

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7101-2AC71-1QG1



Figure similar

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)	20.5 Nm	Shaft height	100		
Rated current	9.7 A	Cooling	Natural cooling		
Static torque (60 K)	22.50 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	27.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	10.00 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	12.30 A	Vibration severity grade	Grade A		
Moment of inertia	79.000 kgcm ²	Connector size	1.5		
Efficiency	93.0 %	Degree of protection	IP65		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor		
		Torque constant	2.15 Nm/A	Electrical connectors	Connectors for signals and power rotatable
		Voltage constant at 20° C	144.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
		Winding resistance at 20° C	0.34 Ω	Holding brake	without holding brake
		Rotating field inductance	8.5 mH	Shaft extension	Plain shaft
		Electrical time constant	25.00 ms	Encoder system	Encoder AS20DQI: absolute encoder single-turn 20 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	2000 rpm
Optimum power	4.3 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	4000 rpm
Maximum torque	80.0 Nm
Maximum current	40.5 A

Recommended Motor Module

Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	80.00 Nm