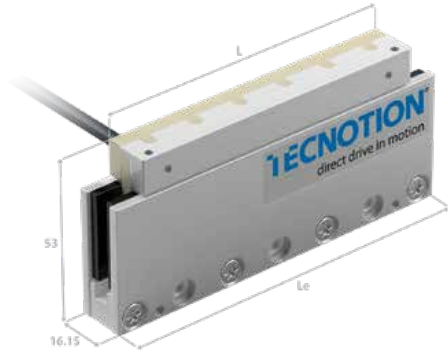


UF series ironless



UF6 in 120mm magnet yoke shown

Magnet yoke dimensions

Le (mm)	72	120
M4 bolts	2	3
Mass (kg/m)	3.2	

Magnet yokes can be butted together.

Approvals



Parameter		Remarks	Symbol	Unit	UF3 + UF3 inline	UF6 + UF6 inline
Performance	Motor type, max voltage ph-ph	3-phase synchronous	$U_{\max}$	$V_{ac,rms}$ (V_{dc})	45 (60)	
	Peak force @ 20 K/s increase	magnets @ 25°C	F_p	N	42.5	85
	Continuous force ¹	coils @ 110°C	F_c	N	19.5	39
	Maximum speed ²	@ $U_{\max}$ @ F_c	$v_{\max}$	m/s	5.1	
	Motor force constant	$I \leq I_c$	K_f	N/ A_{rms}	12.3	
	Motor constant	coils @ 25°C	S	N ² /W	14.4	28.0
Electrical	Peak current	magnets @ 25°C	I_p	A_{rms}	3.5	6.9
	Continuous current ¹	coils @ 110°C	I_c	A_{rms}	1.58	3.17
	Back EMF ph-ph _{peak}		K_e	V_{dc} /m/s	10.1	
	Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	3.5	1.8
	Induction per phase		L_{ph}	mH	1.24	0.62
	Electrical time constant		τ_e	ms	0.36	
Thermal	Continuous power loss ¹	coils @ 110°C	P_c	W	35	70
	Thermal resistance	coils to mount. sfc.	R_{th}	K/W	2.4	1.2
	Thermal time constant		τ_{th}	s	34	
	Temperature sensor				NTC	
Mechanical	Coil unit mass	ex. cables	m	kg	0.045	0.087
	Coil unit length	ex. cables	L	mm	49	97
	Motor attraction force	rms @ 0 A	F_a	N	0	
	Magnet pitch NN		τ	mm	24	
	Cable mass	all cables		kg/m	0.07	
	Cable type (power and sensor)	length 1 m	d	mm (AWG)	4.3 (3x24+2x32)	
	Cable life (FLEX) ³	minimum		cycles	15,000,000	
	Bending radius static	minimum			5x cable diameter	
	Bending radius dynamic	minimum			8x cable diameter	

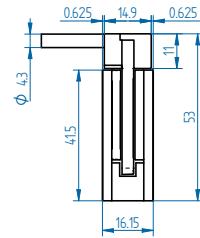
All specifications ±10%

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.

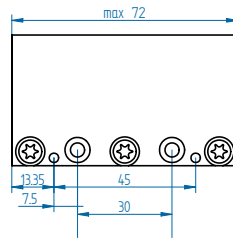
² Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

³ Depending on bending radius, velocity and acceleration.

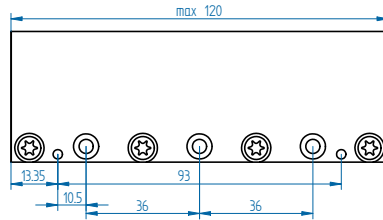
Magnet yokes



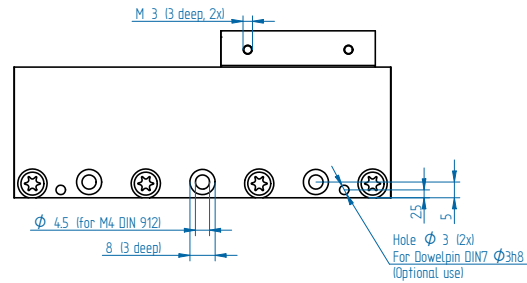
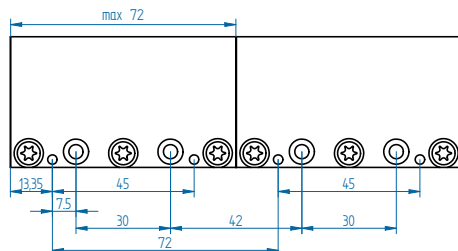
UF 72mm



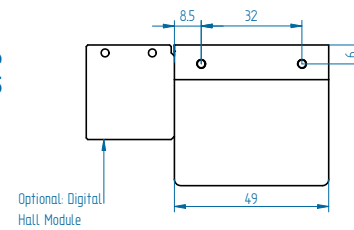
UF 120mm



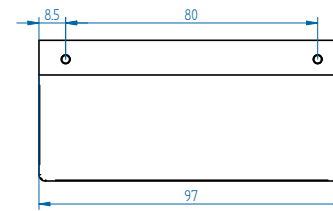
2x UF 72mm



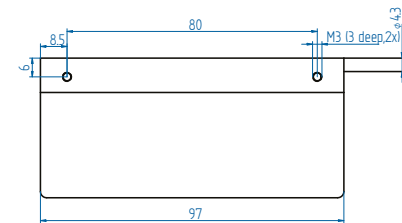
UF 3



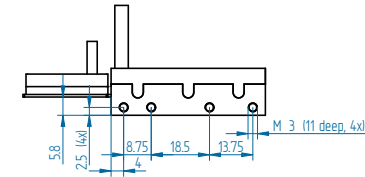
UF 6



UF 6 inline



Coil units



UF 3 inline

