SIEMENS

Data sheet for SIMOTICS S-1FT7

Figure similar

Article No. : 1FT7068-5AF71-1DH0

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)	10.9 Nm
Rated current	6.70 A
Static torque (60 K)	13.0 Nm
Static torque (100 K)	15.0 Nm
Stall current (60 K)	7.30 A
Stall current (100 K)	8.30 A
Rotor moment of inertia	26.10 kgcm²
Efficiency	92.0 %

Physical constants	
Torque constant	1.78 Nm/A
Voltage constant at 20° C	113.0 V/1000*min^{-1}
Winding resistance at 20° C	0.54 Ω
Rotary field inductance	6.4 mH
Electrical time constant	12.00 ms
Mechanical time constant	1.20 ms
Thermal time constant	45 min
Shaft torsional stiffness	21,500 Nm/rad
Net weight of the motor	18.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 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 (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 IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Electrical connection	Connector turnable
Connector size	1

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	3.4 kW

Limiting data	
Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	5,100 rpm
Maximum torque	63.0 Nm
Maximum current	43.00 A

Recommended Motor Module	
Rated inverter current	9.00 A
Maximum inverter current	27.00 A
Maximum torque	46.0 Nm

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	18.0 Nm
Braking torque	11.0 Nm
Power supply voltage	DC 24 V
Coil current	0.80 A
Permissible brake work	880 J
Opening time	150 ms
Closing time	50 ms