

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7100-5AF71-1KH3

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)	12.0 Nm
Rated current	8.0 A
Static torque (60 K)	15.00 Nm
Static torque (100 K)	18.0 Nm
Stall current (60 K)	9.20 A
Stall current (100 K)	11.20 A
Moment of inertia	63.900 kgcm ²
Efficiency	92.0 %

Physical constants

Torque constant	1.59 Nm/A
Voltage constant at 20° C	101.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.34 Ω
Rotating field inductance	7.0 mH
Electrical time constant	20.50 ms
Mechanical time constant	2.23 ms
Thermal time constant	55 min
Shaft torsional stiffness	184000 Nm/rad
Net weight of the motor	21.5 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
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	with holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Figure similar

Optimum operating point

Optimum speed 3000 rpm

Optimum power 3.8 kW

Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 5700 rpm

Maximum torque 55.0 Nm

Maximum current 37.0 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 23.0 Nm

Power supply voltage DC 24 V \pm 10 %

Coil current 1.0 A

Opening time 300 ms

Closing time 70 ms

Highest braking work 3380 J

Recommended Motor Module

Rated inverter current 18 A

Maximum inverter current 36 A

Maximum torque 53.80 Nm