



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7036-5AK70-1DG0-Z
X09**

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

Item no. :
Consignment no. :
Project :

Engineering data

| | |
|-------------------------|------------------------|
| Rated speed | 6,000 rpm |
| Number of poles | 6 |
| Rated torque (100 K) | 1.7 Nm |
| Rated current | 2.40 A |
| Static torque (60 K) | 2.4 Nm |
| Static torque (100 K) | 3.0 Nm |
| Stall current (60 K) | 3.10 A |
| Stall current (100 K) | 4.00 A |
| Rotor moment of inertia | 1.33 kgcm ² |
| Efficiency | 90.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 0.76 Nm/A |
| Voltage constant at 20° C | 48.5 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 1.37 Ω |
| Rotary field inductance | 5.9 mH |
| Electrical time constant | 4.30 ms |
| Mechanical time constant | 1.00 ms |
| Thermal time constant | 30 min |
| Shaft torsional stiffness | 4,100 Nm/rad |
| Net weight of the motor | 5.0 kg |

Mechanical data

| | |
|--------------------------|--|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 36 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.035 mm |
| Concentricity tolerance | 0.080 mm |
| Axial runout tolerance | 0.080 mm |
| Vibration severity grade | Grade A |
| Degree of protection | IP64 |
| Design acc. to Code I | IM B5 (new flange design) |
| Temperature monitoring | Pt1000 temperature sensor |
| Color of the housing | Anthracite RAL 7016 |
| Shaft end type | Plain shaft |
| Sensor design | Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder- internal 2048 S/R) + commutation position 11 bits |
| Electrical connection | Connector turnable |
| Connector size | 1 |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 6,000 rpm |
| Optimum power | 1.1 kW |

Limiting data

| | |
|-----------------------------------|------------|
| Max. permissible speed (mech.) | 10,000 rpm |
| Max. permissible speed (inverter) | 10,000 rpm |
| Maximum torque | 12.0 Nm |
| Maximum current | 17.00 A |

Recommended Motor Module

| | |
|--------------------------|---------|
| Rated inverter current | 5.00 A |
| Maximum inverter current | 15.00 A |
| Maximum torque | 10.8 Nm |

Special design

X09 Paint finish anthracite, similar to RAL 7016