

Linear DC-Servomotors

9,2 N

with Analog Hall Sensors

LM 2070 ... 11

Values at 22°C	LM 2070 ... 11	
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	1 125 μ H
Thermal resistance	R_{th1} / R_{th2}	3,1 / 9,3 K/W
Thermal time constant	τ_{w1} / τ_{w2}	30 / 1 200 s
Operating temperature range		-20 ... +125 °C
Magnetic pitch	τ_m	24 mm
Rod bearings		polymer sleeves
Housing material		metal, non-magnetic
Direction of movement		electronically reversible

	LM 2070-	040-11	080-11	120-11	160-11	220-11	
Stroke length	$S_{\max.}$	40	80	120	160	220	mm
Repeatability	σ_r	60	60	60	60	80	μ m
Accuracy	σ_a	200	300	400	500	600	μ m
Acceleration	$a_{e \max.}$	83,7	61,3	51,1	43,8	35,4	m/s ²
Speed	$v_{e \max.}$	1,8	2,2	2,6	2,6	2,8	m/s
Rod length	L_1	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.

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

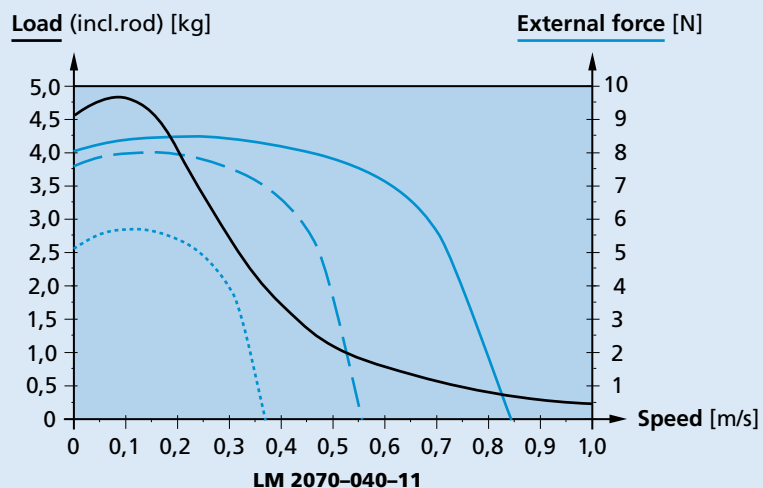
Load:

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



[illegible]

Option, cable and connection information			Connection	
Example product designation: LM2070-040-11			-11/-11C	
Option	Type	Description	No.	Function
-11C	Connector 	Material PVC, 10 conductors, AWG 28 with connector A05a - TCO, pitch 2 mm	1	Phase C
			2	Phase B
			3	Phase A
			4	GND
			5	U _{DD} (+5V)
			6	Hall sensor C
			7	Hall sensor B
			8	Hall sensor A
			9	N.C.
			10	N.C.
			Standard cable	
			Material PVC, 10 conductors, AWG 28, grid 1mm, wires tinned.	

Product combination			
Drive Electronics	Cables / Accessories		
MC 3001 B MC 3001 P MC 3602 B MC 3603 S MC 3606 B MC 5004 P MC 5005 S	To view our large range of accessory parts, please refer to the "Accessories" chapter.		