SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7085-7WH71-3DE4

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	4,500 rpm
Number of poles	8
Rated torque (100 K)	33.0 Nm
Rated current	48.00 A
Static torque (60 K)	34.0 Nm
Static torque (100 K)	43.0 Nm
Stall current (60 K)	46.00 A
Stall current (100 K)	58.00 A
Rotor moment of inertia	34.90 kgcm²
Efficiency	94.0 %

Physical constants	
Torque constant	0.74 Nm/A
Voltage constant at 20° C	47.5 V/1000*min^{-1}
Winding resistance at 20° C	0.05 Ω
Rotary field inductance	1.2 mH
Electrical time constant	26.00 ms
Mechanical time constant	0.50 ms
Thermal time constant	10 min
Shaft torsional stiffness	51,000 Nm/rad
Net weight of the motor	35.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	80
Cooling	Water cooling
Radial runout tolerance	0.025 mm
Concentricity tolerance	0.050 mm
Axial runout tolerance	0.050 mm
Vibration severity grade	Grade R
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	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	Axial NDE
Connector size	3

Optimum operating point	
Optimum speed	4,500 rpm
Optimum power	15.5 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	8,000 rpm
Maximum torque	105.0 Nm
Maximum current	205.00 A

Recommended Motor Module	
Rated inverter current	60.00 A
Maximum inverter current	113.00 A
Maximum torque	77.0 Nm

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	48.0 Nm
Braking torque	25.0 Nm
Power supply voltage	DC 24 V
Coil current	1.00 A
Permissible brake work	1,900 J
Opening time	220 ms
Closing time	65 ms

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