

## Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7042-5AK71-1AH0

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	1.5 Nm	Shaft height	48
Rated current	2.5 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.0 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	3.60 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.40 A	Vibration severity grade	Grade A
Moment of inertia	3.450 kgcm <sup>2</sup>	Connector size	1
Efficiency	89.0 %	Degree of protection	IP64
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	KTY84 temperature sensor in the stator winding
Torque constant	0.69 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	44.0 V/1000*min <sup>-1</sup>	Color of the housing	without
Winding resistance at 20° C	1.20 Ω	Holding brake	with holding brake
Rotating field inductance	6.7 mH	Shaft end	Plain shaft
Electrical time constant	5.60 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Mechanical time constant	2.27 ms		
Thermal time constant	30 min		
Shaft torsional stiffness	16000 Nm/rad		
Net weight of the motor	5.4 kg		

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Figure similar

### Optimum operating point

Optimum speed	5000 rpm
Optimum power	1.0 kW

### Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	9990 rpm
Maximum torque	10.5 Nm
Maximum current	15.3 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	4.0 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.5 A
Opening time	70 ms
Closing time	30 ms
Highest braking work	150 J

### Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	10 A
Maximum torque	6.80 Nm