

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7034-2AK71-1FB1

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	6	Motor type	Compact
Rated torque (100 K)	1.0 Nm	Shaft height	36
Rated current	1.3 A	Cooling	Natural cooling
Static torque (60 K)	1.35 Nm	Radial runout tolerance	0.035 mm
Static torque (100 K)	1.60 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.55 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	1.90 A	Vibration severity grade	Grade A
Moment of inertia	1.000 kgcm <sup>2</sup>	Connector size	1
Efficiency	88.0 %	Degree of protection	IP65
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	0.84 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	55.0 V/1000*min <sup>-1</sup>	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	4.46 Ω	Holding brake	with holding brake
Rotating field inductance	17.2 mH	Shaft end	Feather key
Electrical time constant	3.85 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, 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	3750 Nm/rad		
Net weight of the motor	3.9 kg		



Figure similar

MLFB-Ordering data

1FK7034-2AK71-1FB1

### Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.6 kW

### Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	10000 rpm
Maximum torque	6.5 Nm
Maximum current	8.0 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	1.9 Nm
Power supply voltage	DC 24 V $\pm$ 10 %
Coil current	0.3 A
Opening time	50 ms
Closing time	30 ms
Highest braking work	40 J

### Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	6.50 Nm