

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-5AK71-1TA0

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) | 6000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 1.5 Nm |
| Rated current | 2.5 A |
| Static torque (60 K) | 2.50 Nm |
| Static torque (100 K) | 3.0 Nm |
| Stall current (60 K) | 3.60 A |
| Stall current (100 K) | 4.40 A |
| Moment of inertia | 3.010 kgcm ² |
| Efficiency | 89.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 0.69 Nm/A |
| Voltage constant at 20° C | 44.0 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 1.20 Ω |
| Rotating field inductance | 6.7 mH |
| Electrical time constant | 5.60 ms |
| Mechanical time constant | 2.27 ms |
| Thermal time constant | 30 min |
| Shaft torsional stiffness | 16000 Nm/rad |
| Net weight of the motor | 4.9 kg |

Mechanical data

| | |
|--------------------------|--|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 48 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.040 mm |
| Concentricity tolerance | 0.08 mm |
| Axial runout tolerance | 0.08 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 | KTY84 temperature sensor in the stator winding |
| Electrical connectors | Connectors for signals and power rotatable |
| Color of the housing | without |
| Holding brake | without holding brake |
| Shaft extension | Feather key |
| Encoder system | Resolver 2-pole |

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Figure similar

| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|---------|
| Optimum speed | 5000 rpm | Rated inverter current | 5 A |
| Optimum power | 1.0 kW | Maximum inverter current | 10 A |
| Limiting data | | Maximum torque | 6.80 Nm |
| Max. permissible speed (mech.) | 9000 rpm | | |
| Max. permissible speed (inverter) | 9990 rpm | | |
| Maximum torque | 10.5 Nm | | |
| Maximum current | 15.3 A | | |