

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7042-5AF71-1LH2



Figure similar

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

Item no. :
Consignment no. :
Project :

| Engineering data | | Mechanical data | |
|-----------------------------|-------------------------------|--------------------------|---|
| Rated speed | 3000 rpm | Motor type | Permanent-magnet synchronous motor |
| Number of poles | 6 | Design of the motor type | Compact |
| Rated torque (100 K) | 2.7 Nm | Shaft height | 48 mm |
| Rated current | 2.1 A | Cooling | Natural cooling |
| Static torque (60 K) | 2.50 Nm | Radial runout tolerance | N |
| Static torque (100 K) | 3.0 Nm | Vibration severity grade | Grade A |
| Stall current (60 K) | 1.8 A | Degree of protection | IP67 |
| Stall current (100 K) | 2.1 A | Design acc. to Code I | IM B5 (compatible with 1FT6) |
| Rotor moment of inertia | 0.0003680 kgm ² | Temperature monitoring | Pt1000 temperature sensor |
| Efficiency | 92.0 % | Color of the housing | |
| Physical constants | | Holding brake version | Permanent-magnet brake |
| Torque constant | 1.38 Nm/A | Shaft end type | Plain shaft |
| Voltage constant at 20° C | 87.5 V/1000*min ⁻¹ | 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 |
| Winding resistance at 20° C | 3.60 Ω | Electrical connectors | Connector turnable |
| Rotating field inductance | 21.4 mH | Connector size | 1 |
| Electrical time constant | 5.90 ms | | |
| Mechanical time constant | 1.60 ms | | |
| Thermal time constant | 20 min | | |
| Shaft torsional stiffness | 11700 Nm/rad | | |
| Net weight of the motor | 5.5 kg | | |

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| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed | 3000 rpm | Rated inverter current | 3 A |
| Optimum power | 0.8 kW | Maximum inverter current | 9 A |
| Limiting data | | Maximum torque | 10.90 Nm |
| Max. permissible speed (mech.) | 9000 rpm | | |
| Max. permissible speed (inverter) | 6600 rpm | | |
| Maximum torque | 13.0 Nm | | |
| Maximum current | 11.0 A | | |