

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7083-5AF71-1AA5

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) 10.5 Nm

Rated current 7.4 A

Static torque (60 K) 13.30 Nm

Static torque (100 K) 16.0 Nm

Stall current (60 K) 8.60 A

Stall current (100 K) 10.40 A

Moment of inertia 27.300 kgcm<sup>2</sup>

Efficiency 93.0 %

### Physical constants

Torque constant 1.52 Nm/A

Voltage constant at 20° C 97.0 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.40 Ω

Rotating field inductance 6.0 mH

Electrical time constant 15.50 ms

Mechanical time constant 1.41 ms

Thermal time constant 50 min

Shaft torsional stiffness 105000 Nm/rad

Net weight of the motor 14.0 kg

### Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type Compact

Shaft height 80

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 IP65 and DE flange IP67

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 extension Feather key

Encoder system Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track

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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