

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7063-2AF71-1RH2-Z
Q31

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Engineering data | | Mechanical data | | | |
|---------------------------|--------------------------|-----------------------------|------------------------------------|------------------------|---|
| Rated speed (100 K) | 3000 rpm | Motor type | Permanent-magnet synchronous motor | | |
| Number of poles | 8 | Motor type | Compact | | |
| Rated torque (100 K) | 7.3 Nm | Shaft height | 63 | | |
| Rated current | 5.6 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 9.10 Nm | Radial runout tolerance | 0.040 mm | | |
| Static torque (100 K) | 11.0 Nm | Concentricity tolerance | 0.10 mm | | |
| Stall current (60 K) | 6.50 A | Axial runout tolerance | 0.10 mm | | |
| Stall current (100 K) | 8.00 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 15.700 kgcm ² | Connector size | 1 | | |
| Efficiency | 91.0 % | Degree of protection | IP65 and DE flange IP67 | | |
| Physical constants | | Design acc. to Code I | IM B5 (IM V1, IM V3) | | |
| | | Torque constant | 1.37 Nm/A | Temperature monitoring | Pt1000 temperature sensor |
| | | Voltage constant at 20° C | 90.5 V/1000*min ⁻¹ | Electrical connectors | Connectors for signals and power rotatable |
| | | Winding resistance at 20° C | 0.64 Ω | Color of the housing | Standard (Anthracite RAL 7016) |
| | | Rotating field inductance | 8.5 mH | Holding brake | with holding brake |
| | | Electrical time constant | 13.40 ms | Shaft end | Plain shaft |
| | | Mechanical time constant | 1.48 ms | Encoder system | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |
| | | Thermal time constant | 40 min | | |
| | | Shaft torsional stiffness | 25000 Nm/rad | | |
| | | Net weight of the motor | 12.5 kg | | |



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Optimum operating point

| | |
|---------------|----------|
| Optimum speed | 3000 rpm |
| Optimum power | 2.3 kW |

Limiting data

| | |
|-----------------------------------|----------|
| Max. permissible speed (mech.) | 7200 rpm |
| Max. permissible speed (inverter) | 6400 rpm |
| Maximum torque | 35.0 Nm |
| Maximum current | 28.0 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 | 9 A |
| Maximum inverter current | 27 A |
| Maximum torque | 34.00 Nm |

Special design

Q31 Metal rating plate on the motor