

Linear DC-Servomotors

for sin/cos control

6,2 N

LM 1483 ... 12

Values at 22°C	LM 1483 ... 12		
Continuous force	$F_{e \max.}$	6,2	N
Peak force	$F_{p \max.}$	18,4	N
Continuous current	$I_{e \max.}$	0,5	A
Peak current	$I_{p \max.}$	1,48	A
Back-EMF constant	k_E	10,16	V/m/s
Force constant	k_F	12,44	N/A
Terminal resistance, phase-phase	R	26,3	Ω
Terminal inductance, phase-phase	L	1 649	μH
Thermal resistance	R_{th1} / R_{th2}	1,97 / 12,5	K/W
Thermal time constant	τ_{w1} / τ_{w2}	12,2 / 789	s
Operating temperature range		-20 ... +125	°C
Magnetic pitch	τ_m	18	mm
Rod bearings		polymer sleeves	
Housing material		metal, non-magnetic	
Direction of movement		electronically reversible	

	LM 1483-	020-12	040-12	060-12	080-12	
Stroke length	$S_{\max.}$	20	40	60	80	mm
Repeatability	σ_r	80	80	80	80	μm
Accuracy	σ_a	200	220	240	260	μm
Acceleration	$a_{e \max.}$	213,1	176,6	158,5	140,5	m/s^2
Speed	$v_{e \max.}$	2,1	2,7	3,1	3,4	m/s
Rod length	$L1$	127	154	172	190	mm
Rod mass	m_m	29	35	39	44	g
Total mass	m_t	117	124	128	132	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: 20 mm
Friction coefficient: 0,2
Slope angle: 0°
Rest time: 0,1 s

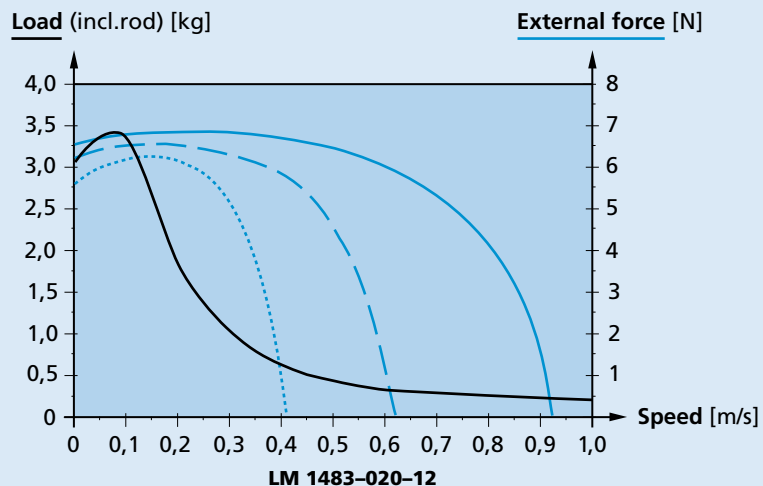
Load:

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

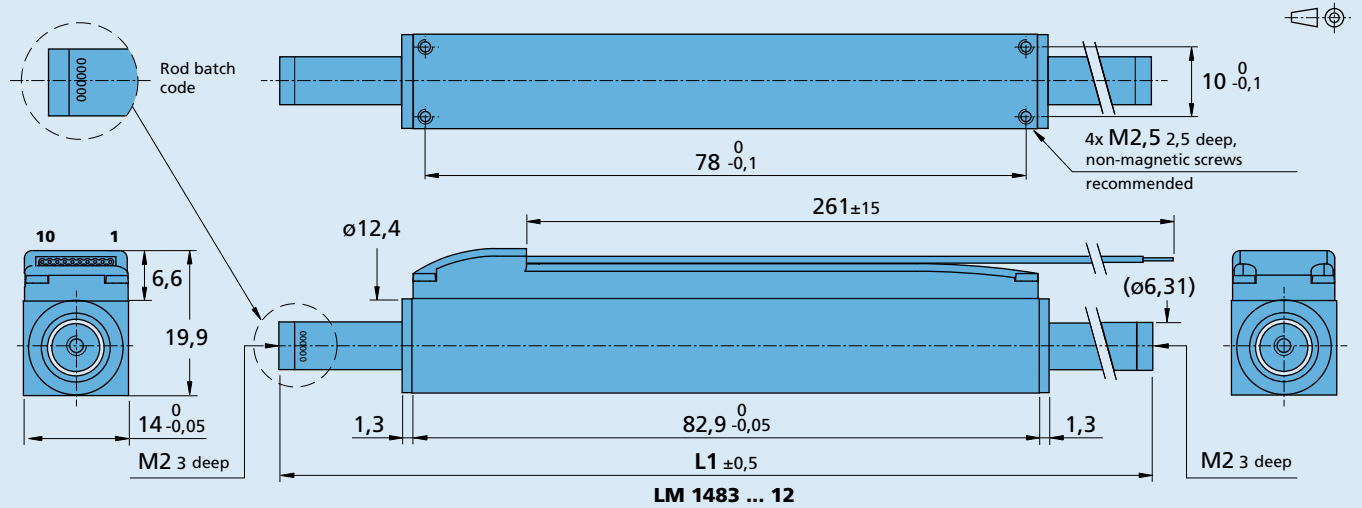
External force:

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

- 0,15 kg —————
- 0,3 kg - - - - -
- 0,6 kg

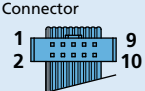


Dimensional drawing



Option, cable and connection information

Example product designation: **LM1483-020-12**

Option	Type	Description	Connection -12/-12C																						
-12C	Connector 	Material PVC, 10 conductors, AWG 28 with connector A05a - TCO, pitch 2 mm	<table border="1"> <thead> <tr> <th>No.</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>1</td><td>Phase C</td></tr> <tr><td>2</td><td>Phase B</td></tr> <tr><td>3</td><td>Phase A</td></tr> <tr><td>4</td><td>GND</td></tr> <tr><td>5</td><td>U_{DD} (+5V)</td></tr> <tr><td>6</td><td>Sin +</td></tr> <tr><td>7</td><td>Sin -</td></tr> <tr><td>8</td><td>Cos +</td></tr> <tr><td>9</td><td>Cos -</td></tr> <tr><td>10</td><td>N.C.</td></tr> </tbody> </table>	No.	Function	1	Phase C	2	Phase B	3	Phase A	4	GND	5	U _{DD} (+5V)	6	Sin +	7	Sin -	8	Cos +	9	Cos -	10	N.C.
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10	N.C.																								
			Standard cable Material PVC, 10 conductors, AWG 28, grid 1mm, wires tinned.																						

Product combination

Drive Electronics	Cables / Accessories
	To view our large range of accessory parts, please refer to the "Accessories" chapter.