

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7064-4CF71-1RH0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

Rated speed (100 K) 3000 rpm

Number of poles 6

Rated torque (100 K) 8.0 Nm

Rated current 7.6 A

Static torque (60 K) 10.00 Nm

Static torque (100 K) 12.0 Nm

Stall current (60 K) 8.70 A

Stall current (100 K) 10.80 A

Moment of inertia 8.500 kgcm²

Efficiency 93.0 %

Physical constants

Torque constant 1.11 Nm/A

Voltage constant at 20° C 70.5 V/1000*min⁻¹

Winding resistance at 20° C 0.35 Ω

Rotating field inductance 12.0 mH

Electrical time constant 34.50 ms

Mechanical time constant 0.64 ms

Thermal time constant 55 min

Shaft torsional stiffness 22500 Nm/rad

Net weight of the motor 16.8 kg

Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type High Dynamic

Shaft height 63

Cooling Natural cooling

Radial runout tolerance 0.040 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 with holding brake

Shaft extension Plain shaft

Encoder system

Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



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Optimum operating point

| | |
|---------------|----------|
| Optimum speed | 3000 rpm |
| Optimum power | 2.5 kW |

Limiting data

| | |
|-----------------------------------|----------|
| Max. permissible speed (mech.) | 7500 rpm |
| Max. permissible speed (inverter) | 7500 rpm |
| Maximum torque | 32.0 Nm |
| Maximum current | 33.0 A |

Holding brake

| | |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 13.0 Nm |
| Power supply voltage | DC 24 V \pm 10 % |
| Coil current | 0.8 A |
| Opening time | 100 ms |
| Closing time | 50 ms |
| Highest braking work | 380 J |

Recommended Motor Module

| | |
|--------------------------|----------|
| Rated inverter current | 18 A |
| Maximum inverter current | 54 A |
| Maximum torque | 32.00 Nm |