

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7101-2AF71-1BG0-Z
L13



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)	15.5 Nm	Shaft height	100
Rated current	11.6 A	Cooling	Natural cooling
Static torque (60 K)	22.50 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	27.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	15.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	18.80 A	Vibration severity grade	Grade A
Moment of inertia	79.000 kgcm ²	Connector size	1.5
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	1.44 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	92.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.14 Ω	Holding brake	without holding brake
Rotating field inductance	3.5 mH	Shaft end	Plain shaft
Electrical time constant	25.00 ms	Encoder system	Encoder AS24DQI: absolute encoder single-turn 24 bits
Mechanical time constant	1.62 ms		
Thermal time constant	60 min		
Shaft torsional stiffness	164000 Nm/rad		
Net weight of the motor	23.0 kg		



Figure similar

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Optimum operating point

Optimum speed 3000 rpm

Optimum power 4.8 kW

Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 5000 rpm

Maximum torque 80.0 Nm

Maximum current 63.0 A

Recommended Motor Module

Rated inverter current 18 A

Maximum inverter current 54 A

Maximum torque 72.00 Nm

Special design

L13 External ground connection