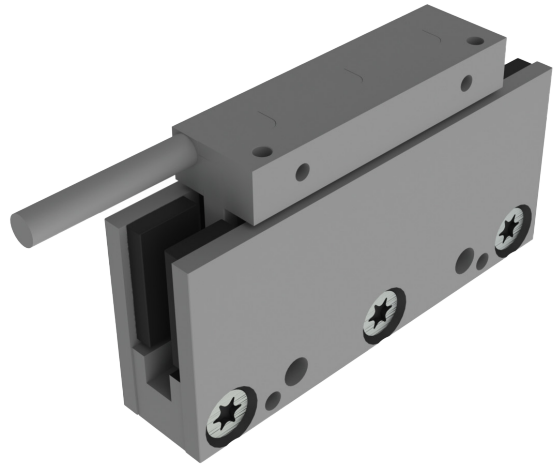


## KMC90S SERIES - IRONLESS LINEAR MOTOR

### DIMENSIONS AND SPECIFICATIONS



Magnet plate dimensions			
Code	KMM900072	KMM900096	KMM900144
Le (mm)	72	96	144
M5 bolts	2	3	4
Mass (kg/m)	2,3		
<i>Magnet plates can be butted together.</i>			

		Parameter	Remarks	Sym	Unit	KMC90S	
Performance	Winding type					IU04H	IU09H
	Motor type, max voltage ph-ph					3-phase synchronous Iron core, 45V <sub>ac rms</sub> (60V <sub>dc</sub> )	
	Peak force @ 20°C/s increase	Magnet @ 25°C	F <sub>p</sub>	N	46	92	
	Continuous force*	Coils @ 110°C	F <sub>c</sub>	N	11,5	23	
	Maximum speed**	@ 600 V	V <sub>max</sub>	m/s	5		
	Motor force constant	Mount. sfc. @ 20°C	K	N/A <sub>rms</sub>	7,3		
Electrical	Motor constant	Coils @ 25°C	S	N <sup>2</sup> /W	7,5	15	
	Peak current	Magnet @ 25°C	i <sub>p</sub>	A <sub>rms</sub>	6,3	12,6	
	Continuous current air cooled	Coils @ 110°C	I <sub>c</sub>	A <sub>rms</sub>	1,6	3,2	
	Back EMF Phase-Phase <sub>peak</sub>		B <sub>emf</sub>	V/m/s	6		
	Resistance per phase	Coils @ 25°C ex. cable	R <sub>ph</sub>	Ω	2,4	1,175	
	Induction per phase	l < 0.6 lp	L <sub>ph</sub>	mH	0,8	0,4	
Thermal	Electrical time constant	Coils @ 25°C	T <sub>e</sub>	ms	0,355		
	Max. continuous power loss	All coils	P <sub>c</sub>	W	24	47	
	Thermal resistance	Coils to mount. sfc.	R <sub>th</sub>	°C/W	3,2	1,6	
Mechanical	Temperature cut-off / sensor				PTC 1kΩ / NTC		
	Coil unit weight	ex. cables	W	kg	0,038	0,075	
	Coil unit length	ex. cables	L	mm	49	97	
	Motor attraction force	rms @ 0 A	F <sub>a</sub>	N	0	0	
	Magnet pitch NN		t	mm	24		
	Cable mass		m	kg/m	0,065		
	Cable Type (power FLEX)		d	mm (AWG)	4,5 (24)		
	Cable Type (power)	Length 3 m	d	mm (AWG)	4.5 (22)		
	Cable Type (sensor)	Length 3 m	d	mm (AWG)	4,9 (26)		
	Cable Life	Minimum			12,000,000 cycles		
	Bending Radius Static	Minimum			4x cable diameter		
Bending Radius Dynamic	Minimum			7,5x cable diameter			

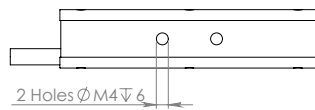
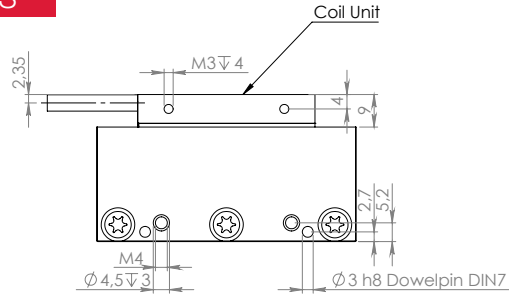
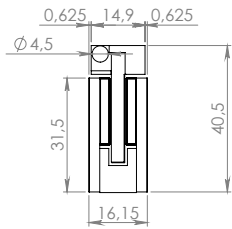
\* These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool.

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

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

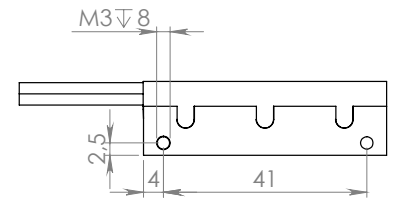
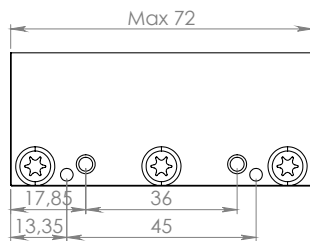
## KMC90S SERIES - IRONLESS LINEAR MOTOR DIMENSIONS AND SPECIFICATIONS

### MAGNET PLATES

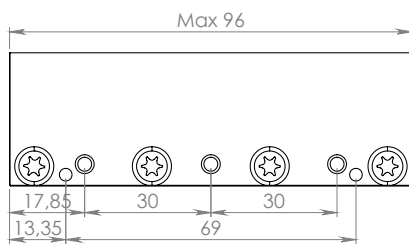
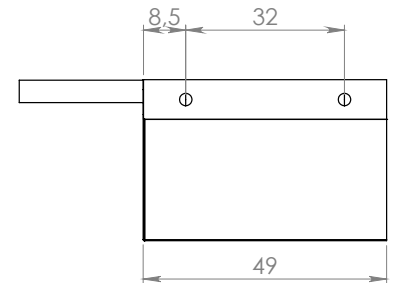


KMM900072

KMC90S-IU04N

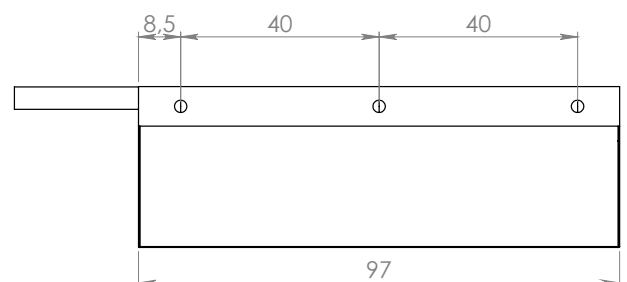
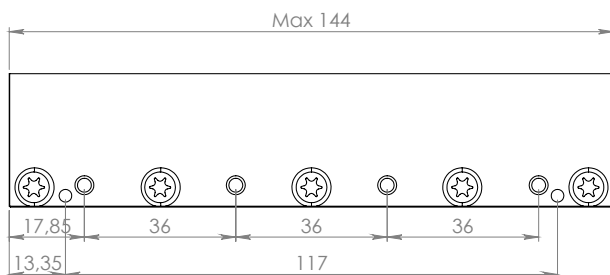
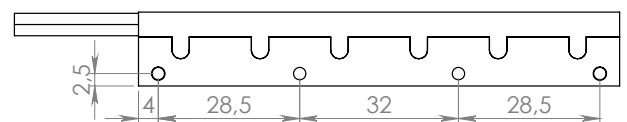


KMM900096



KMC90S-IU09H

KMM900144



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