

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7043-4CH71-1AH0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	2.6 Nm	Shaft height	48
Rated current	3.3 A	Cooling	Natural cooling
Static torque (60 K)	2.90 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.5 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	3.30 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.10 A	Vibration severity grade	Grade A
Moment of inertia	1.360 kgcm <sup>2</sup>	Connector size	1
Efficiency	90.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.85 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	54.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.20 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	13.6 mH	Holding brake	with holding brake
Electrical time constant	11.30 ms	Shaft extension	Plain shaft
Mechanical time constant	0.49 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Thermal time constant	40 min		
Shaft torsional stiffness	9000 Nm/rad		
Net weight of the motor	6.6 kg		



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### Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.2 kW

### Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	9000 rpm
Maximum torque	10.0 Nm
Maximum current	12.5 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	15 A
Maximum torque	10.00 Nm