



Figure similar

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7108-5WB71-1BH1

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

Item no. :  
Consignment no. :  
Project :

### Engineering data

Rated speed	1,500 rpm
Number of poles	10
Rated torque (100 K)	125.0 Nm
Rated current	40.32 A
Static torque (60 K)	100.0 Nm
Static torque (100 K)	125.0 Nm
Stall current (60 K)	31.60 A
Stall current (100 K)	39.00 A
Rotor moment of inertia	291.00 kgcm <sup>2</sup>
Efficiency	94.0 %

### Physical constants

Torque constant	3.16 Nm/A
Voltage constant at 20° C	199.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.11 Ω
Rotary field inductance	2.7 mH
Electrical time constant	24.00 ms
Mechanical time constant	0.90 ms
Thermal time constant	2 min
Shaft torsional stiffness	96,000 Nm/rad
Net weight of the motor	72.9 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
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 (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	1.5

### Optimum operating point

Optimum speed	1,500 rpm
Optimum power	19.6 kW

### Limiting data

Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	2,900 rpm
Maximum torque	330.0 Nm
Maximum current	120.50 A

### Recommended Motor Module

Rated inverter current	45.00 A
Maximum inverter current	85.00 A
Maximum torque	249.5 Nm

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	85.0 Nm
Braking torque	35.0 Nm
Power supply voltage	DC 24 V
Coil current	1.60 A
Permissible brake work	5,300 J
Opening time	250 ms
Closing time	70 ms