

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AF71-1QG2

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) | 10.5 Nm | Shaft height | 80 | | |
| Rated current | 7.2 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 13.30 Nm | Radial runout tolerance | 0.050 mm | | |
| Static torque (100 K) | 16.0 Nm | Concentricity tolerance | 0.10 mm | | |
| Stall current (60 K) | 8.20 A | Axial runout tolerance | 0.10 mm | | |
| Stall current (100 K) | 10.10 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 26.000 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 | without holding brake | | |
| | | Shaft extension | Plain shaft | | |
| | | Encoder system | Encoder AS20DQI: absolute encoder single-turn 20 bits | | |
| | | Torque constant | 1.58 Nm/A | | |
| | | Voltage constant at 20° C | 102.5 V/1000*min ⁻¹ | | |
| | | 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 | | | | |



Figure similar

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| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed | 3000 rpm | Rated inverter current | 9 A |
| Optimum power | 3.3 kW | Maximum inverter current | 27 A |
| Limiting data | | Maximum torque | 40.00 Nm |
| Max. permissible speed (mech.) | 6000 rpm | | |
| Max. permissible speed (inverter) | 5600 rpm | | |
| Maximum torque | 50.0 Nm | | |
| Maximum current | 37.0 A | | |