



Unano 3 in 34 mm magnet yoke
shown

Full magnet yoke dimensions

Le (mm)	33.6	50.4
M3 bolts	1	2
Mass (kg/m)	1.90	
Magnet yokes can be butted together.		

Half magnet yoke dimensions

Le (mm)	33.6	50.4
M3 bolts	1	2
Mass (kg/m)	1.53	
Magnet yokes can be butted together.		

Magnet plate dimensions

Le (mm)	33.6	50.4
M2 bolts	2	3
Mass (kg/m)	0.90	
Magnet plates can be butted together.		

Approvals



Unano series ironless

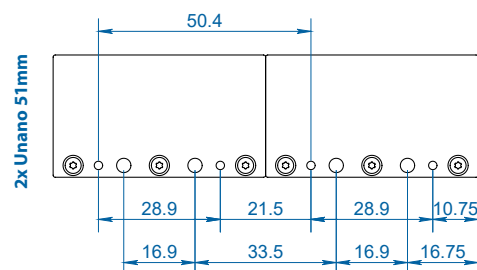
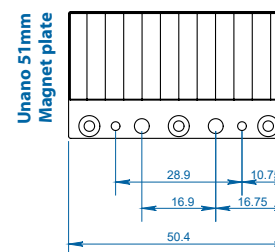
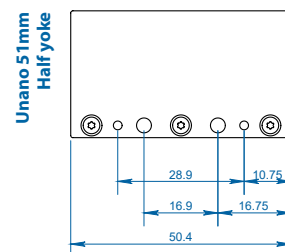
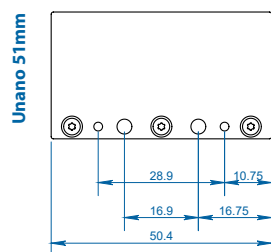
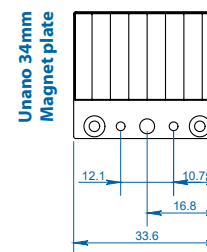
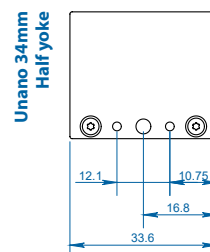
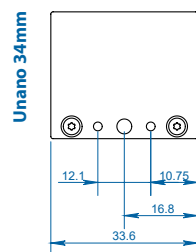
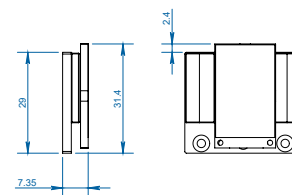
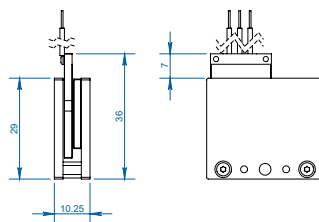
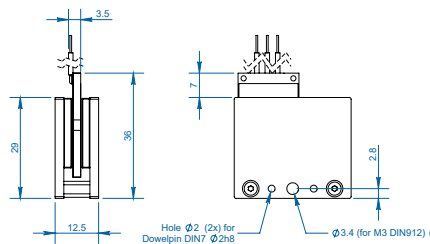
Parameter		Remarks	Symbol	Unit	UnanoA3			UnanoA6			UnanoA9		
Performance	Yoke type				Full	Half	Plate	Full	Half	Plate	Full	Half	Plate
	Motor type, max voltage ph-ph	3-phase synchronous	$U_{\max}$	$V_{ac,rms}$ (V_{dc})	48 (68)								
	Peak force @ 25 K/s increase	magnets @ 25°C	F_p	N	5.6	3.0	2.7	11.2	6.0	5.4	16.8	8.9	8.1
	Continuous force ¹	coils @ 100°C	F_c	N	2.9	1.5	1.4	5.8	3.1	2.8	8.7	4.6	4.2
	Maximum speed ²	@ $U_{\max}$ @ F_c	$V_{\max}$	m/s	62	115	128	29	54	60	18	34	37
	Motor force constant	$I \leq I_c$	K_f	N/A _{rms}	1.26	0.67	0.61	2.52	1.34	1.21	3.78	2.01	1.82
	Motor constant	coils @ 25°C	S	N ² /W	0.92	0.26	0.21	1.86	0.53	0.43	2.81	0.79	0.65
Electrical	Peak current	magnets @ 25°C	I_p	A_{rms}	4.44								
	Continuous current ¹	coils @ 100°C	I_c	A_{rms}	2.29								
	Back EMF ph-ph _{peak}		K_e	V_{dc} /m/s	1.03	0.55	0.49	2.06	1.09	0.99	3.09	1.64	1.48
	Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	0.58			1.14			1.70		
	Induction per phase		L_{ph}	μ H	12.9	16.2	12.2	25.8	32.4	24.4	38.7	48.6	36.6
	Electrical time constant		τ_e	μ s	22.6	28.4	21.4	22.6	28.4	21.4	22.6	28.4	21.4
Thermal	Continuous power loss ¹	coils @ 100°C	P_c	W	11.7			23.4			35.0		
	Thermal resistance	coils to mount. sfc.	R_{th}	K/W	6.85			3.43			2.28		
	Thermal time constant		τ_{th}	s	16.4								
	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		kg/m	0.01								
	Cable type	length 0.3 m	d	mm (AWG)	1.3 (26)								

All specifications ±10%

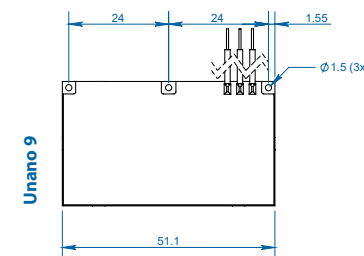
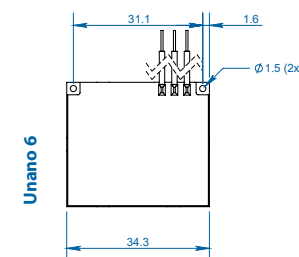
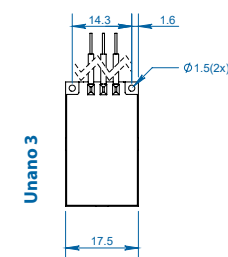
¹ These values are only applicable when the mounting surface is at 20°C and the motor is driven at continuous current. If these values differ in your application, please check our simulation tool.

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



Mounting instructions and flatness or parallelism requirements can be found in the ironless installation manual. CAD files can be downloaded from our website.

* All sizes are in mm