SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7046-5AF70-1DB4

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	6
Rated torque (100 K)	5.6 Nm
Rated current	3.50 A
Static torque (60 K)	6.0 Nm
Static torque (100 K)	7.0 Nm
Stall current (60 K)	3.40 A
Stall current (100 K)	4.00 A
Rotor moment of inertia	8.39 kgcm²
Efficiency	92.0 %

Physical constants	
Torque constant	1.75 Nm/A
Voltage constant at 20° C	111.0 V/1000*min^{-1}
Winding resistance at 20° C	1.55 Ω
Rotary field inductance	11.0 mH
Electrical time constant	7.00 ms
Mechanical time constant	1.10 ms
Thermal time constant	35 min
Shaft torsional stiffness	8,300 Nm/rad
Net weight of the motor	10.2 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	48
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.080 mm
Axial runout tolerance	0.080 mm
Vibration severity grade	Grade R
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	Fitted key and keyway
Sensor design	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Safety Integrated - Suitable encoder	Yes
Electrical connection	Connector turnable
Connector size	1

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	1.8 kW

Limiting data	
Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	5,200 rpm
Maximum torque	31.0 Nm
Maximum current	19.00 A

Recommended Motor Module	
Rated inverter current	5.00 A
Maximum inverter current	15.00 A
Maximum torque	24.5 Nm

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	8.0 Nm
Braking torque	5.0 Nm
Power supply voltage	DC 24 V
Coil current	0.60 A
Permissible brake work	270 J
Opening time	90 ms
Closing time	30 ms

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens