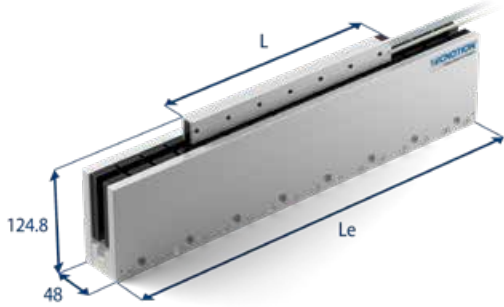


# UXX Series Ironless



UXX6 in 456mm magnet yoke shown

## UXX3S 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)	25		

Magnet yokes can be butted together.

Approvals



Parameter	Remarks	Symbol	Unit	UXX3		UXX6		UXX9		UXX12		UXX18
				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 <sub>ac rms</sub> (325V <sub>dc</sub> )								
Peak force @ 20°C/s increase	magnet @ 25°C	F <sub>p</sub>	N	700		1400		2100		2800		4200
Continuous force*	coils @ 110°C	F <sub>c</sub>	N	141		282		423		564		846
Maximum speed**	@ 300 V	v <sub>max</sub>	m/s	2.7	6.6	2.7	6.6	2.7	6.6	2.7	6.6	2.7
Motor force Constant	mount. sfc. @ 20°C	K	N/A <sub>rms</sub>	124	50.3	124	50.3	124	50.3	124	50.3	124
Motor constant	coils @ 25°C	S	N <sup>2</sup> /W	323		647		970		1293		1940
Peak current	magnet @ 25°C	I <sub>p</sub>	A <sub>rms</sub>	5.6	13.9	11.3	28	16.9	42	22.6	56	34
Maximum continuous current	coils @ 110°C	I <sub>c</sub>	A <sub>rms</sub>	1.14	2.80	2.27	5.6	3.4	8.4	4.5	11.2	6.8
Back EMF phase-phase <sub>peak</sub>		B <sub>emf</sub>	V/m/s	101	41	101	41	101	41	101	41	101
Resistance per phase*	coils @ 25°C ex. cable	R <sub>ph</sub>	Ω	15.8	2.6	7.9	1.29	5.3	0.86	4.0	0.65	2.6
Induction per phase		L <sub>ph</sub>	mH	28	4.6	14	2.3	9	1.5	7	1.2	4.7
Electrical time constant*	coils @ 25°C	τ <sub>e</sub>	ms	1.8		1.8		1.8		1.8		1.8
Maximum continuous power loss	all coils	P <sub>c</sub>	W	82		165		247		330		494
Thermal resistance	coils to mount. sfc.	R <sub>th</sub>	°C/W	1.04		0.52		0.35		0.26		0.17
Thermal time constant*	up to 63% max. coiltemp.	τ <sub>th</sub>	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 <sub>a</sub>	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 UXX3S****								
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 UXX3S 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.

