SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7087-7WF70-1CK4

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	8
Rated torque (100 K)	51.0 Nm
Rated current	43.00 A
Static torque (60 K)	48.0 Nm
Static torque (100 K)	61.0 Nm
Stall current (60 K)	40.00 A
Stall current (100 K)	51.00 A
Rotor moment of inertia	27.40 kgcm²
Efficiency	94.0 %

Physical constants	
Torque constant	1.20 Nm/A
Voltage constant at 20° C	77.0 V/1000*min^{-1}
Winding resistance at 20° C	0.08 Ω
Rotary field inductance	2.1 mH
Electrical time constant	26.00 ms
Mechanical time constant	0.50 ms
Thermal time constant	11 min
Shaft torsional stiffness	60,000 Nm/rad
Net weight of the motor	41.0 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 (new flange design)
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	Transverse facing to right site
Connector size	3

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	16.0 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	7,500 rpm
Maximum torque	150.0 Nm
Maximum current	170.00 A

Recommended Motor Module	
Rated inverter current	60.00 A
Maximum inverter current	113.00 A
Maximum torque	120.0 Nm

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