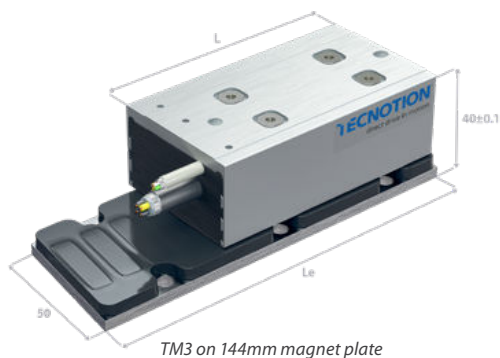




TM series

	Parameter	Remarks	Symbol	Unit	TM3		TM6		TM12	TM18	
Performance	Winding type				S	Z	S	Z	S	N	S
	Motor type, max voltage ph-ph	3-phase synchronous	U _{max}	V _{ac,rms} (V _{dc})	400 (565)						
	Ultimate force @ 10 K/s increase	magnets @ 25°C	F _u	N	120		240		480	720	
	Peak force @ 6 K/s increase	magnets @ 25°C	F _p	N	105		210		420	630	
	Continuous force ¹	coils @ 100°C	F _c	N	60		120		240	360	
	Maximum speed ²	@ U _{max} @ F _c	v _{max}	m/s	11	32	11	32	11	5.5	11
	Motor force constant	I ≤ I _c	K _f	N/A _{rms}	39	12.9	39	12.9	39	79	39
	Motor constant	coils @ 25°C	S	N ² /W	94	99	188	198	376	578	596
Electrical	Ultimate current	magnets @ 25°C	I _u	A _{rms}	4.1	12.6	8.2	25.1	16.4	12.3	25.1
	Peak current	magnets @ 25°C	I _p	A _{rms}	3.1	9.5	6.2	18.9	12.4	9.2	18.9
	Continuous current ¹	coils @ 100°C	I _c	A _{rms}	1.5	4.7	3.0	9.3	6.0	4.5	9.3
	Back EMF ph-ph _{peak}		K _e	V _{dc} /m/s	32	11	32	11	32	65	32
	Resistance per phase	coils @ 25°C ex. cable	R _{ph}	Ω	5.4	0.56	2.7	0.28	1.35	3.6	0.85
	Induction per phase	I < 0.6 I _p	L _{ph}	mH	35	3.7	17	1.8	8.7	23	5.5
	Electrical time constant		τ _e	ms	6.5						
Thermal	Continuous power loss ¹	coils @ 100°C	P _c	W	49		99		197	296	
	Thermal resistance	coils to mount. sfc.	R _{th}	K/W	1.5		0.75		0.38	0.25	
	Thermal time constant		τ _{th}	s	75						
	Temperature sensor				PTC 1kΩ / KTY 83-122						
Mechanical	Coil unit mass	ex. cables	m	kg	0.6		0.9		1.6	2.3	
	Coil unit length	ex. cables	L	mm	93		143		241	336	
	Motor attraction force	rms @ 0 A	F _a	N	300		500		900	1300	
	Magnet pitch NN		τ	mm	24						
	Cable mass	all cables		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)	4.7 (26)						
	Cable life (power FLEX) ³	minimum		cycles	5,000,000						
	Bending radius static (power FLEX)	minimum			4x cable diameter						
	Bending radius dynamic (power FLEX)	minimum			10x cable diameter						

FLEX cable

The TM series comes standard with a 3m long FLEX power cable.

Magnet plate dimensions

Le (mm)	96	144	384
M5 bolts	4	6	16
Mass (kg/m)	2.1		

Magnet plates can be butted together.

Approvals



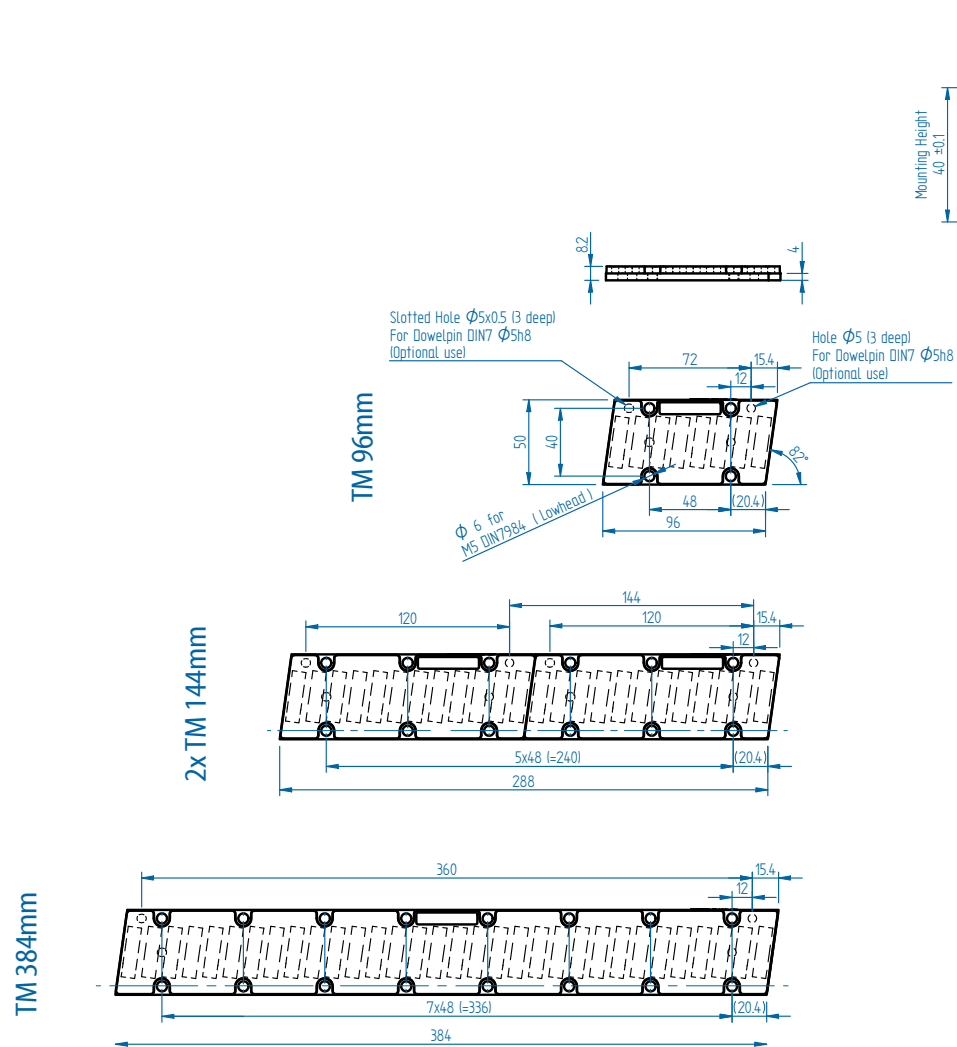
All specifications ±10%

¹ These values are only applicable when the mounting surface is at 20°C and the motor is driven at continuous current. If these values differ in your application, please check our simulation tool.

² Actual values depend on bus voltage. Please check the F/V diagram in our simulation tool.

³ Depending on bending radius, velocity and acceleration.

Magnet plates



Coil units

