

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7085-4CC71-1AA0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K)	2000 rpm
Number of poles	8
Rated torque (100 K)	15.0 Nm
Rated current	10.0 A
Static torque (60 K)	18.30 Nm
Static torque (100 K)	22.0 Nm
Stall current (60 K)	10.90 A
Stall current (100 K)	13.50 A
Moment of inertia	22.000 kgcm <sup>2</sup>
Efficiency	92.0 %

### Physical constants

Torque constant	1.63 Nm/A
Voltage constant at 20° C	105.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.31 Ω
Rotating field inductance	9.8 mH
Electrical time constant	31.50 ms
Mechanical time constant	0.77 ms
Thermal time constant	45 min
Shaft torsional stiffness	84000 Nm/rad
Net weight of the motor	23.0 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
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	IP64
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Feather key
Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track



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### Optimum operating point

Optimum speed 2000 rpm

Optimum power 3.1 kW

### Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 5500 rpm

Maximum torque 65.0 Nm

Maximum current 51.0 A

### Recommended Motor Module

Rated inverter current 18 A

Maximum inverter current 54 A

Maximum torque 65.00 Nm