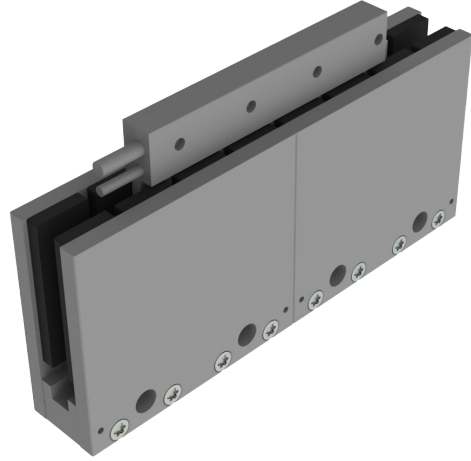


## KMC97S SERIES - IRONLESS LINEAR MOTOR

### DIMENSIONS AND SPECIFICATIONS



Magnet plate dimensions

Code	KMM970144	KMM970171	KMM970456
Le (mm)	144	171	456
M5 bolts	2	3	8
Mass (kg/m)	19,1		
<i>Magnet plates can be butted together.</i>			

Parameter		Remarks	Sym	Unit	KMC97S									
Performance	Winding type				IU06N	IU06H	IU13N	IU13H	IU19N	IU19H	IU26N	IU26H	IU39N	IU39H
	Motor type, max voltage ph-ph				3-phase synchronous Iron core, 230V <sub>ac rms</sub> (320V <sub>dc</sub> )									
	Peak force @ 20°C/s increase	Magnet @ 25°C	F <sub>p</sub>	N	645		1290		1935		2580		3870	
	Continuous force*	Coils @ 110°C	F <sub>c</sub>	N	125		250		375		500		750	
	Maximum speed**	@ 300 V	V <sub>max</sub>	m/s	3,1	7,7	3,1	7,7	3,1	7,7	3,1	7,7	3,1	7,7
	Motor force constant	Mount. sfc. @ 20°C	K	N/A <sub>rms</sub>	107	43,4	107	43,4	107	43,4	107	43,4	107	43,4
Electrical	Motor constant	Coils @ 25°C	S	N <sup>2</sup> /W	242		483		725		966		1449	
	Peak current	Magnet @ 25°C	I <sub>p</sub>	A <sub>rms</sub>	6,0	14,9	12,1	29,7	18,1	44,6	24,1	59,4	36,2	89,2
	Maximum continuous current	Coils @ 110°C	I <sub>c</sub>	A <sub>rms</sub>	1,2	2,9	2,3	5,8	3,5	8,6	4,7	11,5	7,0	17,3
	Back EMF Phase-Phase <sub>peak</sub>		B <sub>emf</sub>	V/m/s	87	35	87	35	87	35	87	35	87	35
	Resistance per phase	Coils @ 25°C ex. cable	R <sub>ph</sub>	Ω	15,8	2,6	7,9	1,29	5,3	0,86	3,95	0,65	2,6	0,43
	Induction per phase		L <sub>ph</sub>	mH	28,4	4,7	14,2	2,3	9,5	1,5	7,1	1,2	4,7	0,8
Thermal	Electrical time constant*	Coils @ 25°C	t <sub>e</sub>	ms	1,8									
	Max. continuous power loss	All coils	P <sub>c</sub>	W	88		176		264		352		528	
	Thermal resistance	Coils to mount. sfc.	R <sub>th</sub>	°C/W	1,03		0,52		0,34		0,25		0,18	
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC									
	Coil unit weight	ex. cables	W	kg	0,54		0,94		1,34		1,74		2,54	
	Coil unit length	ex. cables	L	mm	134		248		362		476		704	
	Motor attraction force		F <sub>a</sub>	N	0		0		0		0		0	
Magnet pitch NN		t	mm	57										

\* 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.

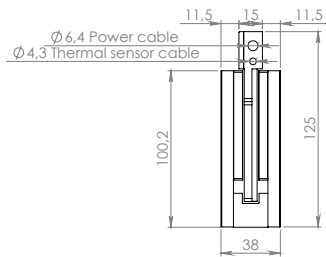
\*\* Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

\*\*\* Depending on bending radius, velocity and acceleration.

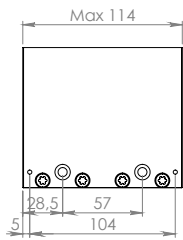
# KMC97S SERIES - IRONLESS LINEAR MOTOR

## DIMENSIONS AND SPECIFICATIONS

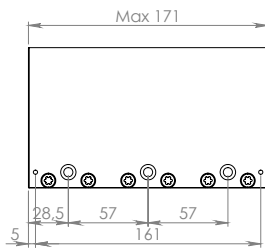
### MAGNET PLATES



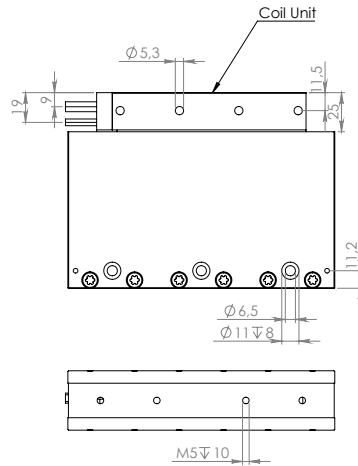
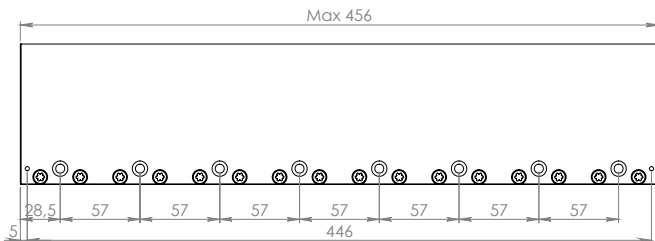
KMM970144



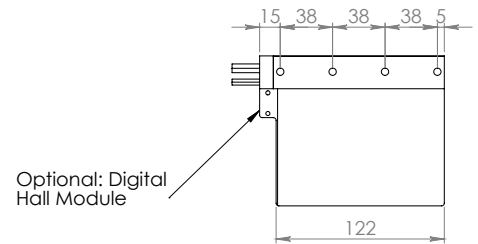
KMM970171



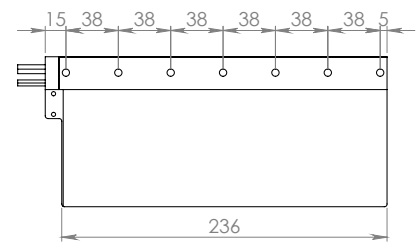
KMM970456



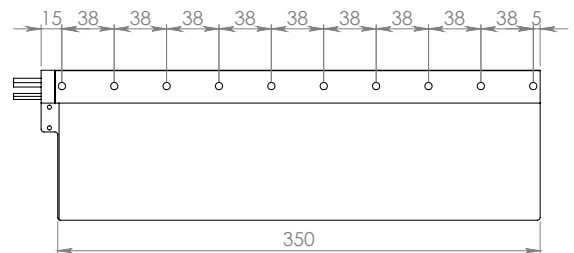
KMC97S-IU64N / IU64H



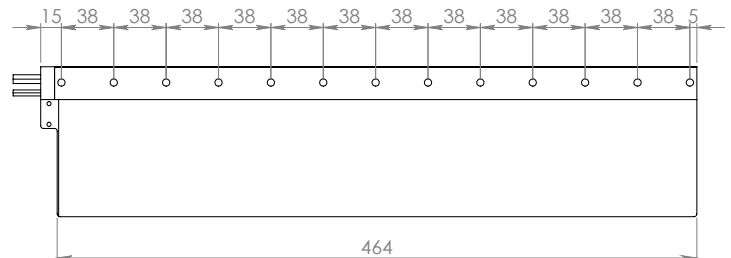
KMC97S-IU13N / IU13H



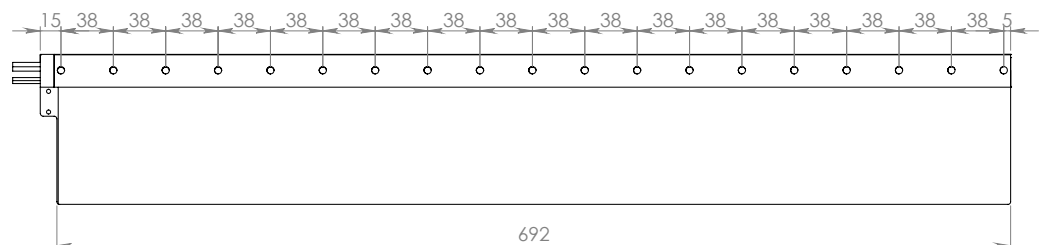
KMC97S-IU19N / IU19H



KMC97S-IU26N / IU26H



KMC97S-IU39N / IU39H



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