SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7102-5AF71-1CA0

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)	20.0 Nm
Rated current	12.00 A
Static torque (60 K)	25.0 Nm
Static torque (100 K)	30.0 Nm
Stall current (60 K)	15.00 A
Stall current (100 K)	18.00 A
Rotor moment of inertia	91.40 kgcm²
Efficiency	93.0 %

Physical constants	
Torque constant	1.67 Nm/A
Voltage constant at 20° C	106.0 V/1000*min^{-1}
Winding resistance at 20° C	0.15 Ω
Rotary field inductance	3.1 mH
Electrical time constant	21.00 ms
Mechanical time constant	1.50 ms
Thermal time constant	70 min
Shaft torsional stiffness	181,000 Nm/rad
Net weight of the motor	26.1 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
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	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	Fitted key and keyway
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	3,000 rpm
Optimum power	6.3 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	5,360 rpm
Maximum torque	120.0 Nm
Maximum current	90.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	79.0 Nm

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