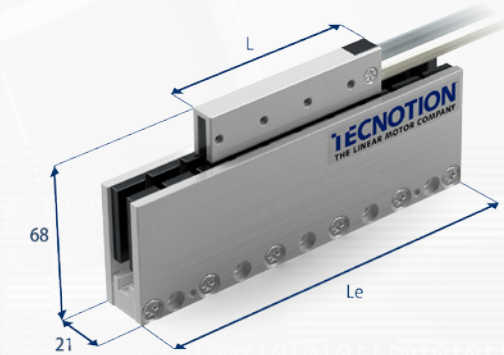


Parameter		Remarks	Symbol	Unit	UM3		UM6		UM9		UM12	
Performance	Winding type				N	S	N	S	N	S	N	S
	Motor type, max voltage ph-ph				3-phase synchronous Ironless, 230V <sub>ac rms</sub> (300V <sub>dc</sub> )							
	Peak Force @ 20°C/s increase	magnet @ 25°C	F <sub>p</sub>	N	100		200		300		400	
	Continuous Force*	coils @ 110°C	F <sub>c</sub>	N	29		58		87		116	
	Maximum Speed**	@ 300 V	v <sub>max</sub>	m/s	10	18	10	18	10	17	10	16
	Motor Force Constant	mount. sfc. @ 20°C	K	N/A <sub>rms</sub>	36.3	19.9	36.3	19.9	36.3	19.9	36.3	19.9
Electrical	Motor Constant	coils @ 25°C	S	N <sup>2</sup> /W	24		48		71		95	
	Peak Current	magnet @ 25°C	I <sub>p</sub>	A <sub>rms</sub>	2.8	5.0	5.5	10.0	8.3	15.0	11.0	20.0
	Maximum Continuous Current	coils @ 110°C	I <sub>c</sub>	A <sub>rms</sub>	0.8	1.5	1.6	2.9	2.4	4.4	3.2	5.8
	Back EMF Phase-Phase <sub>peak</sub>		B <sub>emf</sub>	V / m/s	30	16	30	16	30	16	30	16
	Resistance per Phase*	coils @ 25°C ex. cable	R <sub>f</sub>	Ω	18.5	5.5	9.3	2.8	6.2	1.8	4.6	1.4
	Induction per Phase	l < 0.6 l <sub>p</sub>	L <sub>f</sub>	mH	6	1.8	3	0.9	2	0.6	1.5	0.4
Thermal	Electrical Time Constant*	coils @ 25°C	τ <sub>e</sub>	ms	0.35		0.35		0.35		0.35	
	Maximum Continuous Power Loss	all coils	P <sub>c</sub>	W	47		95		142		190	
	Thermal Resistance	coils to mount. sfc.	R <sub>th</sub>	°C/W	1.8		0.9		0.6		0.45	
	Thermal Time Constant*	to max. coil temp.	τ <sub>th</sub>	s	36		36		36		36	
Mechanical	Temperature Cut-off / Sensor				PTC 1kΩ / NTC							
	Coil Unit Weight	ex. cables	W	kg	0.084		0.162		0.240		0.318	
	Coil Unit Length	ex. cables	L	mm	78		138		198		258	
	Motor Attraction Force		F <sub>a</sub>	N	0		0		0		0	
	Magnet Pitch NN		τ	mm	30		30		30		30	
	Cable Mass		m	kg/m	0.08		0.08		0.08		0.08	
	Cable Type (Power)	length 1 m	d	mm (AWG)	5.3 (22)							
	Cable Type (Sensor)	length 1 m	d	mm (AWG)	3.2 (26)							



UM3 in 150mm magnet yoke shown

Approvals



#### Magnet yoke dimensions

Le (mm)	90	120	150	390
M4 bolts	3	4	6	13
Mass (kg/m)	4.8			

Magnet yokes can be butted together.

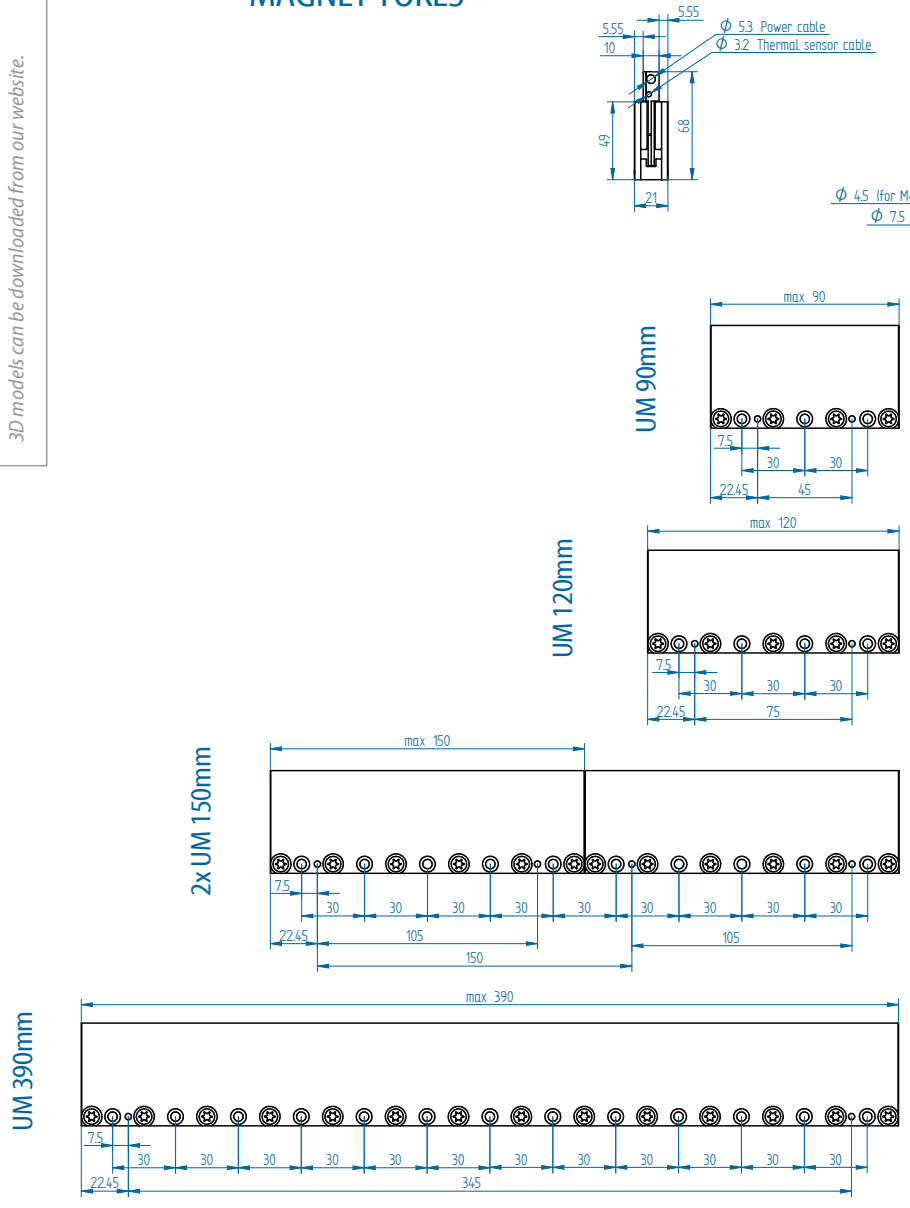
All specifications ±10%

\* 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 Ironless installation manual. CAD files and  
3D models can be downloaded from our website.

**MAGNET YOKES**



**COIL UNITS**

