

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7084-5SF70-1CG0



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)	23.0 Nm
Rated current	18.50 A
Static torque (60 K)	21.5 Nm
Static torque (100 K)	27.0 Nm
Stall current (60 K)	16.50 A
Stall current (100 K)	21.00 A
Rotor moment of inertia	450.00 kgcm <sup>2</sup>
Efficiency	94.0 %

### Physical constants

Torque constant	1.30 Nm/A
Voltage constant at 20° C	83.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.18 Ω
Rotary field inductance	2.8 mH
Electrical time constant	16.00 ms
Mechanical time constant	1.40 ms
Thermal time constant	35 min
Shaft torsional stiffness	88,000 Nm/rad
Net weight of the motor	25.0 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Forced ventilation
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	IP64
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 AM24DQI: Absolute encoder 24 bit (resolution 16777216, encoder-internal 2048 S/R) + 12 bit Multiturn (traversing range 4096 revolutions) - with signal connection RJ45
Electrical connection	Connector turnable
Connector size	1.5

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	7.2 kW

### Limiting data

Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	7,000 rpm
Maximum torque	81.0 Nm
Maximum current	77.00 A

### Recommended Motor Module

Rated inverter current	30.00 A
Maximum inverter current	90.00 A
Maximum torque	81.0 Nm