



TD55-3 on 2xTD55-96 mm magnet plates

TD55 series

Magnet plate dimensions

Le (mm)	96	384
M5 bolts	4	10
Mass (kg/m) ³	2.24	
<i>Magnet plates can be butted together.</i>		

³ Low weight magnet plate available

Approvals



	Parameter	Remarks	Symbol	Unit	TD55-3	TD55-6	TD55-9	TD55-12
Performance	Winding type				N	N	N	N
	Motor type, max voltage ph-ph	3-phase synchronous	U _{max}	V _{ac,rms} (V _{dc})	480 (680)			
	Ultimate force @ 10 K/s increase	magnets @ 25°C	F _u	N	211	422	634	845
	Peak force @ 6 K/s increase	magnets @ 25°C	F _p	N	161	323	484	645
	Continuous force ¹	coils @ 105°C	F _c	N	106	213	319	426
	Maximum speed ²	@ U _{max} @ F _c	v _{max}	m/s	19.8	9.6	6.1	4.3
	Motor force constant	I ≤ I _c	K _f	N/A _{rms}	34.4	68.8	103.2	137.5
	Motor constant	coils @ 25°C	S	N ² /W	140	280	421	561
Electrical	Ultimate current	magnets @ 25°C	I _u	A _{rms}	6.9			
	Peak current	magnets @ 25°C	I _p	A _{rms}	5.0			
	Continuous current ¹	coils @ 105°C	I _c	A _{rms}	3.1			
	Back EMF ph-ph _{peak}		K _e	V _{dc} /m/s	28.1	56.1	84.2	112.3
	Resistance per phase	coils @ 25°C ex. cable	R _{ph}	Ω	2.8	5.6	8.4	11.2
	Induction per phase	I < 0.6 I _p	L _{ph}	mH	13.7	27.4	41.1	54.8
	Electrical time constant		τ _e	ms	4.9			
Thermal	Continuous power loss ¹	coils @ 105°C	P _c	W	107	213	320	427
	Thermal resistance	coils to mount. sfc.	R _{th}	K/W	0.75	0.37	0.25	0.19
	Thermal time constant		τ _{th}	s	42			
	Temperature sensor				Pt1000 / PTC 1kΩ (2x)			
Mechanical	Coil unit mass	ex. cables	m	kg	0.53	0.89	1.3	1.6
	Coil unit length	ex. cables	L	mm	95	159	223	287
	Motor attraction force	rms @ 0 A	F _a	N	384	768	1152	1536
	Magnet pitch NN		τ	mm	32			
	Cable mass	all cables		kg/m	0.17			
	Cable type	length 1 m	d	mm (AWG)	10.6 (4x19+2x22+2x26)			

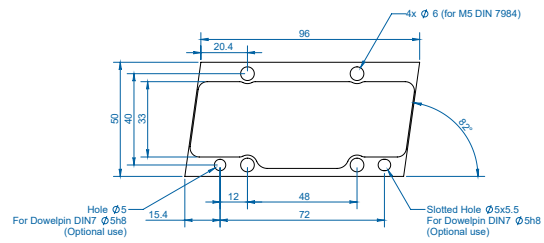
¹ These values are only applicable when the mounting surface is at 20°C and the motor is driven at continuous current. If these values differ in your application, please check our simulation tool.

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

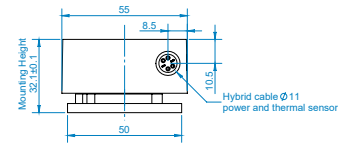
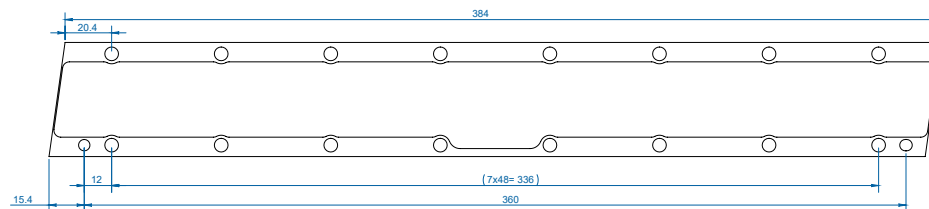
All specifications ±10%

Magnet plates

TD55 96 mm

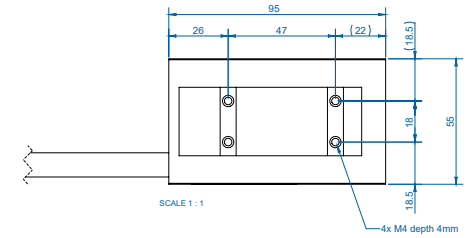


TD55 384 mm

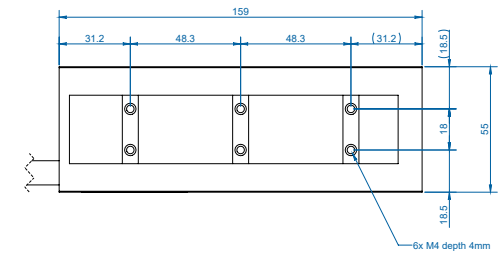


Coil units

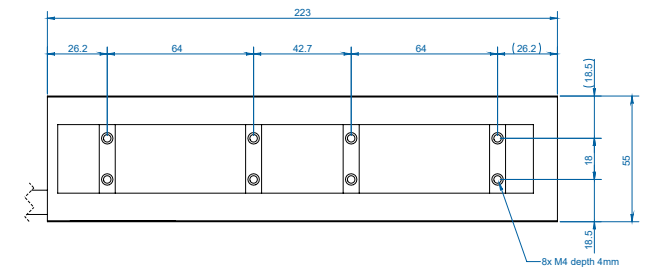
TD55-3



TD55 -6



New
TD55 -9



New
TD55 -12

