

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7066-5AH71-1CH2



Figure similar

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

Item no. :
Consignment no. :
Project :

| Engineering data | |
|-------------------------|-------------------------|
| Rated speed | 4,500 rpm |
| Number of poles | 10 |
| Rated torque (100 K) | 5.0 Nm |
| Rated current | 6.30 A |
| Static torque (60 K) | 10.0 Nm |
| Static torque (100 K) | 12.0 Nm |
| Stall current (60 K) | 11.30 A |
| Stall current (100 K) | 13.60 A |
| Rotor moment of inertia | 19.30 kgcm ² |
| Efficiency | 90.0 % |

| Physical constants | |
|-----------------------------|-------------------------------|
| Torque constant | 0.88 Nm/A |
| Voltage constant at 20° C | 56.0 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 0.20 Ω |
| Rotary field inductance | 2.3 mH |
| Electrical time constant | 12.00 ms |
| Mechanical time constant | 1.20 ms |
| Thermal time constant | 40 min |
| Shaft torsional stiffness | 24,000 Nm/rad |
| Net weight of the motor | 14.1 kg |

| Mechanical data | |
|--------------------------|--|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 63 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.040 mm |
| Concentricity tolerance | 0.100 mm |
| Axial runout tolerance | 0.100 mm |
| Vibration severity grade | Grade A |
| Degree of protection | IP67 |
| 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 RJ45 |
| Electrical connection | Connector turnable |
| Connector size | 1 |

| Optimum operating point | |
|-------------------------|-----------|
| Optimum speed | 4,000 rpm |
| Optimum power | 2.5 kW |

| Limiting data | |
|-----------------------------------|-----------|
| Max. permissible speed (mech.) | 9,000 rpm |
| Max. permissible speed (inverter) | 8,000 rpm |
| Maximum torque | 49.0 Nm |
| Maximum current | 70.00 A |

| Recommended Motor Module | |
|--------------------------|---------|
| Rated inverter current | 18.00 A |
| Maximum inverter current | 54.00 A |
| Maximum torque | 42.8 Nm |

| Holding brake | |
|------------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 18.0 Nm |
| Braking torque | 11.0 Nm |
| Power supply voltage | DC 24 V |
| Coil current | 0.80 A |
| Permissible brake work | 880 J |
| Opening time | 150 ms |
| Closing time | 50 ms |