

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7060-3BF71-1CH1

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	High Inertia
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)	6.0 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	13.500 kgcm <sup>2</sup>	Connector size	1
Efficiency	90.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.33 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	85.5 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.35 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	15.2 mH	Holding brake	with holding brake
Electrical time constant	11.30 ms	Shaft extension	Plain shaft
Mechanical time constant	2.80 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	30 min		
Shaft torsional stiffness	27500 Nm/rad		
Net weight of the motor	9.3 kg		



Figure similar

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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