

Datasheet for linear direct drive SLD 21 and servo drive Indradrive Cs

Type of motor

SLD 21

Type of axis

SLD 21

Date of creation:

16.01.2026



Description	Symbol	Unit		comment
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Electrical data

S-0-0141	Type of axis			SLD 21	
P-0-4014	Type of motor	Linear synchron motor		0200h	
P-0-0512	Temperature sensor			3	
	PWM frequency		kHz	4	
S-0-0111	Motor idle current (rms)	I_d	A	4,1	rms
	Nominal motor force	F_{nenn}	N	285	with temperature increase of 75 K inside motor
	Power loss	Plconst	W	110,2	with temperature increase of 75 K inside motor
S-0-0109	Motor peak current (rms)	I_{max}	A	12	rms
	Motor peak force	F_{max}	N	600	
S-0-0092	Bipolar force limit value		%	292,7	
P-0-0109	Force peak limit		%	292,7	
P-0-0051	Force constant	k_f	N/A	69	
	Motor constant	K_m	N/√W	27,1	
	BEMF (velocity 1 m/s)	K_e (Phase-Phase)	V _{SS}	141	
	Thermal resistance	R _{th}	K/W	0,68	temperature increase (75 K) / Plconst
S-0-0113	Maximum motor speed	v_{max}	mm/min	300000	
	Max. frequency	f_{max}	Hz	178,6	
P-0-0018	Number of pole pairs per distance	PWT (Npol-Npol)	mm	28	
	Type of circuit			Y	
	Max. intermediate circuit voltage	U_{DC}	V	900	
	Inductance	$L_{U-V}, L_{V-W}, L_{W-U}$	mH	37,00	
P-0-4016	Motor series inductance		mH	18,50	
P-0-4017	Motor shunt inductance		mH	18,50	
P-0-4048	Winding resistance by 25°C	$R_{U-V}, R_{V-W}, R_{W-U}$	Ohm	3,14	
	Winding resistance by 100°C	$R_{U-V}, R_{V-W}, R_{W-U}$	Ohm	4,1	
	Electrical time constant		ms	11,8	
	Type of temperature sensor			PT1000	
S-0-0201	Motor warning temperature		°C	100	
S-0-0204	Motor shutdown temperature		°C	105	
	Insulation class			F	

Mechanical Data

	Total mass primary part		kg	6,78	
	Total mass rail		kg/m	19,45	without attachments

Control parameters without mass moment of inertia

S-0-0106	Current loop propotional gain		V/A	16,5	
S-0-0107	Current loop integral action time		ms	4,5	
S-0-0104	Position loop KV-Factor	kv		1	
P-0-0004	Velocity loop smoothing time const.			900	
S-0-0100	Velocity loop propotional gain	kp		0,03	
S-0-0101	Velocity loop integral action time	TN		5	

Parameter of position

S-0-0277	Position feedback 1 type			1001 b	
S-0-0278	Maximum travel range		mm	5800	

Encoder Feedback

	Measurement principle		magnetic	magnetic absolut	optical	magnetic absolut
	Type of sensor		LE100	TTK 70	LIC 411	MSA111C-DQ
	Tape measure		MB100	MBA 111	LIC4005	MBA 111
	Manufacturer		SIKO	Sick Stegmann	Heidenhain	SIKO
	Grating period	μm	1000μm	1000μm	--	1000μm
	Supply voltage	V	5V	7V - 12V	3,6V - 14V	10V - 30V
	Waveform		sin/cos	sin/cos / Hiperface	EnDat 2.2	DRIVE-CLiQ
	Reference mark		periodic	--	--	--
	Reference mark pitch	mm	20 mm	--	--	--
	Signal amplitude	V _{ss}	1V _{ss}	1V _{ss}	--	--
S-0-0116 / S-0-0602.1.3	Feedback resolution	mm	1mm	1mm	10 nm	1 μm

Motor connection

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

Thermal motor protection

	Sensor1	
Type	PT1000	
Characteristic	Datasheet	

Motor feedback

Feedback	Signal	LE100	TTK 70	LIC 411	MSA111C-DQ
		Sub D plug	Sub D plug	Stecker [6]	Stecker [5]
	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