

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AF74-1TG0

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 7.2 A

Static torque (60 K) 13.30 Nm

Static torque (100 K) 16.00 Nm

Stall current (60 K) 8.20 A

Stall current (100 K) 10.10 A

Moment of inertia 26.000 kgcm<sup>2</sup>

Efficiency 93.0 %

### Physical constants

Torque constant 1.58 Nm/A

Voltage constant at 20° C 102.5 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.38 Ω

Rotating field inductance 7.0 mH

Electrical time constant 18.60 ms

Mechanical time constant 1.18 ms

Thermal time constant 50 min

Shaft torsional stiffness 101000 Nm/rad

Net weight of the motor 15.6 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 IP64

Design acc. to Code I IM B5 (IM V1, IM V3)

Temperature monitoring Pt1000 temperature sensor

Electrical connectors Connectors for signals and power rotatable

Color of the housing Standard (Anthracite RAL 7016)

Holding brake without holding brake

Shaft end Plain shaft

Encoder system Resolver 2-pole



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### Optimum operating point

Optimum speed	3000 rpm
Optimum power	3.3 kW

### Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5600 rpm
Maximum torque	50.0 Nm
Maximum current	37.0 A

### Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	40.00 Nm