

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AC71-1RA1

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) | 12.5 Nm | Shaft height | 80 | | |
| Rated current | 6.3 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 13.30 Nm | Radial runout tolerance | 0.050 mm | | |
| Static torque (100 K) | 16.00 Nm | Concentricity tolerance | 0.10 mm | | |
| Stall current (60 K) | 6.10 A | Axial runout tolerance | 0.10 mm | | |
| Stall current (100 K) | 7.50 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 26.000 kgcm ² | Connector size | 1 | | |
| Efficiency | 93.0 % | Degree of protection | IP65 | | |
| <th colspan="2">Physical constants</th> | | Physical constants | | Design acc. to Code I | IM B5 (IM V1, IM V3) |
| | | Torque constant | 2.13 Nm/A | Temperature monitoring | Pt1000 temperature sensor |
| | | Voltage constant at 20° C | 138.5 V/1000*min ⁻¹ | Electrical connectors | Connectors for signals and power rotatable |
| | | Winding resistance at 20° C | 0.66 Ω | Color of the housing | Standard (Anthracite RAL 7016) |
| | | Rotating field inductance | 12.8 mH | Holding brake | without holding brake |
| | | Electrical time constant | 19.40 ms | Shaft end | Feather key |
| | | Mechanical time constant | 1.13 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 | 50 min | | |
| | | Shaft torsional stiffness | 101000 Nm/rad | | |
| | | Net weight of the motor | 15.6 kg | | |



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| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed | 2000 rpm | Rated inverter current | 9 A |
| Optimum power | 2.6 kW | Maximum inverter current | 27 A |
| Limiting data | | Maximum torque | 49.30 Nm |
| Max. permissible speed (mech.) | 6000 rpm | | |
| Max. permissible speed (inverter) | 4150 rpm | | |
| Maximum torque | 50.0 Nm | | |
| Maximum current | 27.5 A | | |