

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7084-5WF70-1FH1

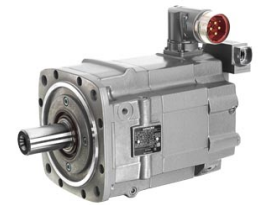


Figure similar

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)	35.0 Nm
Rated current	24.20 A
Static torque (60 K)	29.0 Nm
Static torque (100 K)	35.0 Nm
Stall current (60 K)	19.20 A
Stall current (100 K)	23.00 A
Rotor moment of inertia	62.50 kgcm <sup>2</sup>
Efficiency	94.0 %

### Physical constants

Torque constant	1.51 Nm/A
Voltage constant at 20° C	95.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.18 Ω
Rotary field inductance	3.1 mH
Electrical time constant	17.00 ms
Mechanical time constant	1.20 ms
Thermal time constant	2 min
Shaft torsional stiffness	65,000 Nm/rad
Net weight of the motor	30.5 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Water cooling
Radial runout tolerance	0.050 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 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	1.5

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	11.0 kW

### Limiting data

Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	6,100 rpm
Maximum torque	90.0 Nm
Maximum current	78.00 A

### Recommended Motor Module

Rated inverter current	30.00 A
Maximum inverter current	90.00 A
Maximum torque	90.0 Nm

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	48.0 Nm
Braking torque	25.0 Nm
Power supply voltage	DC 24 V
Coil current	1.00 A
Permissible brake work	1,900 J
Opening time	220 ms
Closing time	65 ms