

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7080-2AF74-1AH0

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)	6.8 Nm	Shaft height	80
Rated current	4.4 A	Cooling	Natural cooling
Static torque (60 K)	6.60 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	8.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	4.90 A	Vibration severity grade	Grade A
Moment of inertia	17.500 kgcm <sup>2</sup>	Connector size	1
Efficiency	92.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.61 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	105.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.98 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	17.2 mH	Holding brake	with holding brake
Electrical time constant	17.50 ms	Shaft extension	Plain shaft
Mechanical time constant	1.52 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	81000 Nm/rad		
Net weight of the motor	13.3 kg		



Figure similar

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### Optimum operating point

Optimum speed	3000 rpm
Optimum power	2.1 kW

### Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5500 rpm
Maximum torque	25.0 Nm
Maximum current	18.0 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	22.0 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.9 A
Opening time	200 ms
Closing time	60 ms
Highest braking work	1400 J

### Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	22.10 Nm