

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7083-5AF71-1EH2

No image available for this configuration.

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K)	3000 rpm
Number of poles	8
Rated torque (100 K)	10.5 Nm
Rated current	7.4 A
Static torque (60 K)	13.30 Nm
Static torque (100 K)	16.0 Nm
Stall current (60 K)	8.60 A
Stall current (100 K)	10.40 A
Moment of inertia	35.900 kgcm <sup>2</sup>
Efficiency	93.0 %

### Physical constants

Torque constant	1.52 Nm/A
Voltage constant at 20° C	97.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.40 Ω
Rotating field inductance	6.0 mH
Electrical time constant	15.50 ms
Mechanical time constant	1.41 ms
Thermal time constant	50 min
Shaft torsional stiffness	105000 Nm/rad
Net weight of the motor	16.5 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Natural cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP65 and DE flange IP67
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	KTY84 temperature sensor in the stator winding
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	without
Holding brake	with holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface

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Figure similar

### Optimum operating point

Optimum speed 3000 rpm

Optimum power 3.3 kW

### Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 5900 rpm

Maximum torque 50.0 Nm

Maximum current 37.0 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 9 A

Maximum inverter current 18 A

Maximum torque 27.80 Nm