

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7100-2AF71-1EG0-Z
N16

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)	12.0 Nm	Shaft height	100
Rated current	8.0 A	Cooling	Natural cooling
Static torque (60 K)	14.90 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	18.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	9.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	11.10 A	Vibration severity grade	Grade A
Moment of inertia	54.000 kgcm²	Connector size	1
Efficiency	92.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.62 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	104.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.32 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	7.3 mH	Holding brake	without holding brake
Electrical time constant	22.50 ms	Shaft end	Plain shaft
Mechanical time constant	2.00 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
Thermal time constant	55 min		
Shaft torsional stiffness	183000 Nm/rad		
Net weight of the motor	17.6 kg		



Figure similar

MLFB-Ordering data

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Optimum operating point	
Optimum speed	3000 rpm
Optimum power	3.8 kW
Limiting data	
Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	5000 rpm
Maximum torque	55.0 Nm
Maximum current	37.0 A
Recommended Motor Module	
Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	55.00 Nm
Special design	
N16	Nickel plated connectors and paint varnish for increased chemical resistance