

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7046-5AH70-1CG1



Figure similar

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

Item no. :
Consignment no. :
Project :

| Engineering data | | Mechanical data | |
|-----------------------------|-------------------------------|--------------------------|--|
| Rated speed | 4500 rpm | Motor type | Permanent-magnet synchronous motor |
| Number of poles | 6 | Design of the motor type | Compact |
| Rated torque (100 K) | 2.4 Nm | Shaft height | 48 mm |
| Rated current | 3.2 A | Cooling | Natural cooling |
| Static torque (60 K) | 6.00 Nm | Radial runout tolerance | N |
| Static torque (100 K) | 7.0 Nm | Vibration severity grade | Grade A |
| Stall current (60 K) | 6.9 A | Degree of protection | IP65 |
| Stall current (100 K) | 8.1 A | Design acc. to Code I | IM B5 (new flange design) |
| Rotor moment of inertia | 0.0007520 kgm ² | Temperature monitoring | Pt1000 temperature sensor |
| Efficiency | 90.0 % | Color of the housing | |
| Physical constants | | Holding brake version | no value |
| Torque constant | 0.87 Nm/A | Shaft end type | Plain shaft |
| Voltage constant at 20° C | 55.5 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 RJ45 |
| Winding resistance at 20° C | 0.41 Ω | Electrical connectors | Connector turnable |
| Rotating field inductance | 2.9 mH | Connector size | 1 |
| Electrical time constant | 7.00 ms | | |
| Mechanical time constant | 1.20 ms | | |
| Thermal time constant | 35 min | | |
| Shaft torsional stiffness | 8300 Nm/rad | | |
| Net weight of the motor | 9.3 kg | | |

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| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed | 3500 rpm | Rated inverter current | 9 A |
| Optimum power | 1.3 kW | Maximum inverter current | 27 A |
| Limiting data | | Maximum torque | 22.40 Nm |
| Max. permissible speed (mech.) | 9000 rpm | | |
| Max. permissible speed (inverter) | 9000 rpm | | |
| Maximum torque | 31.0 Nm | | |
| Maximum current | 38.0 A | | |