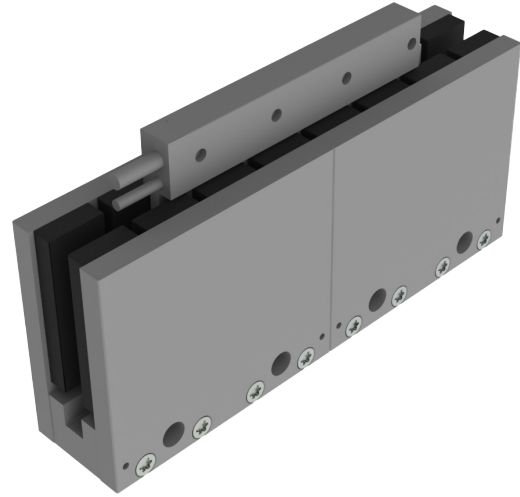


## KMC99S SERIES - IRONLESS LINEAR MOTOR

### DIMENSIONS AND SPECIFICATIONS



#### Magnet plate dimensions

Code	KMM990114	KMM990171	KMM990456
Le (mm)	114	171	456
M5 bolts	2	3	8
Mass (kg/m)	13,5		
<i>Magnet plates can be butted together.</i>			

Parameter		Remarks	Sym	Unit	KMC99S									
Performance	Winding type				IU07N	IU07H	IU15N	IU15H	IU22N	IU22H	IU29N	IU29H	IU44N	IU44H
	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	730		1460		2190		2920		4380	
	Continuous force*	Coils @ 110°C	F <sub>c</sub>	N	145		290		435		580		870	
	Maximum speed**	@ 300 V	V <sub>max</sub>	m/s	2,6	6,8	2,6	6,8	2,6	6,8	2,6	6,8	2,6	6,8
	Motor force constant	Mount. sfc. @ 20°C	K	N/A <sub>rms</sub>	127	49	127	49	127	49	127	49	127	49
Electrical	Motor constant	Coils @ 25°C	S	N <sup>2</sup> /W	340		680		1020		1359		2039	
	Peak current	Magnet @ 25°C	I <sub>p</sub>	A <sub>rms</sub>	5,7	14,9	11,5	29,8	17,2	44,7	23,0	59,6	34,5	89,4
	Maximum continuous current	Coils @ 110°C	I <sub>c</sub>	A <sub>rms</sub>	1,1	3,0	2,3	5,9	3,4	8,9	4,6	11,8	6,9	17,8
	Back EMF Phase-Phase <sub>peak</sub>		B <sub>emf</sub>	V/m/s	104	40	104	40	104	40	104	40	104	40
	Resistance per phase	Coils @ 25°C ex. cable	R <sub>ph</sub>	Ω	15,82	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	28,5	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	119		238		357		476		713	
	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										

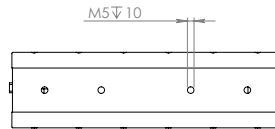
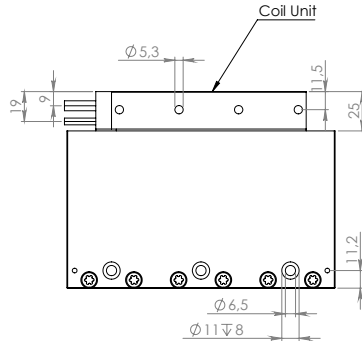
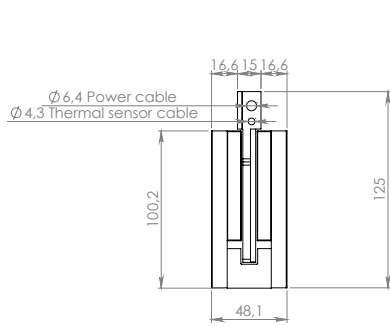
\* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

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

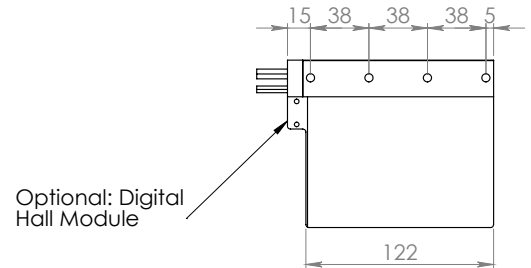
\*\*\* Depending on bending radius, velocity and acceleration.

## KMC99S SERIES - IRONLESS LINEAR MOTOR DIMENSIONS AND SPECIFICATIONS

### MAGNET PLATES

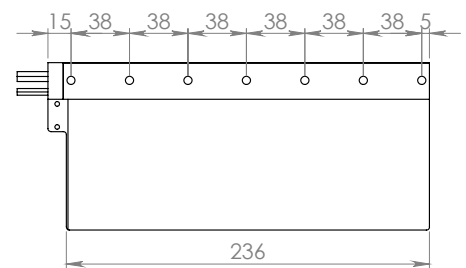


### KMC99S-IU73N / IU73H

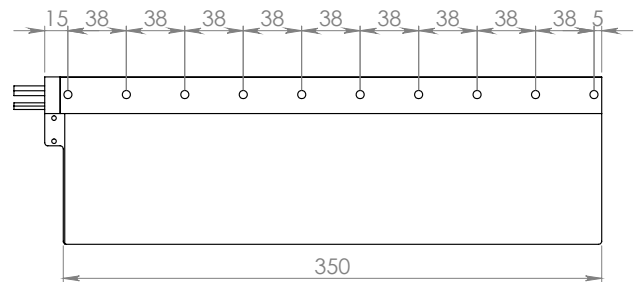


Optional: Digital Hall Module

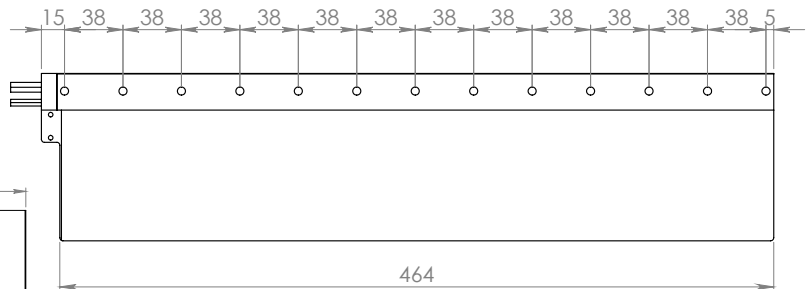
### KMC99S-IU15N / IU15H



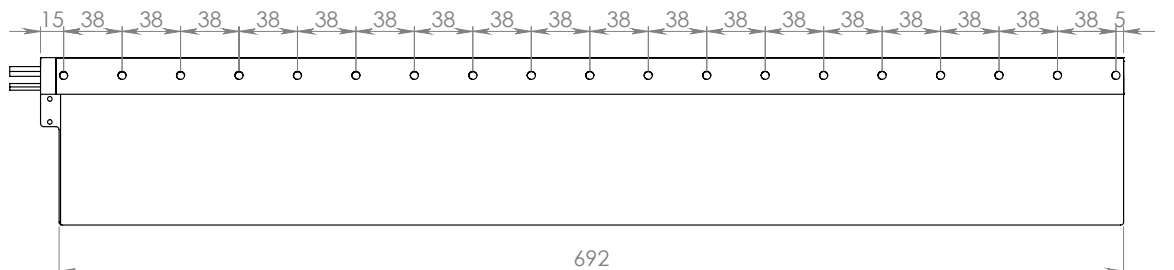
### KMC99S-IU22N / IU22H



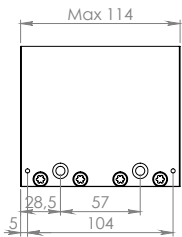
### KMC99S-IU29N / IU29H



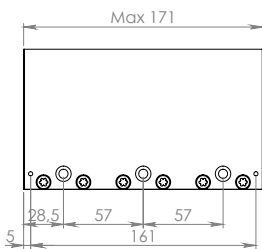
### KMC99S-IU44N / IU44H



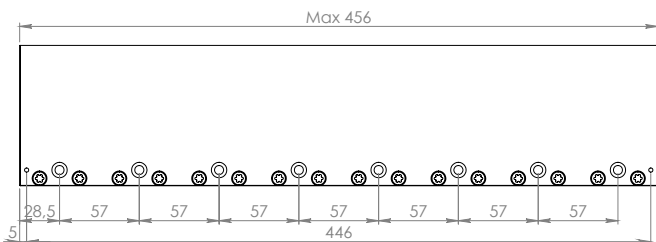
KMM990114



KMM990171



KMM990456



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