



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7044-1AF71-1LG1

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

Item no. :
Consignment no. :
Project :

Engineering data

| | |
|-------------------------|------------------------|
| Rated speed | 3,000 rpm |
| Number of poles | 6 |
| Rated torque (100 K) | 4.3 Nm |
| Rated current | 2.60 A |
| Static torque (60 K) | 4.4 Nm |
| Static torque (100 K) | 5.0 Nm |
| Stall current (60 K) | 2.50 A |
| Stall current (100 K) | 2.80 A |
| Rotor moment of inertia | 5.43 kgcm ² |
| Efficiency | 92.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 1.79 Nm/A |
| Voltage constant at 20° C | 49.0 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 2.30 Ω |
| Rotary field inductance | 15.0 mH |
| Electrical time constant | 6.50 ms |
| Mechanical time constant | 1.20 ms |
| Thermal time constant | 35 min |
| Shaft torsional stiffness | 12,300 Nm/rad |
| Net weight of the motor | 7.2 kg |

Mechanical data

| | |
|--------------------------|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact core type |
| Shaft height | 48 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.040 mm |
| Concentricity tolerance | 0.080 mm |
| Axial runout tolerance | 0.080 mm |
| Vibration severity grade | Grade A |
| Degree of protection | IP65 |
| Design acc. to Code I | IM B5 (compatible with 1FT6) |
| Temperature monitoring | Pt1000 temperature sensor |
| Color of the housing | Standard (pearl dark gray similar to RAL 9023) |
| Shaft end type | Plain shaft |
| Sensor design | Encoder AM24DQI: Absolute encoder 24 bit (resolution 16777216, encoder-internal 2048 S/R) + 12 bit Multiturn (traversing range 4096 revolutions) - with signal connection via M17 rotary plug |
| Electrical connection | Connector turnable |
| Connector size | 1 |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 3,000 rpm |
| Optimum power | 1.4 kW |

Limiting data

| | |
|-----------------------------------|-----------|
| Max. permissible speed (mech.) | 9,000 rpm |
| Max. permissible speed (inverter) | 5,200 rpm |
| Maximum torque | 23.0 Nm |
| Maximum current | 16.00 A |

Recommended Motor Module

| | |
|--------------------------|--------|
| Rated inverter current | 3.00 A |
| Maximum inverter current | 6.00 A |