

Unano series ironless



Unano 3 in 34 mm magnet yoke shown

Magnet yoke dimensions		
Le (mm)	34	51
M3 bolts	1	2
Mass (kg/m)	1.91	
<i>Magnet yokes can be butted together.</i>		

Approvals



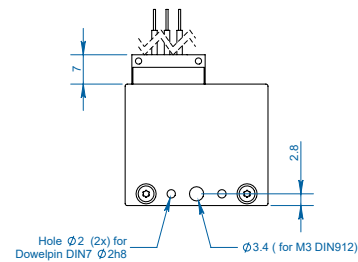
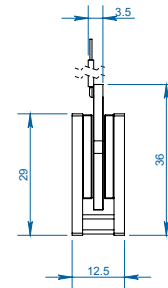
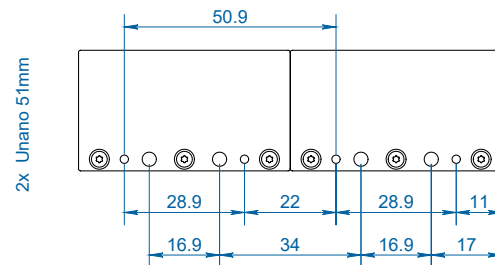
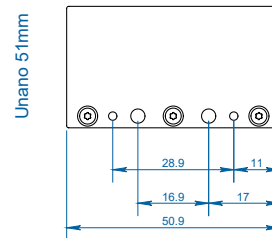
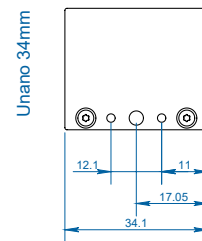
	Parameter	Remarks	Symbol	Unit	UnanoA3	UnanoA6	UnanoA9
Performance	Motor type, max voltage ph-ph	3-phase synchronous	U_{max}	$V_{ac,rms} (V_{dc})$	48 (68)		
	Peak force @ 25 K/s increase	magnets @ 25°C	F_p	N	5.1	10.2	15.3
	Continuous force ¹	coils @ 100°C	F_c	N	2.6	5.2	7.8
	Maximum speed ²	@ U_{max} @ F_c	v_{max}	m/s	57.1	26.5	16.3
	Motor force constant	$I \leq I_c$	K_f	N/A _{rms}	1.15	2.3	3.45
	Motor constant	coils @ 25°C	S	N ² /W	0.76	1.55	2.34
Electrical	Peak current	magnets @ 25°C	I_p	A _{rms}	4.44		
	Continuous current ¹	coils @ 100°C	I_c	A _{rms}	2.24		
	Back EMF ph-ph _{peak}		K_e	V _{dc} /m/s	0.94	1.88	2.82
	Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	0.58	1.14	1.70
	Induction per phase		L_{ph}	μH	66.7	133.3	200.1
	Electrical time constant		τ_e	ms	0.12		
Thermal	Continuous power loss ¹	coils @ 100°C	P_c	W	11.2	22.4	33.6
	Thermal resistance	coils to mount, sfc.	R_{th}	K/W	6.70	3.35	2.23
	Thermal time constant		τ_{th}	s	16.1		
	Temperature sensor				None		
Mechanical	Coil unit mass	ex. cables	m	g	4.7	10	15
	Coil unit length	ex. cables	L	mm	17.5	34.3	51.1
	Motor attraction force	rms @ 0 A	F_a	N	0		
	Magnet pitch NN		τ	mm	8.4		
	Cable mass	all cables		g/m	3		
	Cable type	length 0.3 m	d	mm (AWG)	1.3 (26)		
	Bending radius static	minimum	r	mm	13		

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 manual or online simulation tool. Please contact Tecnotion when speed higher than 10 m/s is required.

Magnet yokes



Coil units

