



Figure similar

## Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7034-5AK71-1FK3

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

Item no. :  
Consignment no. :  
Project :

### Engineering data

Rated speed	6,000 rpm
Number of poles	6
Rated torque (100 K)	1.4 Nm
Rated current	2.10 A
Static torque (60 K)	1.6 Nm
Static torque (100 K)	2.0 Nm
Stall current (60 K)	2.10 A
Stall current (100 K)	2.70 A
Rotor moment of inertia	0.85 kgcm <sup>2</sup>
Efficiency	90.0 %

### Physical constants

Torque constant	0.76 Nm/A
Voltage constant at 20° C	48.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	2.40 Ω
Rotary field inductance	9.7 mH
Electrical time constant	4.00 ms
Mechanical time constant	1.10 ms
Thermal time constant	25 min
Shaft torsional stiffness	5,100 Nm/rad
Net weight of the motor	3.8 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	36
Cooling	Natural cooling
Radial runout tolerance	0.018 mm
Concentricity tolerance	0.040 mm
Axial runout tolerance	0.040 mm
Vibration severity grade	Grade R
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	6,000 rpm
Optimum power	0.9 kW

### Limiting data

Max. permissible speed (mech.)	10,000 rpm
Max. permissible speed (inverter)	10,000 rpm
Maximum torque	8.0 Nm
Maximum current	12.00 A

### Recommended Motor Module

Rated inverter current	3.00 A
Maximum inverter current	9.00 A
Maximum torque	6.3 Nm