

Linear motor data SLD23 -H -H for not Schunk supported controllers

Type of motor: SLD23 -H -H

Date of creation: 16.01.2026

Description	Symbol	Unit	Value
Daten			
Nominal motor force	F_{nenn}	N	512
Motor peak force	$F_{\text{max.}}$	N	1800
Motor idle current (rms)	I_{nenn}	A eff	21,9
Motor peak current (rms)	$I_{\text{max.}}$	A eff	82
Max. velocity	$v_{\text{max.}}$	m/s	10
Power loss	P	W	2
Force constant	k_{Force}	N/A	23,4
Motor constant	k_{Motor}	N/√W	362
BEMF (velocity 1 m/s)	k_{EMK}	Vs/m	49
Thermal time constant	$k_{\text{therm.}}$	s	1440
Resistance	R phase / phase	Ohm	0,20
Inductance	Lu-v, Lv-w, Lw-u	mH	2,00
Number of pole pairs per distance		mm	28
Mass primary part	$m_{\text{Prim.}}$	kg	19
Mass Rail	$m_{\text{Sek.}}$	kg/m	36
Max. intermediate circuit voltage	U_{DC}	V	900
Max. coil temperature	$T_{\text{max.}}$	°C	105
Type of temperature sensor			PT1000

Control parameters

Current loop propotional gain		V/A	1
Current loop integral action time		ms	4,3
Position loop KV-Factor	kv	1000/min	1
Velocity loop smoothing time const.		us	900
Velocity loop propotional gain	kp	N/(mm/min)	0,03
Velocity loop integral action time	TN	ms	5

Encoder Feedback

Type	magnetic	magnetic absolut	optical	magnetic absolut
Sensor designation	LE100	TTK 70	LIC411	MSA111C-DQ
Tape measure	MB100	MBA 111	LIC4005	MBA 111
Manufactur	SIKO	Sick Stegmann	Heidenhain	SIKO
Grating period	1000 µm	1000 µm	--	1000 µm
Supply voltage	5 V	7V- 12V	3,6V - 14V	10V- 30V
Waveform	sin/cos	sin/cos / Hiperface	EnDat 2.2	DRIVE-CLiQ
Reference mark	periodisch	--	--	--
Reference mark pitch	20 mm	--	--	--
Signal amplitude	1 Vpp	1 Vpp	--	--
Feedback revolution	1 mm	1 mm	10 nm	1µm

Motor connection

Connector		Pin
TE connectivity	U	thick 1
Typ: BEWC110MR11000207000	V	thick 4
	W	thick 3
	GND	thick 2
	PT1000	thin C
		thin D

Thermal motor protection

	Sensor 1	
Type	PT1000	
Characteristic	Datasheet	

Measurement system

	LE100	TTK 70	LIC 411	MSA111C-DQ
	Sub D pin	Sub D pin	Stecker [6]	Stecker [5]
Signal	Pin	Pin		
0V Sense	15			
Ref - / EncData-	10	8	4	
Ref + / EncData+	9	7	3	
/B (COS-)	6	6		4
B(COS+)	5	5		5
A(SIN+)	2	2		8
/A(SIN-)	3	3		7
Clock+			7	
GND (0V)	4	4	5	3
Clock-			6	
Ucc	12	11	8	1
N.C.				2
GND (Schirm)				
N.C.				10

