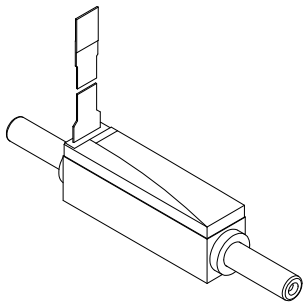
LM 0830...01 with Analog Hall Sensors

推力：1.03 N
瞬間推力：2.74 N
解析度：2.9 µm（使用內建 Analog Hall Sensor）
最高連續移動速度：2.4 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的定位精度與重現性

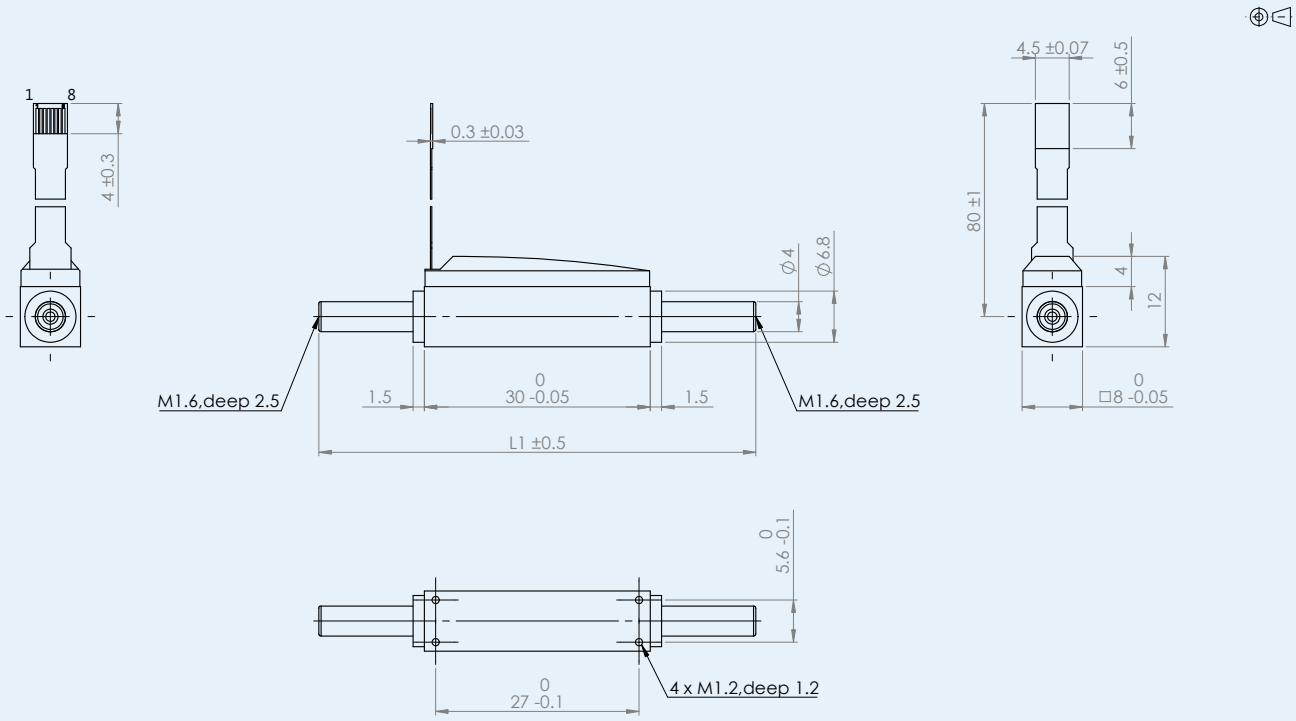
LM 0830- XXX-01
Travel
Motor type

Technical Specification			Values at 22°C
Continuous force	$F_{e\,max.}$	1.03	N
Peak force	$F_{p\,max.}$	2.74	N
Continuous current	$I_{e\,max.}$	0.53	A
Peak current	$I_{p\,max.}$	1.41	A
Back-EMF constant	k_E	1.58	V/m/s
Force constant	k_F	1.94	N/A
Terminal resistance, phase-phase	R	7.37	Ω
Terminal inductance, phase-phase	L	117	µH
Terminal resistance	R_{th1}/R_{th2}	6.6 / 37.4	K/W
Terminal time constant	τ_{w1} / τ_{w2}	4 / 291	s
Operation temperature range		-20 ... +125	°C
Magnetic pitch	τ_m	12	mm
Rod bearings		polymer sleeves	
Housing material		metal, non-magnetic	
Direction of movement		electronically reversible	

		015-01	040-01	
Stroke length	S_{max}	15	40	mm
Repeatability	O_r	40	40	µm
Accuracy	O_a	120	140	µm
Acceleration	$a_{e\,max.}$	206.9	147.8	m/s^2
Speed	$v_{e\,max.}$	1.8	2.4	m/s
Rod length	L1	58	82	mm
Rod mass	m_m	5	7	g
Total mass	m_t	15	17	g

Note: These motors are for operation with DC-voltage < 50 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: **LM0830-015-01**

Option	Type	Description

Connection

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

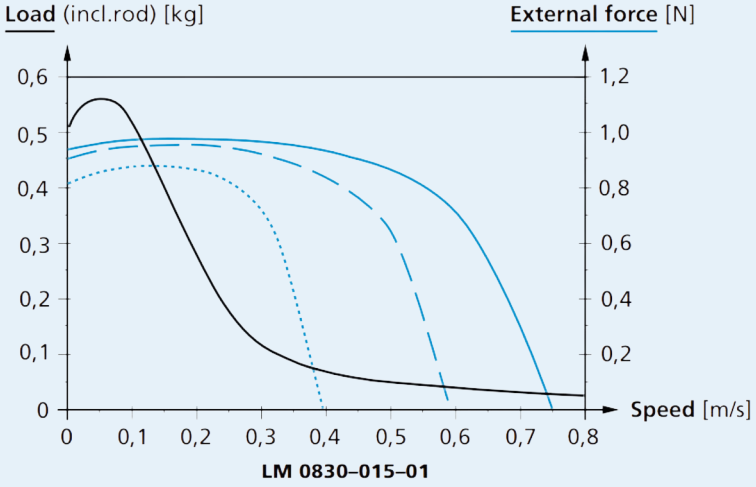
Motor characteristic curves

Trapezoidal motion profile: (t1 = t2 = t3)
Displacement distance: 15 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:

- 0,035 kg
- 0,05 kg
- 0,1 kg



LM 0830–015–01

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Specifications subject to change without notice.
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