

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7064-1AK70-1BG1



Figure similar

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

Item no. :  
Consignment no. :  
Project :

### Engineering data

|                         |                         |
|-------------------------|-------------------------|
| Rated speed             | 6,000 rpm               |
| Number of poles         | 10                      |
| Rated torque (100 K)    | 2.9 Nm                  |
| Rated current           | 3.40 A                  |
| Static torque (60 K)    | 7.7 Nm                  |
| Static torque (100 K)   | 9.0 Nm                  |
| Stall current (60 K)    | 7.40 A                  |
| Stall current (100 K)   | 9.00 A                  |
| Rotor moment of inertia | 11.90 kgcm <sup>2</sup> |
| Efficiency              | 91.0 %                  |

### Physical constants

|                             |                               |
|-----------------------------|-------------------------------|
| Torque constant             | 1.00 Nm/A                     |
| Voltage constant at 20° C   | 64.0 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.38 Ω                        |
| Rotary field inductance     | 4.1 mH                        |
| Electrical time constant    | 10.80 ms                      |
| Mechanical time constant    | 1.40 ms                       |
| Thermal time constant       | 30 min                        |
| Shaft torsional stiffness   | 35,000 Nm/rad                 |
| Net weight of the motor     | 9.7 kg                        |

### Mechanical data

|                          |  |
|--------------------------|--|
| Motor type               | Permanent-magnet synchronous motor   |
| Motor type               | Compact core type  |
| 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     | IP65   |
| Design acc. to Code I    | IM B5 (new flange design)  |
| 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 AS24DQI: Absolut encoder Singleturn 24 bit - with signal connection RJ45 |
| Electrical connection    | Connector turnable   |
| Connector size           | 1  |

### Optimum operating point

|               |           |
|---------------|-----------|
| Optimum speed | 4,500 rpm |
| Optimum power | 2.6 kW    |

### Limiting data

|                                   |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 9,000 rpm |
| Max. permissible speed (inverter) | 8,000 rpm |
| Maximum torque                    | 36.0 Nm   |
| Maximum current                   | 45.00 A   |

### Recommended Motor Module

|                          |         |
|--------------------------|---------|
| Rated inverter current   | 9.00 A  |
| Maximum inverter current | 18.00 A |