

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7081-2AC71-1RB2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Engineering data | | Mechanical data | | | |
|---------------------------|--------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Rated speed (100 K) | 2000 rpm | Motor type | Permanent-magnet synchronous motor | | |
| Number of poles | 8 | Motor type | Compact | | |
| Rated torque (100 K) | 10.0 Nm | Shaft height | 80 | | |
| Rated current | 4.4 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 10.00 Nm | Radial runout tolerance | 0.050 mm | | |
| Static torque (100 K) | 12.0 Nm | Concentricity tolerance | 0.10 mm | | |
| Stall current (60 K) | 4.05 A | Axial runout tolerance | 0.10 mm | | |
| Stall current (100 K) | 5.00 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 23.500 kgcm ² | Connector size | 1 | | |
| Efficiency | 93.0 % | Degree of protection | IP65 and DE flange IP67 | | |
| Physical constants | | 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 | Feather key | | |
| | | Encoder system | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) | | |
| | | Torque constant | 2.40 Nm/A | | |
| | | Voltage constant at 20° C | 154.5 V/1000*min ⁻¹ | | |
| | | Winding resistance at 20° C | 1.27 Ω | | |
| Rotating field inductance | 23.5 mH | | | | |
| Electrical time constant | 18.40 ms | | | | |
| Mechanical time constant | 1.33 ms | | | | |
| Thermal time constant | 45 min | | | | |
| Shaft torsional stiffness | 76000 Nm/rad | | | | |
| Net weight of the motor | 15.9 kg | | | | |



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Optimum operating point

Optimum speed 2000 rpm

Optimum power 2.1 kW

Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 3750 rpm

Maximum torque 37.0 Nm

Maximum current 17.2 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 22.0 Nm

Power supply voltage DC 24 V \pm 10 %

Coil current 0.9 A

Opening time 200 ms

Closing time 60 ms

Highest braking work 1400 J

Recommended Motor Module

Rated inverter current 5 A

Maximum inverter current 15 A

Maximum torque 33.30 Nm