

Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7083-5AF71-1UG0

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	10.5 Nm	Shaft height	80
Rated current	7.4 A	Cooling	Natural cooling
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	16.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	8.60 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	10.40 A	Vibration severity grade	Grade A
Moment of inertia	27.300 kgcm ²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.52 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	97.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.40 Ω	Color of the housing	without
Rotating field inductance	6.0 mH	Holding brake	without holding brake
Electrical time constant	15.50 ms	Shaft extension	Plain shaft
Mechanical time constant	1.41 ms	Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)
Thermal time constant	50 min		
Shaft torsional stiffness	105000 Nm/rad		
Net weight of the motor	14.0 kg		

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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

Recommended Motor Module

Rated inverter current 9 A

Maximum inverter current 18 A

Maximum torque 27.80 Nm