod mass	$m_m$	110	150	180	210	260	g
Total mass	$m_t$	248	288	318	348	398	g

Note: These motors are for operation with DC-voltage < 75 V DC. The given values are for free standing motors.

Other rod lengths available on request.

## Dimensional drawing



## Option, cable and connection information

Example product designation: LM2070-040-11

Option	Type	Description
-11C	Connector	Material PVC, 10 conductors, AWG28 with connector A05a - TCO, pitch 2 mm

## Connection -11/-11c

No	Function
Pin 1	Phase C
Pin 2	Phase B
Pin 3	Phase A
Pin 4	GND
Pin 5	Um(+5V)
Pin 6	Hall sensor C
Pin 7	Hall sensor B
Pin 8	Hall sensor A

## Standard cable

Material PVC, 10 conductors, AWG 28, grid 1mm, wires tinned.

## Motor characteristic curves

Trapezoidal motion profile: ( $t_1 = t_2 = t_3$ )  
 Displacement distance: 40 mm  
 Friction coefficient: 0,2  
 Slope angle: 0°  
 Rest time: 0,1 s

### Load:

The max. applicable load (incl. rod) at a given speed with an external force of 0 N.

### External force:

The max. permissible external force at a given speed with a load (incl. rod) of:

- 0,5 kg ———
- 1,0 kg - - - - -
- 2,0 kg ⋯⋯⋯

