

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7105-5AC71-1FA0

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) 2000 rpm

Number of poles 8

Rated torque (100 K) 37.0 Nm

Rated current 16.0 A

Static torque (60 K) 40.00 Nm

Static torque (100 K) 48.0 Nm

Stall current (60 K) 17.00 A

Stall current (100 K) 20.00 A

Moment of inertia 156.000 kgcm<sup>2</sup>

Efficiency 93.0 %

### Physical constants

Torque constant 2.37 Nm/A

Voltage constant at 20° C 151.0 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.17 Ω

Rotating field inductance 4.4 mH

Electrical time constant 26.00 ms

Mechanical time constant 1.40 ms

Thermal time constant 70 min

Shaft torsional stiffness 125000 Nm/rad

Net weight of the motor 39.1 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 1.5

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 Feather key

Encoder system Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Figure similar

Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	30 A
Optimum power	7.8 kW	Maximum inverter current	56 A
Limiting data		Maximum torque	127.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	3800 rpm		
Maximum torque	150.0 Nm		
Maximum current	72.0 A		