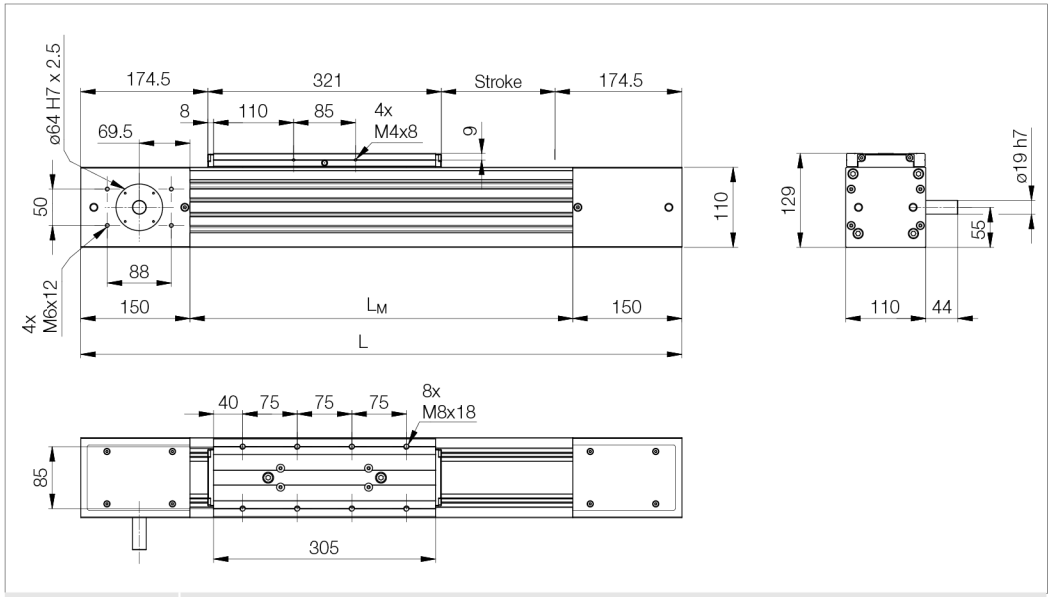
Linear module LM5...NZ...N XL with toothed belt drive



Nominal size	Dimensions			
Designation	L [mm]	L_M [mm]	Belt length [mm]	Weight [kg]
LM5...NZ...N	Stroke + 670	L – 300	2 x Stroke + 1144	18.60 kg + 1.48 kg/100 mm Stroke

Variants/dimensions with protective strip (LM5...BZ...N) see catalogue

XL Please contact LINE TECH for Consulting & Engineering →

Enquiry (technical/quote)

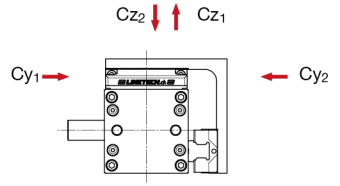
LM	Toothed belt drive				Axial load	Positioning accuracy	Repeating accuracy	Acceler-ation
Size	Type/division	Pinion $d_3 \times l_R$ [mm]	Stroke/rev [mm]	Tension [3] [mm/m]	F [N]	[µ/mm]	.../1000 mm [mm]	a_{max} [m/s²]
LM5...Z...	STD8M	94.22 x 60	296	0.059	... [1]	200/1000 [2]	< 0.20 [2]	50.0 [1]

$d_3 \times l_R$ = pinion diameter x pinion width
1) depending on speed and load
2) backlash not factored in
3) belt tension/metre [mm/m] per 100 N tensile force

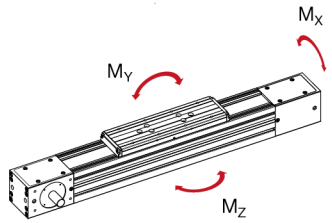
LM	Movement speed		Moments of inertia		Stroke max.	Steel strip	Feed and friction force	Moved mass
	Guide	Drive	Z / Y					
Type	v_{max} [m/s]	v_{max} [m/s]	I_Y [cm⁴]	I_Z [cm⁴]	[mm]		F_V [N]	m_b [kg]
LM5...Z...N	5.0	4)	451.9	623.9	XL: 15280	without	30.00	4.100
						with	40.00	4.140

4) for toothed belt drive, dependent on load and speed and permissible movement speed of the linear guide

Load ratings



Torques



Linear modul	Maximum permissible load [kN]				Maximum permissible torque [Nm]					
Type	static		dynamic		static			dynamic		
	$C_{y_{0\,1,2}}$	$C_{z_{0\,1,2}}$	$C_{y_{1,2}}$	$C_{z_{1,2}}$	M_{x_0}	M_{y_0}	M_{z_0}	M_x	M_y	M_z
LM5...Z...N	85.0	85.0	49.6	49.6	1080	6115	6115	684	5170	5170

The determination of dynamic load ratings and torques is based on a 50,000 m stroke. If comparative values must be calculated for a 100,000 m stroke, the values for M_x, M_y, M_z and C must be divided by the factor 1.26.

With a view to serviceable life, loads of less than 20% of the dynamic load ratings have generally proved to be expedient.

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