

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7083-2AC71-1EB0-Z
K24

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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	12.5 Nm	Shaft height	80
Rated current	6.3 A	Cooling	Natural cooling
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	16.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	6.10 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	7.50 A	Vibration severity grade	Grade A
Moment of inertia	29.500 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)
Torque constant	2.13 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	138.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.66 Ω	Color of the housing	without
Rotating field inductance	12.8 mH	Holding brake	with holding brake
Electrical time constant	19.40 ms	Shaft extension	Feather key
Mechanical time constant	1.13 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
Thermal time constant	50 min		
Shaft torsional stiffness	72000 Nm/rad		
Net weight of the motor	18.6 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	9 A
Optimum power	2.6 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	49.30 Nm
Max. permissible speed (mech.)	6000 rpm	Special design	
Max. permissible speed (inverter)	4150 rpm	K24	Primed (unpainted)
Maximum torque	50.0 Nm		
Maximum current	27.5 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	22.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.9 A		
Opening time	200 ms		
Closing time	60 ms		
Highest braking work	1400 J		