

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7084-2AC71-1RG2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

| | |
|-----------------------|--------------------------|
| Rated speed (100 K) | 2000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 15.0 Nm |
| Rated current | 6.7 A |
| Static torque (60 K) | 16.60 Nm |
| Static torque (100 K) | 20.0 Nm |
| Stall current (60 K) | 6.90 A |
| Stall current (100 K) | 8.50 A |
| Moment of inertia | 32.500 kgcm ² |
| Efficiency | 93.0 % |

Physical constants

| | |
|-----------------------------|--------------------------------|
| Torque constant | 2.36 Nm/A |
| Voltage constant at 20° C | 152.0 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 0.58 Ω |
| Rotating field inductance | 12.0 mH |
| Electrical time constant | 20.50 ms |
| Mechanical time constant | 1.02 ms |
| Thermal time constant | 55 min |
| Shaft torsional stiffness | 93000 Nm/rad |
| Net weight of the motor | 18.3 kg |

Mechanical data

| | |
|--------------------------|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 80 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.050 mm |
| Concentricity tolerance | 0.10 mm |
| Axial runout tolerance | 0.10 mm |
| Vibration severity grade | Grade A |
| Connector size | 1 |
| Degree of protection | IP65 and DE flange IP67 |
| 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 AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |



Figure similar

MLFB-Ordering data

1FK7084-2AC71-1RG2

| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed | 2000 rpm | Rated inverter current | 9 A |
| Optimum power | 3.1 kW | Maximum inverter current | 27 A |
| Limiting data | | Maximum torque | 58.40 Nm |
| Max. permissible speed (mech.) | 6000 rpm | | |
| Max. permissible speed (inverter) | 3800 rpm | | |
| Maximum torque | 61.0 Nm | | |
| Maximum current | 28.5 A | | |