

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7044-7AH71-1AG0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data	
Rated speed (100 K)	4500 rpm
Number of poles	6
Rated torque (100 K)	3.0 Nm
Rated current	4.9 A
Static torque (60 K)	3.00 Nm
Static torque (100 K)	4.0 Nm
Stall current (60 K)	4.60 A
Stall current (100 K)	6.30 A
Moment of inertia	1.280 kgcm ²
Efficiency	91.0 %

Physical constants	
Torque constant	0.63 Nm/A
Voltage constant at 20° C	42.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.81 Ω
Rotating field inductance	11.0 mH
Electrical time constant	13.50 ms
Mechanical time constant	0.78 ms
Thermal time constant	45 min
Shaft torsional stiffness	9500 Nm/rad
Net weight of the motor	7.7 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	48
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 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	without
Holding brake	without holding brake
Shaft extension	Plain shaft
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 4500 rpm

Optimum power 1.4 kW

Limiting data

Max. permissible speed (mech.) 8000 rpm

Max. permissible speed (inverter) 13300 rpm

Maximum torque 12.0 Nm

Maximum current 20.0 A

Recommended Motor Module

Rated inverter current 9 A

Maximum inverter current 18 A

Maximum torque 11.00 Nm