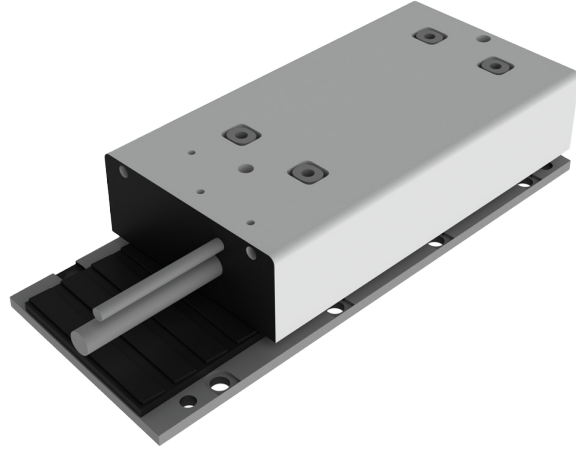


KMC75S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS



Magnet plate dimensions		
Code	KMM750192	KMM750288
Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	3,8	
Magnet plates can be butted together.		

Parameter	Remarks	Sym	Unit	KMC75S														
				II04N	II04H	II06N	II06H	II09N	II09H	II11N	II11H	II13N	II13H	II18N	II18H	II25N	II25H	II36Q
Winding type				3-phase synchronous Iron core, 400 V _{ac,rms} (max. 900 V _{dc})														
Motor type, 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	496	744	992	1240	1488	1984	2480	3600							
Peak force @ 6°C/s increase	Magnet @ 25°C	F _p	N	440	660	890	1100	1320	1760	2200	3200							
Continuous force aircooled*	Coils @ 100°C	F _c	N	200	300	400	500	600	800	1100	1680							
Maximum speed**	@ 560 V _{dc}	V _{max}	m/s	3.5	7	2.5	7	3.5	7	3.5	7	3.5	7	3.5	7	4	8	1.7
Motor force constant	Mount. sfc. @ 20°C	K	N/A _{rms}	93	46.5	140	46.5	93	46.5	112	46.5	93	44.9	93	46.5	112.5	46.5	180
Motor constant	Coils @ 25°C	S	N ² /W	380	570	760	950	1140	1520	1900	3040							
Ultimate current	Magnet @ 25°C	i _u	A _{rms}	6.5	13.1	6.5	19.6	13.1	26.2	13.5	32.7	19.6	41	26.2	52	29.8	72.1	27.1
Peak current	Magnet @ 25°C	I _p	A _{rms}	5.0	10.0	5.0	15.0	10.0	20.0	10.4	25.0	15.0	31.0	20.0	40.0	22.7	55.0	20.7
Continuous current watercooled*	Coils @ 100°C	I _{cw}	A _{rms}	2.26	4.5	2.26	6.8	4.5	9.0	4.7	11.3	6.8	14.0	9.0	18.1	9.8	23.7	9.4
Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	76	38	114	38	76	38	92	38	76	38	76	38	92	38	147
Resistance per phase	Coils @ 25°C ex. cable	R _{ph}	Ω	7.2	1.80	10.8	1.21	3.6	0.90	4.3	0.72	2.41	0.59	1.81	0.46	2.17	0.37	3.45
Induction per phase	l < 0.6 lp	L _{ph}	mH	54.0	14.0	81.0	9.0	27.0	7.0	32.0	5.4	18.0	4.4	14	3.4	16.3	2.8	25.9
Electrical time constant	Coils @ 25°C	t _e	ms	7.5														
Max. continuous power loss	All coils	P _c	W	150	225	300	375	450	600	853	1200							
Thermal resistance	Coils to mount. sfc.	R _{th}	°C/W	0.48	0.32	0.24	0.19	0.16	0.12	0.1	0.06							
Thermal time constant*	up to 63% max. coiltemp.	t _{th}	s	77														
Temperature cut-off / sensor				PTC 1kΩ / KTY 83-122														
Coil unit weight	ex. cables	M	kg	1.5	2.0	2.6	3.2	3.8	5.2	6	9.75							
Coil unit length	ex. cables	L	mm	146	194	244	290	336	468	562	855							
Motor attraction force	rms @ 0 A	F _a	N	950	1325	1700	2075	2450	3400	4150	6400							
Magnet pitch NN		t	mm	24														
Cable mass		m	kg/m	0.18														
Cable Type (power FLEX)***	Length 3 m	d	mm (AWG)	7.4 (18)						11.9 (14)								
Cable Type (sensor)	Length 3 m	d	mm (AWG)	4.3 (26)														
Cable Life Time (power FLEX)***	Minimum		Cycles	5.000.000 cycles														
Bending Radius Static	Minimum		mm	4x cable diameter														
Bending Radius Dynamic	Minimum		mm	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.

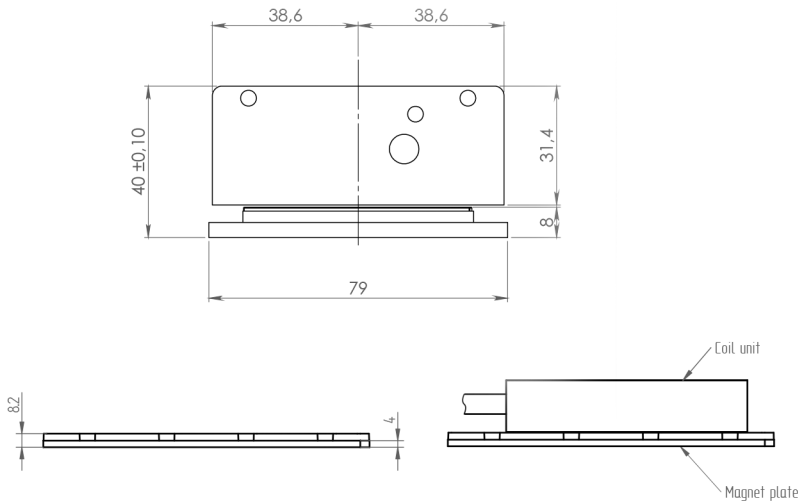
** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

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

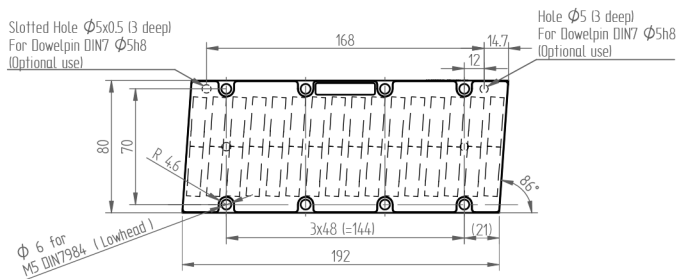
KMC75S SERIES - IRON CORE LINEAR MOTOR

DIMENSIONS AND SPECIFICATIONS

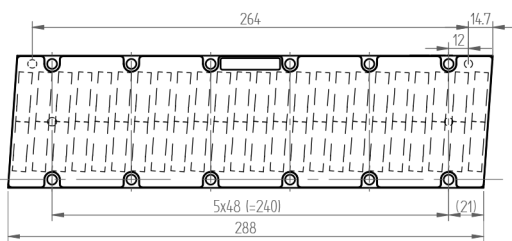
MAGNET PLATES



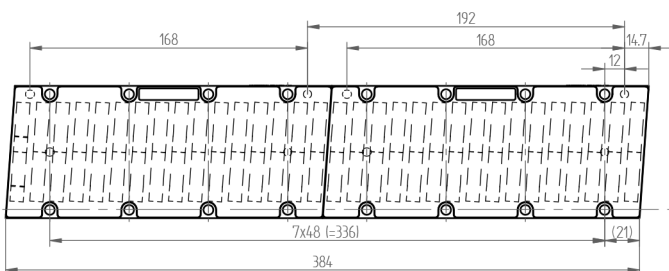
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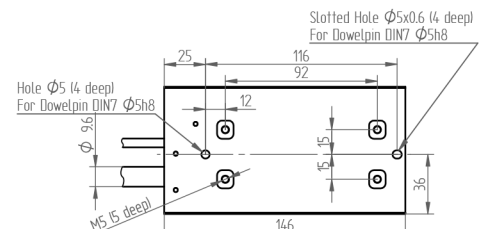
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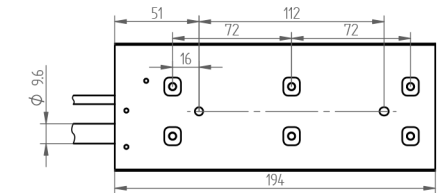
KMM750192 x 2



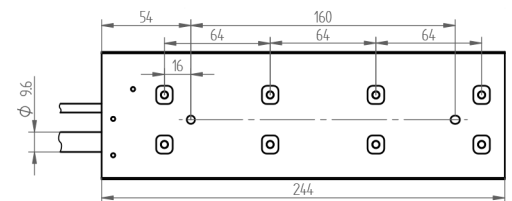
KMC75S-II04N / II04H



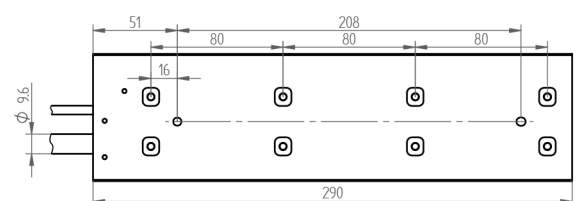
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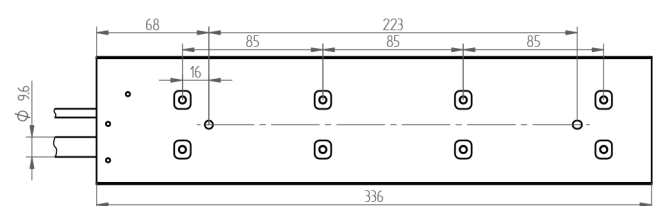
KMC75S-II09N / II09H



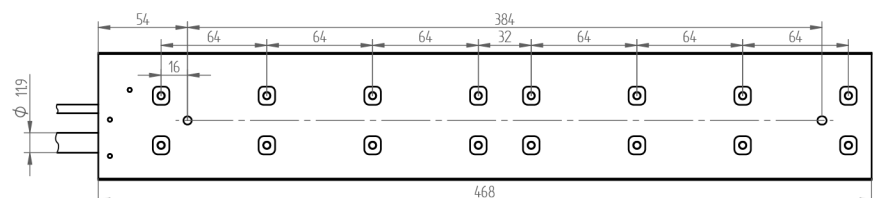
KMC75S-II11N / II11H



KMC75S-II13N / II13H



KMC75S-II18N / II18H



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