

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7060-2AF71-1CB0

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)	4.7 Nm	Shaft height	63
Rated current	3.7 A	Cooling	Natural cooling
Static torque (60 K)	5.00 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	6.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	3.60 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	4.45 A	Vibration severity grade	Grade A
Moment of inertia	8.700 kgcm <sup>2</sup>	Connector size	1
Efficiency	90.0 %	Degree of protection	IP64
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.33 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	85.5 V/1000*min <sup>-1</sup>	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	1.35 Ω	Holding brake	with holding brake
Rotating field inductance	15.2 mH	Shaft end	Feather key
Electrical time constant	11.30 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	1.71 ms		
Thermal time constant	30 min		
Shaft torsional stiffness	28500 Nm/rad		
Net weight of the motor	8.5 kg		



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### Optimum operating point

Optimum speed	3000 rpm
Optimum power	1.5 kW

### Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	6700 rpm
Maximum torque	18.0 Nm
Maximum current	15.0 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

### Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	18.00 Nm