



TD55-3 on TD55-192 mm magnet plate

TD55 series

Parameter	Remarks	Symbol	Unit	TD55-3	TD55-6	
Performance	Winding type			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
	Peak force @ 6 K/s increase	magnets @ 25°C	F_p	N	161	323
	Continuous force ¹	coils @ 105°C	F_c	N	106	213
	Maximum speed ²	@ U_{max} @ F_c	v_{max}	m/s	19.8	9.6
	Motor force constant	$l \leq l_c$	K_f	N/A _{rms}	34.4	68.8
	Motor constant	coils @ 25°C	S	N ² /W	140	280
Electrical	Ultimate current	magnets @ 25°C	I_u	A _{rms}	6.9	6.9
	Peak current	magnets @ 25°C	I_p	A _{rms}	5.0	5.0
	Continuous current ¹	coils @ 100°C	I_c	A _{rms}	3.1	3.1
	Back EMF ph-ph _{peak}		K_e	$V_{dc}/m/s$	28.1	56.1
	Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	2.8	5.6
	Induction per phase	$l < 0.6 I_p$	L_{ph}	mH	13.7	27.4
	Electrical time constant		τ_e	ms	4.9	
Thermal	Continuous power loss ¹	coils @ 105°C	P_c	W	107	213
	Thermal resistance	coils to mount. sfc.	R_{th}	K/W	0.75	0.37
	Thermal time constant		τ_{th}	s	42	
	Temperature sensor				Pt1000 / PTC 1k Ω (2x)	
Mechanical	Coil unit mass	ex. cables	m	kg	0.53	0.89
	Coil unit length	ex. cables	L	mm	95	159
	Motor attraction force	rms @ 0 A	F_a	N	384	768
	Magnet pitch NN		τ	mm	32	
	Cable mass	all cables		kg/m	0.3	
Cable type	length 1 m	d	mm (AWG)	11 (19)		

Magnet plate dimensions

Le (mm) 96 384

M5 bolts 4 10

Mass (kg/m)³ 2.24

Magnet plates can be butted together.

³ Low weight magnet plate available

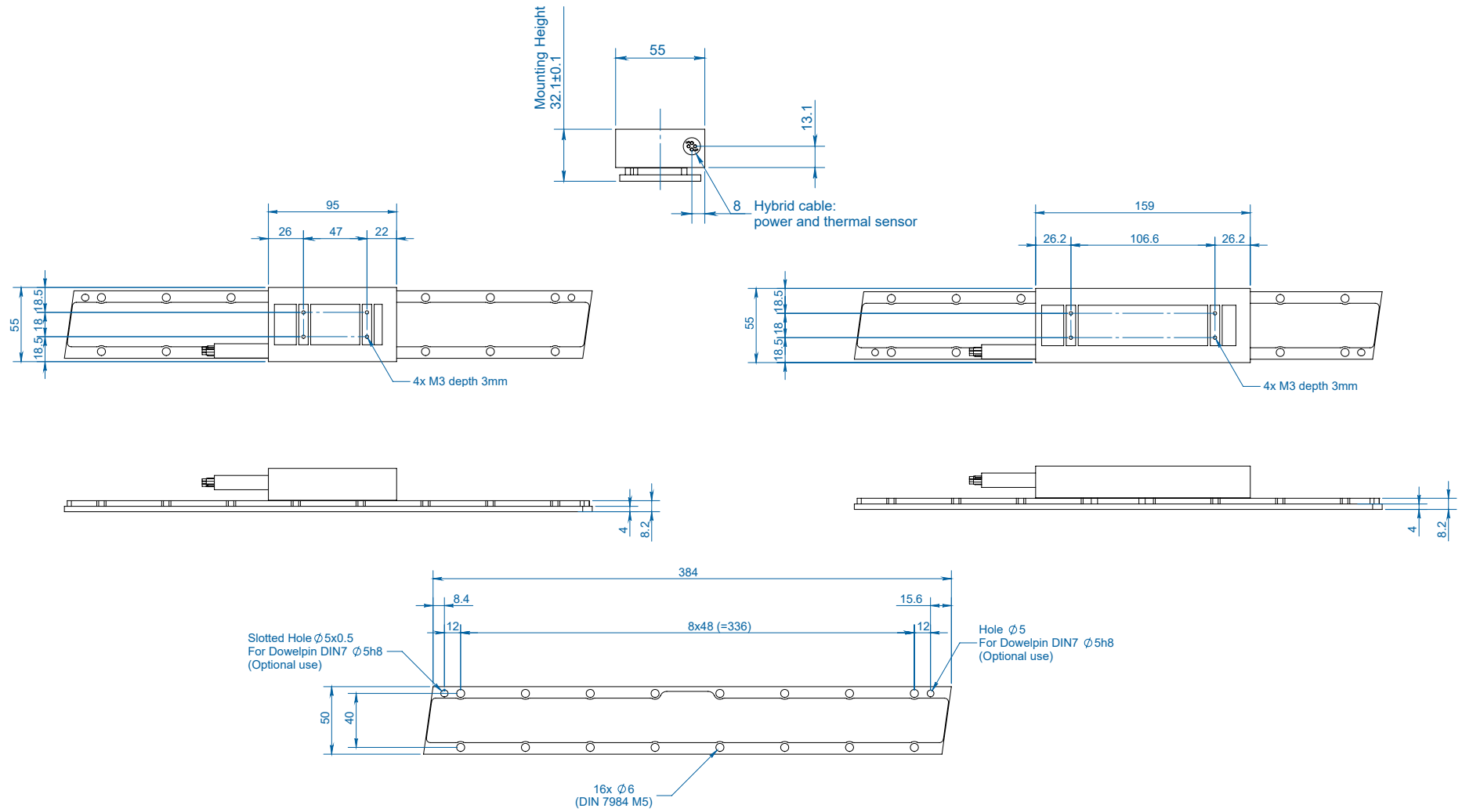
¹ These values are only applicable when the mounting surface is at 20°C and the motor is driven at continuous current. If these values differ in your application, please check our simulation tool.

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

All specifications $\pm 10\%$

TD55-3 & TD55-384 mm

TD55-6 & TD55-384 mm



Mounting instructions and flatness or parallelism requirements can be found in the iron core installation manual. CAD files, 3D models and the manual can be downloaded from our website.

* All sizes are in mm



TD82-3 on TD82-128 mm magnet plate

TD82 series

Parameter	Remarks	Symbol	Unit	TD82-3	TD82-6
Performance					
Winding type				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	453	905
Peak force @ 6 K/s increase	magnets @ 25°C	F_p	N	403	805
Continuous force ¹	coils @ 105°C	F_c	N	256	524
Maximum speed ²	@ U_{max} @ F_c	v_{max}	m/s	262	6.4
Motor force constant	$l \leq l_c$	K_f	N/A _{rms}	93.6	
Motor constant	coils @ 25°C	S	N ² /W	498	996
Electrical					
Ultimate current	magnets @ 25°C	I_u	A _{rms}	6.5	13.1
Peak current	magnets @ 25°C	I_p	A _{rms}	5.0	10.0
Continuous current ¹	coils @ 100°C	I_{cw}	A _{rms}	2.8	5.6
Back EMF ph-ph _{peak}		K_e	V _{dc} /m/s	76.5	76.5
Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	5.9	2.9
Induction per phase	$l < 0.6 I_p$	L_{ph}	mH	54.6	27.3
Electrical time constant		τ_e	ms	9.3	
Thermal					
Continuous power loss ¹	coils @ 105°C	P_c	W	182	364
Thermal resistance	coils to mount. sfc.	R_{th}	K/W	0.44	0.22
Thermal time constant		τ_{th}	s	36	
Temperature sensor				Pt1000 / PTC 1kΩ (2x)	
Mechanical					
Coil unit mass	ex. cables	m	kg	1.20	2.13
Coil unit length	ex. cables	L	mm	95	159
Motor attraction force	rms @ 0 A	F_a	N	704	1408
Magnet pitch NN		τ	mm	32	
Cable mass	all cables		kg/m	0.3	
Cable type	length 1 m	d	mm (AWG)	11 (19)	

Magnet plate dimensions

Le (mm) 192 288

M5 bolts 8 12

Mass (kg/m) 3.73

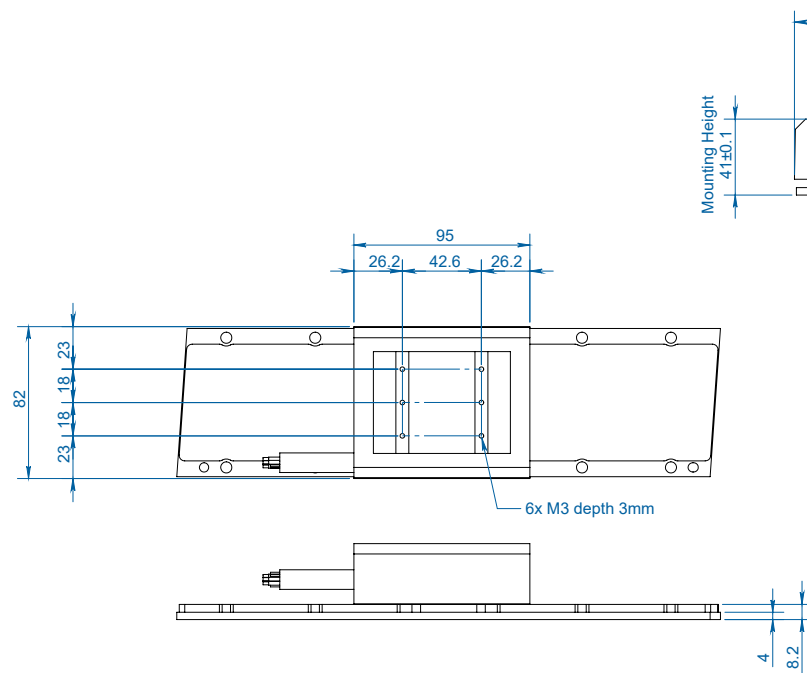
Magnet plates can be butted together.

All specifications ±10%

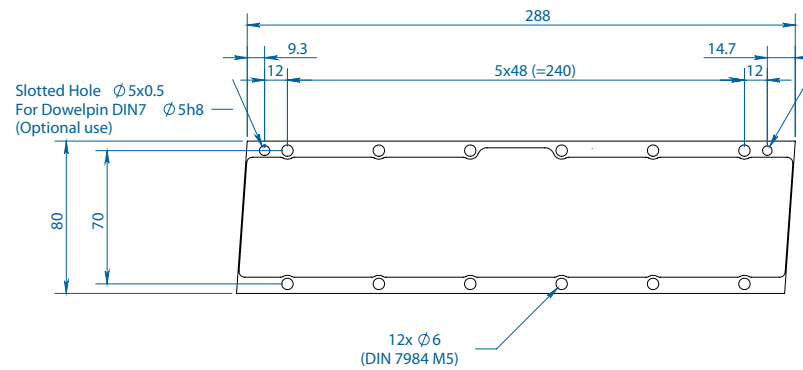
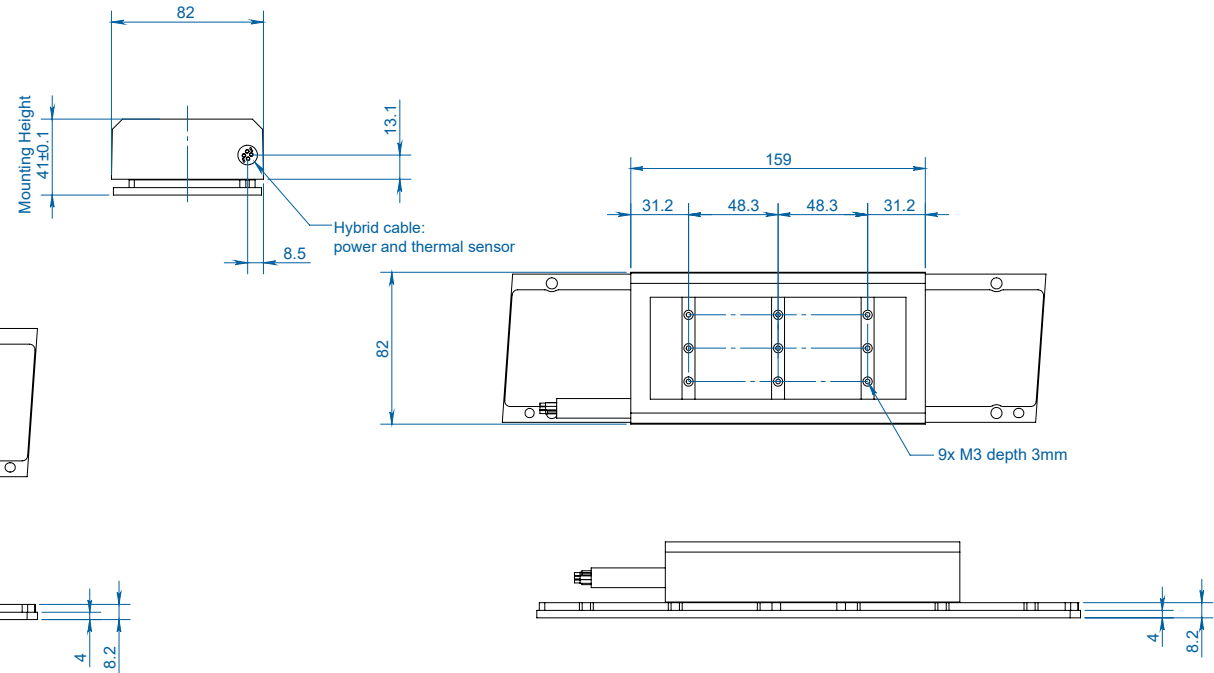
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² Actual values depend on bus voltage. Please check the F/v diagram in our simulation tool.

TD82-3 & TD82-288 mm



TD82-6 & TD82-288 mm



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