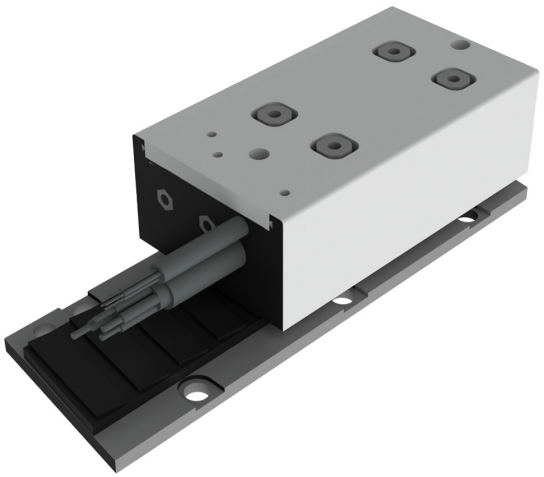
KMC73S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

Magnet plate dimensions			
Code	**KMM730096**	**KMM730144**	**KMM730384**
Le (mm)	96	144	384
M5 bolts	4	6	16
Mass (kg/m)	2,1		
Magnet plates can be butted together.			



FLEX Cable

The KMC-Serie comes standard with a 3m long FLEX power cable.

	Parameter	Remarks	Sym	Unit	KMC73S									
Performance	**Winding type**				II01H	II01I	II02H	II02I	II05H	II05I	II07N	II07H	II07I	II09N
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400 $V_{ac\ rms}$ (max. 900 V_{dc})									
	Ultimate force @ 10°C/s increase	Magnet @ 25°C	F_u	N	135		270		540		810			960
	Peak force @ 6°C/s increase	Magnet @ 25°C	F_p	N	116		232		464		696			840
	Continuous force*	Coils @ 100°C	F_c	N	60		120		240		360			480
	Maximum speed**	@ 560 V_{dc}	V_{max}	m/s	12	36	12	36	12	36	4,5	10,0	36	3.8
	Motor force constant	Mount. sfc. @ 20°C	K	N/A_{rms}	39	12,9	39	12,9	39	12,9	79	39	12,9	103
	Motor constant	Coils @ 25°C	S	N^2/W	95		190		380		570			760
Electrical	**Ultimate current**	Magnet @ 25°C	I_u	A_{rms}	4,1	12,6	8,2	25,1	16,4	56,1	12,3	25,1	42,1	12.6
	Peak current	Magnet @ 25°C	i_p	A_{rms}	3,1	9,5	6,2	18,9	12,4	41,5	9,2	18,9	31,1	9.5
	Maximum continuous current*	Coils @ 100°C	I_c	A_{rms}	1,5	4,7	3	9,3	6	20,3	4,5	9,3	15,2	4.7
	Back EMF Phase-Phase$_{peak}$		B_{emf}	V/m/s	32	11	32	11	32	11	65	32	11	84
	Resistance per phase	Coils @ 25°C ex. cable	R_{ph}	Ω	5,4	0,56	2,7	0,28	1,35	0,14	3,6	0,85	0,4	4.5
	Induction per phase	I < 0.6 Ip	I_{ph}	mH	35	3,75	17	1,83	9	0,9	23	5,5	2,6	29
	Electrical time constant	Coils @ 25°C	T_e	ms	6,5									
Thermal	**Max. continuous power loss**	All coils	P_c	W	49		99		197		296			394
	Thermal resistance	Coils to mount. sfc.	R_{th}	°C/W	1,5		0,75		0,38		0,25			0.19
	Thermal time constant*	up to 63% max. coiltemp.	T_{th}	s	75									
	Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122									
Mechanical	**Coil unit weight**	ex. cables	W	kg	0,6		0,9		1,6		2,3			3.0
	Coil unit length	ex. cables	L	mm	93		143	93	241		336			434
	Motor attraction force	rms @ 0 A	F_a	N	300		500		900		1300			1700
	Magnet pitch NN		t	mm	24									
	Cable mass		m	kg/m	0.18									
	Cable Type (power FLEX)	Length 3 m	d	mm (AWG)	8,3 (>18)									
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,3 (26)									
	Cable Life Time (power FLEX)***	Minimum			5,000,000 cycles									
	Bending Radius Static	Minimum			4x cable diameter									
	Bending Radius Dynamic	Minimum			10x cable diameter									

** These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.*
*** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.*
**** Depending on bending radius, velocity and acceleration.*

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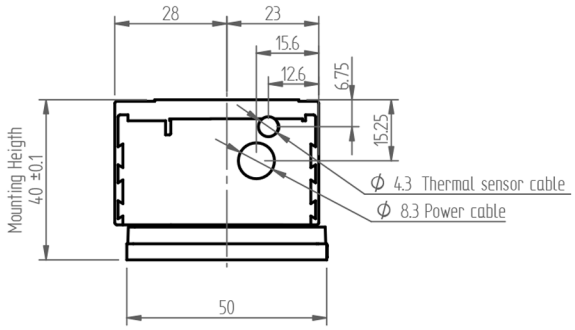
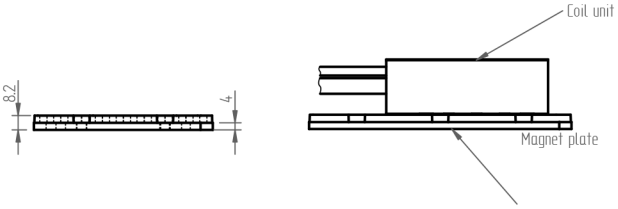
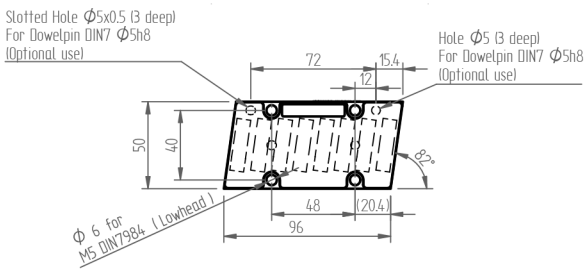
DIMENSIONS AND SPECIFICATIONS

MAGNET PLATES





KMM730096



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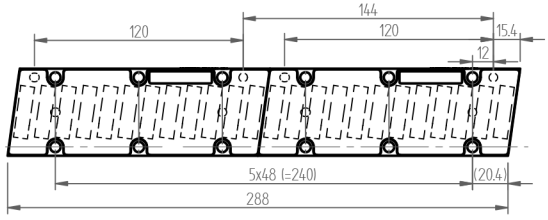
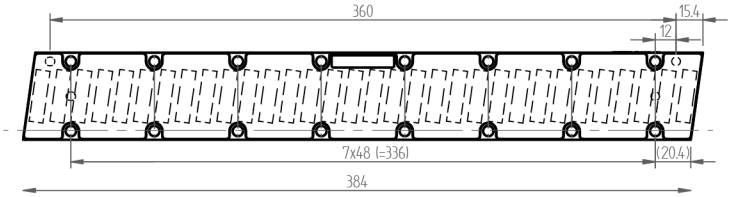
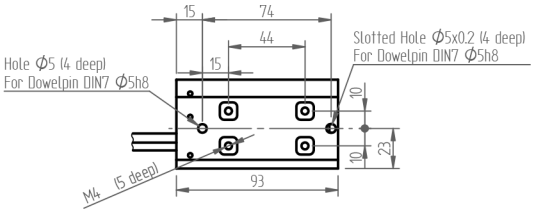


KMM730384



KMC73S-II01H



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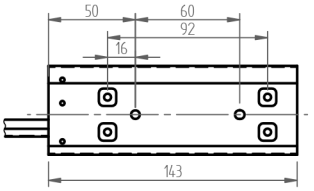
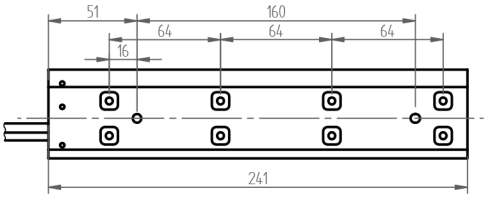
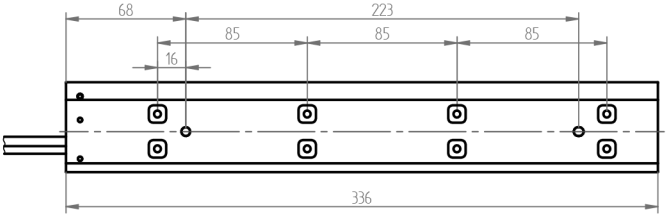


KMC73S-II05H



KMC73S-II07H / II07N / II07I



*Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website. * All sizes are in mm*