

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7081-2AF71-1QA0-Z
N05



Figure similar

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	8.7 Nm	Shaft height	80
Rated current	6.8 A	Cooling	Natural cooling
Static torque (60 K)	10.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	12.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	7.10 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	8.70 A	Vibration severity grade	Grade A
Moment of inertia	20.000 kgcm ²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.38 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	88.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.42 Ω	Holding brake	without holding brake
Rotating field inductance	7.7 mH	Shaft end	Feather key
Electrical time constant	18.20 ms	Encoder system	Encoder AS20DQI: absolute encoder single-turn 20 bits
Mechanical time constant	1.35 ms		
Thermal time constant	45 min		
Shaft torsional stiffness	109000 Nm/rad		
Net weight of the motor	12.9 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	2.8 kW	Maximum inverter current	27 A
		Maximum torque	34.10 Nm
Limiting data		Special design	
Max. permissible speed (mech.)	6000 rpm	N05	Non-standard shaft end (dimensions as for 1FT5 motors)
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	37.0 Nm		
Maximum current	30.0 A		