

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7066-5AF71-1BK5



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)	9.3 Nm
Rated current	7.20 A
Static torque (60 K)	10.0 Nm
Static torque (100 K)	12.0 Nm
Stall current (60 K)	7.10 A
Stall current (100 K)	8.40 A
Rotor moment of inertia	16.40 kgcm <sup>2</sup>
Efficiency	92.0 %

### Physical constants

Torque constant	1.41 Nm/A
Voltage constant at 20° C	89.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.50 Ω
Rotary field inductance	5.5 mH
Electrical time constant	11.00 ms
Mechanical time constant	1.20 ms
Thermal time constant	40 min
Shaft torsional stiffness	31,500 Nm/rad
Net weight of the motor	12.3 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.021 mm
Concentricity tolerance	0.050 mm
Axial runout tolerance	0.050 mm
Vibration severity grade	Grade R
Degree of protection	IP67
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 AS24DQI: Absolut encoder Singleturn 24 bit - with signal connection RJ45
Electrical connection	Connector turnable
Connector size	1

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	2.9 kW

### Limiting data

Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	6,500 rpm
Maximum torque	49.0 Nm
Maximum current	44.00 A

### Recommended Motor Module

Rated inverter current	9.00 A
Maximum inverter current	27.00 A
Maximum torque	35.2 Nm