

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7062-1AF71-1DG1



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             | 10                            | Design of the motor type | Compact core type  |
| Rated torque (100 K)        | 5.4 Nm                        | Shaft height             | 63 mm  |
| Rated current               | 3.9 A                         | Cooling                  | Natural cooling  |
| Static torque (60 K)        | 5.00 Nm                       | Radial runout tolerance  | N  |
| Static torque (100 K)       | 6.0 Nm                        | Vibration severity grade | Grade A  |
| Stall current (60 K)        | 3.2 A                         | Degree of protection     | IP65   |
| Stall current (100 K)       | 3.9 A                         | Design acc. to Code I    | IM B5 (compatible with 1FT6)   |
| Rotor moment of inertia     | 0.0007360 kgm <sup>2</sup>    | Temperature monitoring   | Pt1000 temperature sensor  |
| Efficiency                  | 91.0 %                        | Color of the housing     |  |
| Physical constants          |                               | Holding brake version    | no value   |
| Torque constant             | 1.54 Nm/A                     | Shaft end type           | Plain shaft  |
| Voltage constant at 20° C   | 95.0 V/1000*min <sup>-1</sup> | Sensor design            | Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits |
| Winding resistance at 20° C | 1.57 Ω                        | Electrical connectors    | Connector turnable   |
| Rotating field inductance   | 15.2 mH                       | Connector size           | 1  |
| Electrical time constant    | 9.70 ms                       |                          |  |
| Mechanical time constant    | 1.50 ms                       |                          |  |
| Thermal time constant       | 25 min                        |                          |  |
| Shaft torsional stiffness   | 28000 Nm/rad                  |                          |  |
| Net weight of the motor     | 7.1 kg                        |                          |  |

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### Optimum operating point

Optimum speed 3000 rpm

Optimum power 1.7 kW

### Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 6100 rpm

Maximum torque 24.0 Nm

Maximum current 22.0 A

### Recommended Motor Module

Rated inverter current 5 A

Maximum inverter current 10 A