

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7062-5AF71-1FH0



Figure similar

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

Item no. :  
Consignment no. :  
Project :

### Engineering data

Rated speed	3,000 rpm
Number of poles	10
Rated torque (100 K)	5.4 Nm
Rated current	3.90 A
Static torque (60 K)	5.0 Nm
Static torque (100 K)	6.0 Nm
Stall current (60 K)	3.40 A
Stall current (100 K)	3.90 A
Rotor moment of inertia	10.20 kgcm <sup>2</sup>
Efficiency	91.0 %

### Physical constants

Torque constant	1.49 Nm/A
Voltage constant at 20° C	94.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	1.57 Ω
Rotary field inductance	15.2 mH
Electrical time constant	10.00 ms
Mechanical time constant	1.60 ms
Thermal time constant	25 min
Shaft torsional stiffness	28,500 Nm/rad
Net weight of the motor	8.8 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	IP64
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 AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Electrical connection	Connector turnable
Connector size	1

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	1.7 kW

### Limiting data

Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	6,100 rpm
Maximum torque	24.0 Nm
Maximum current	22.00 A

### Recommended Motor Module

Rated inverter current	5.00 A
Maximum inverter current	15.00 A
Maximum torque	18.7 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