

Data sheet for SIMOTICS S-1FK7 servo geared motor



Figure similar

MLFB-Ordering data **1FK7040-5AK71-1DV3-Z**
A13

Client order no. :
 Order no. :
 Offer no. :
 Remarks :

Item no. :
 Consignment no. :
 Project :

| Engineering data | | Mechanical data | | | |
|---------------------------|-------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------|--|--|
| Rated speed (100 K) | 6000 rpm | Motor type | Permanent-magnet synchronous motor | | |
| Number of poles | 8 | Motor type | Compact | | |
| Rated torque (100 K) | 1.1 Nm | Shaft height | 48 | | |
| Rated current | 1.7 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 1.30 Nm | Radial runout tolerance | 0.040 mm | | |
| Static torque (100 K) | 1.6 Nm | Concentricity tolerance | 0.08 mm | | |
| Stall current (60 K) | 1.80 A | Axial runout tolerance | 0.08 mm | | |
| Stall current (100 K) | 2.25 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 3.000 kgcm ² | Connector size | 1 | | |
| Physical constants | | 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 | Standard (Anthracite RAL 7016) | | |
| | | Holding brake | with holding brake | | |
| | | Shaft extension | Fitted key and keyway | | |
| | | Encoder system | Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits | | |
| | | Recommended Motor Module | | | |
| | | Rated inverter current | 3 A | | |
| Maximum inverter current | 6 A | | | | |
| Maximum torque | 4.10 Nm | | | | |



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Gearbox data

| | | | |
|-----------------------------------|---------------------------------|----------------------------|-------------------------|
| Gearbox type | DYA compact planetary gear unit | Static torque | 15.0 Nm |
| Designation | DYA | Output torque S1 | 12.5 Nm |
| Gearbox shaft end | Fitted key and keyway | Moment of inertia of rotor | 3.000 kgcm ² |
| Gearbox ratio | 10 | Maximum current | 7.4 A |
| Rated speed | 340 rpm | Static current | 2.3 A |
| Rated power | 0.45 kW | Weight | 6.60 kg |
| Output speed at the gearbox shaft | 600 rpm | | |
| Acceleration torque max. | 49 Nm | | |

Special design

A13 1FK7-DYA, M2standstill=15Nm S1Output speed=340rpm (l=10)

Limiting data

| | |
|-----------------------------------|----------|
| Max. permissible speed (mech.) | 9000 rpm |
| Max. permissible speed (inverter) | 9990 rpm |
| Maximum torque | 5.1 Nm |
| Maximum current | 7.7 A |

Holding brake

| | |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 3.2 Nm |
| Power supply voltage | DC 24 V 10 % |
| Coil current | 0.6 A |
| Opening time | 70 ms |
| Closing time | 30 ms |
| Highest braking work | 74 J |