SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7086-5AF71-1DG1

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)	18.0 Nm
Rated current	11.00 A
Static torque (60 K)	23.0 Nm
Static torque (100 K)	28.0 Nm
Stall current (60 K)	12.90 A
Stall current (100 K)	15.50 A
Rotor moment of inertia	63.60 kgcm²
Efficiency	93.0 %

Physical constants	
Torque constant	1.78 Nm/A
Voltage constant at 20° C	113.5 V/1000*min^{-1}
Winding resistance at 20° C	0.23 Ω
Rotary field inductance	4.0 mH
Electrical time constant	17.00 ms
Mechanical time constant	1.40 ms
Thermal time constant	60 min
Shaft torsional stiffness	74,000 Nm/rad
Net weight of the motor	27.5 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Natural 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 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	1.5

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	5.7 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	5,100 rpm
Maximum torque	120.0 Nm
Maximum current	78.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	86.0 Nm

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