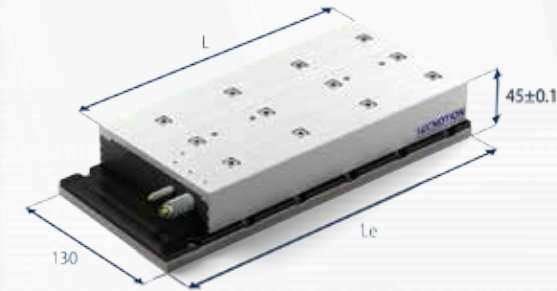


	Parameter	Remarks	Symbol	Unit	TB12		TB15		TB30	
Performance	Winding type				N	S	N	S	N	S
	Motortype, max voltage ph-ph				3-phase synchronous Iron core, 400V _{ac rms} (600V _{dc})					
	Ultimate Force @ 10°C/s increase	magnet @ 25°C	F _u	N	1800		2250		4500	
	Peak Force @ 6°C/s increase	magnet @ 25°C	F _p	N	1600		2000		4000	
	Continuous Force*	coils @ 100°C	F _c	N	760		950		1900	
	Maximum Speed**	@ 560 V	v _{max}	m/s	3	6	2.5	6	2.5	6
	Motor Force Constant	mount. sfc. @ 20°C	K	N/A _{rms}	186	93	225	93	225	93
	Motor Constant	coils @ 25°C	S	N ² /W	1750		2150		4300	
Electrical	Ultimate Current	magnet @ 25°C	I _u	A _{rms}	13.0	26	13.5	33	27	66
	Peak Current	magnet @ 25°C	I _p	A _{rms}	10.0	20	10.0	25	20	50
	Maximum Continuous Current	coils @ 100°C	I _c	A _{rms}	4.1	8.2	4.2	10.2	8.5	20.5
	Back EMF Phase-Phase _{peak}		B _{emf}	V/m/s	152	76	183	76	183	76
	Resistance per Phase*	coils @ 25°C ex. cable	R _{ph}	Ω	6.3	1.6	7.6	1.3	3.8	0.65
	Induction per Phase	I < 0.6 I _p	L _{ph}	mH	51	13	60	10	30	5
	Electrical Time Constant*	coils @ 25°C	τ _e	ms	8		8		8	
Thermal	Maximum Continuous Power Loss	all coils	P _c	W	430		530		1060	
	Thermal Resistance	coils to mount. sfc.	R _{th}	°C/W	0.15		0.12		0.06	
	Thermal Time Constant*	up to 63% max. coiltemp.	τ _{th}	s	90		90		90	
	Temperature Cut-off / Sensor				PTC 1kΩ / KTY 83-122					
Mechanical	Coil Unit Weight	ex. cables	W	kg	4.9		5.9		11.6	
	Coil Unit Length	ex. cables	L	mm	244		290		562	
	Motor Attraction Force	rms @ 0 A	F _a	N	3400		4150		8300	
	Magnet Pitch NN		τ	mm	24		24		24	
	Cable Mass		m	kg/m	0.3		0.3		0.3	
	Cable Type (Power)	length 1 m	d	mm (AWG)	11.9 (14)					
	Cable Type (Sensor)	length 1 m	d	mm (AWG)	4.3 (26)					



TB12 on 288mm magnet plate shown

Approvals



See page 28 for Analog hall

Magnet plate dimensions

Le (mm)	192	288
M5 bolts	8	12
Mass (kg/m)	10.5	

Magnet plates can be butted together.

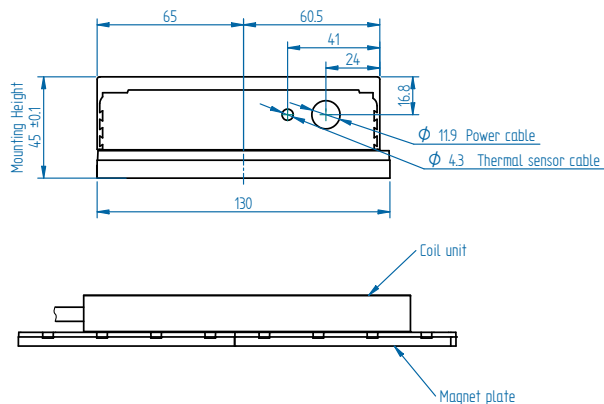
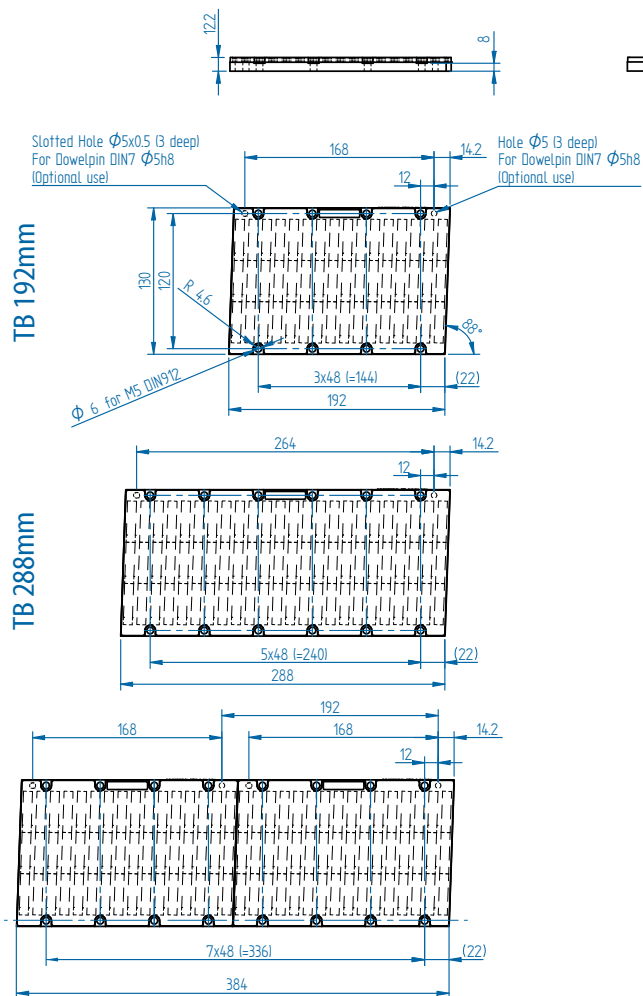
All specifications ±10%

* 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.

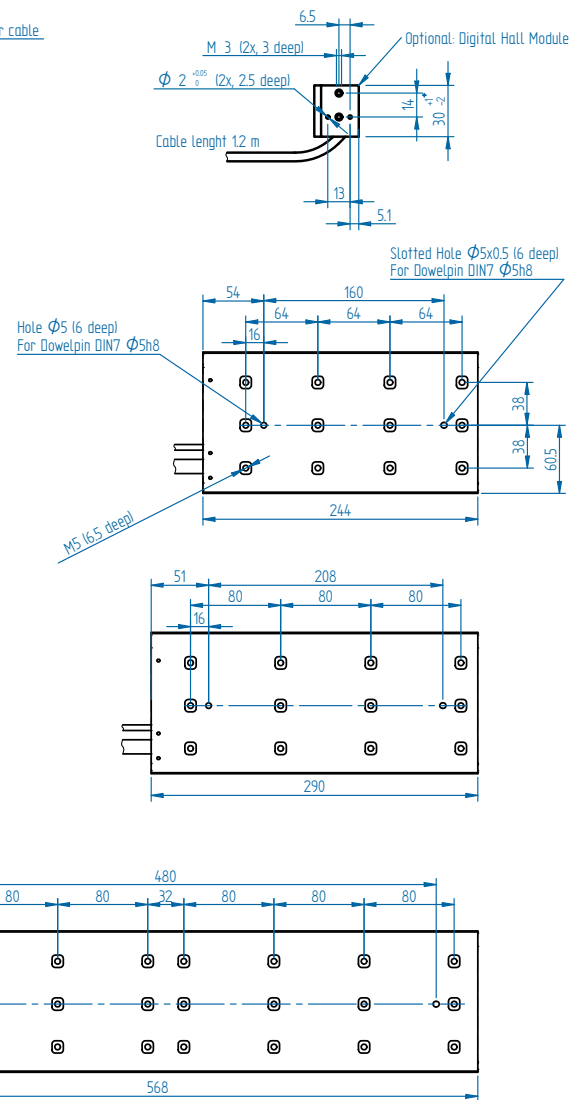
** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

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.

MAGNET PLATES



COIL UNITS

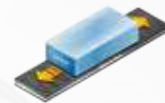


TB30

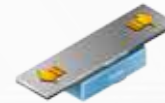
[DIRECT DRIVE ADVANTAGES]

The direct drive technology of linear motors is a perfect way to enhance productivity, accuracy, and dynamic performance. Linear motors eliminate the need for mechanical transmissions like rack and pinion, belts and speed reducers. Between coil unit and magnets there is no contact, this means no mechanical wear. The technology makes designs slimmer, modular and reduces costs.

Modular system. All motors can be used in various configurations:



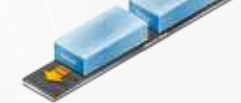
1. single moving coil



2. moving magnet



3. parallel coupled coil



4. in-line on a single track



5. crosstable or gantry

High force density

More force in a smaller packing means lowering footprint and fits better in smal(ler) spaces.

Low cogging

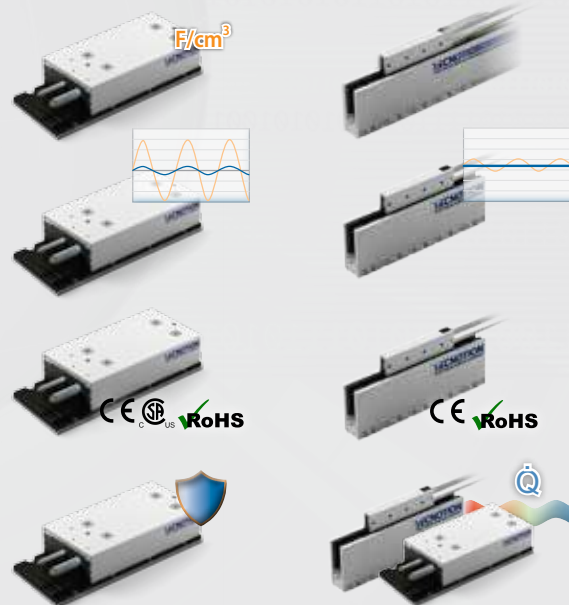
Optimized iron core motor design, for smooth motion and position accuracy in your application.

Approved for CSA and CE, ROHS

Iron core motors are approved for CE, CSA and ROHS.

Aluminium housed design

Housed design with integrated water cooling for TBW- and TL series.



High acceleration and dynamics

The outstanding force to mass ratio of the ironless coils enables unmatched system dynamics.

No cogging, extremely low force ripple

Ironless motors have no cogging effects. Offering smooth motion and position accuracy in your application.

Approved for CE and ROHS

Ironless motors are CE and RoHS approved.

Low thermal resistance

Allowing good heat transfer, achieving an extremely high continuous force for all motors when using a descent size heatsink or active cooling.