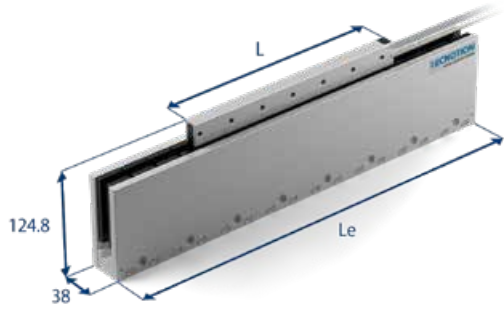


UXA Series Ironless



UXA6 in 456mm magnet yoke shown

UXA3S Power Cable (FLEX cable of 3m)

Cable Type	9.0 (21) mm (AWG)
Cable Life****	5,000,000 cycles
Bending Radius Static	4x cable diameter
Bending Radius Dynamic	10x cable diameter

**** Depending on Bending Radius, Velocity and Acceleration.

Magnet yoke dimensions

Le (mm)	114	171	456
M6 bolts	2	3	8
Mass (kg/m)	19		

Magnet yokes can be butted together.

Approvals



Parameter	Remarks	Symbol	Unit	UXA3		UXA6		UXA9		UXA12		UXA18
				N	S	N	S	N	S	N	S	N
Winding type				N	S	N	S	N	S	N	S	N
Motortype, max voltage ph-ph				3-phase synchronous Ironless, 230V _{ac rms} (325V _{dc})								
Peak force @ 20°C/s increase	magnet @ 25°C	F _p	N	615		1230		1845		2460		3690
Continuous force*	coils @ 110°C	F _c	N	120		240		360		480		720
Maximum speed**	@ 300 V	v _{max}	m/s	2.9	7.2	2.9	7.2	2.9	7.2	2.9	7.2	2.9
Motor force constant	mount. sfc. @ 20°C	K	N/A _{rms}	107	43.4	107	43.4	107	43.4	107	43.4	107
Motor constant	coils @ 25°C	S	N ² /W	244		488		732		976		1464
Peak current	magnet @ 25°C	I _p	A _{rms}	5.6	13.9	11.3	28	16.9	42	22.6	56	34
Maximum continuous current	coils @ 110°C	I _c	A _{rms}	1.14	2.80	2.27	5.6	3.4	8.4	4.5	11.2	6.8
Back EMF phase-phase _{peak}		B _{emf}	V/m/s	87	35	87	35	87	35	87	35	87
Resistance per phase*	coils @ 25°C ex. cable	R _{ph}	Ω	15.8	2.6	7.9	1.29	5.3	0.86	4.0	0.65	2.6
Induction per phase		L _{ph}	mH	28	4.6	14	2.3	9	1.5	7	1.2	4.7
Electrical time constant*	coils @ 25°C	τ _e	ms	1.8		1.8		1.8		1.8		1.8
Maximum continuous power loss	all coils	P _c	W	82		165		247		330		494
Thermal resistance	coils to mount. sfc.	R _{th}	°C/W	1.04		0.52		0.35		0.26		0.17
Thermal time constant	up to 63% max. coiltemp.	τ _{th}	s	156		156		156		156		156
Temperature cut-off / sensor*				PTC 1kΩ / NTC								
Coil unit weight	ex. cables	W	kg	0.55		0.95		1.35		1.75		2.55
Coil unit length	ex. cables	L	mm	134		248		362		476		701
Motor attraction force		F _a	N	0		0		0		0		0
Magnet pitch NN		τ	mm	57		57		57		57		57
Cable mass		m	kg/m	0.18		0.18		0.18		0.18		0.18
Cable type (power)	length 1 m	d	mm (AWG)	6.4 (18) except UXA3S***								
Cable type (sensor)	length 1 m	d	mm (AWG)	4.3 (26)								

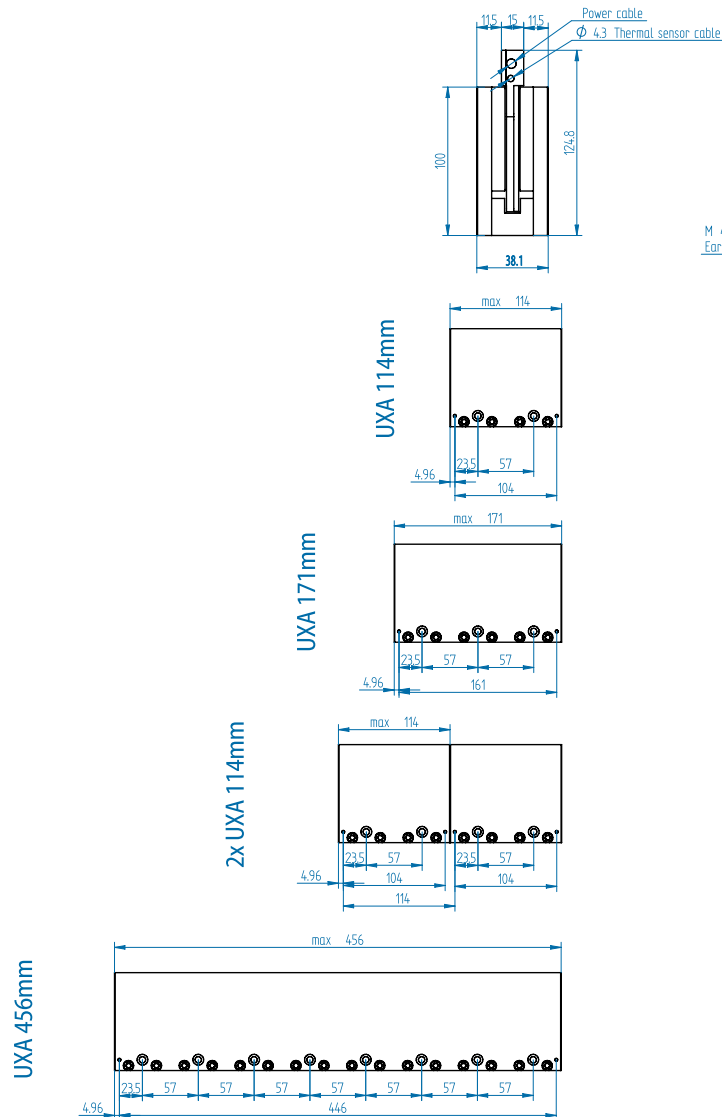
All specifications ±10%

* 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.

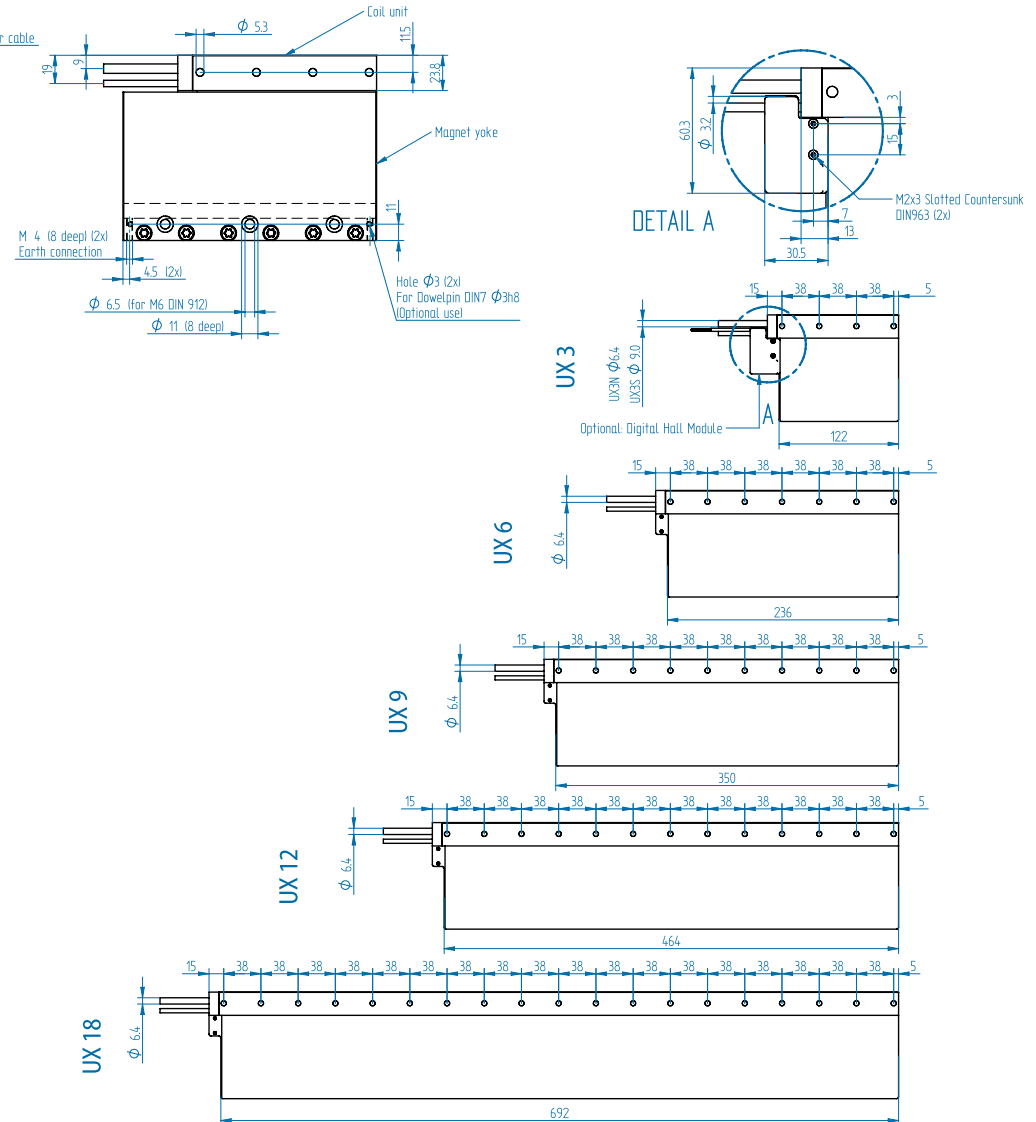
** Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

*** The UXA3S is only available with a FLEX power cable. The specifications for this cable can be found in the table on the left side of this page.

Magnet yokes



Coil units



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.

* All sizes are in mm