

Data sheet for SIMOTICS S-1FK7

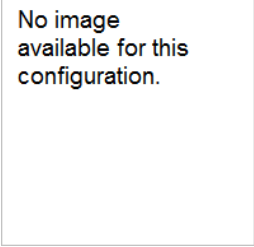


Figure similar

MLFB-Ordering data

1FK7061-7AF71-1PA3

Client order no. :
 Order no. :
 Offer no. :
 Remarks :

Item no. :
 Consignment no. :
 Project :

Engineering data

Mechanical data

Rated speed (100 K)	3000 rpm
Number of poles	6
Rated torque (100 K)	5.4 Nm
Rated current	5.3 A
Static torque (60 K)	4.90 Nm
Static torque (100 K)	6.40 Nm
Stall current (60 K)	4.80 A
Stall current (100 K)	6.10 A
Moment of inertia	3.400 kgcm ²
Efficiency	93.0 %

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 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 end	Feather key
Encoder system	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)

Physical constants

Torque constant	1.00 Nm/A
Voltage constant at 20° C	66.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.74 Ω
Rotating field inductance	20.0 mH
Electrical time constant	27.00 ms
Mechanical time constant	0.75 ms
Thermal time constant	45 min
Shaft torsional stiffness	37000 Nm/rad
Net weight of the motor	10.0 kg

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Figure similar

Optimum operating point

Optimum speed 3000 rpm

Optimum power 1.7 kW

Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 8700 rpm

Maximum torque 17.3 Nm

Maximum current 17.5 A

Recommended Motor Module

Rated inverter current 9 A

Maximum inverter current 18 A

Maximum torque 17.30 Nm