SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7105-5SC71-1CG1

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	2,000 rpm
Number of poles	10
Rated torque (100 K)	56.0 Nm
Rated current	29.00 A
Static torque (60 K)	51.0 Nm
Static torque (100 K)	65.0 Nm
Stall current (60 K)	24.00 A
Stall current (100 K)	31.00 A
Rotor moment of inertia	178.00 kgcm²
Efficiency	93.0 %

Physical constants	
Torque constant	2.11 Nm/A
Voltage constant at 20° C	134.5 V/1000*min^{-1}
Winding resistance at 20° C	0.10 Ω
Rotary field inductance	2.7 mH
Electrical time constant	26.00 ms
Mechanical time constant	1.20 ms
Thermal time constant	50 min
Shaft torsional stiffness	146,000 Nm/rad
Net weight of the motor	50.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Forced ventilation
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 AM24DQI: Absolute encoder 24 bit (resolution 16777216, encoder-internal 2048 S/R) + 12 bit Multiturn (traversing range 4096 revolutions) - with signal connection RJ45
Safety Integrated - Suitable encoder	Yes
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	2,000 rpm
Optimum power	11.7 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	4,250 rpm
Maximum torque	200.0 Nm
Maximum current	107.00 A

Recommended Motor Module	
Rated inverter current	45.00 A
Maximum inverter current	85.00 A
Maximum torque	168.0 Nm

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