SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7065-7WF70-1DB1

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	6
Rated torque (100 K)	18.0 Nm
Rated current	15.00 A
Static torque (60 K)	16.0 Nm
Static torque (100 K)	19.0 Nm
Stall current (60 K)	14.00 A
Stall current (100 K)	16.00 A
Rotor moment of inertia	9.00 kgcm²
Efficiency	92.0 %

Physical constants	
Torque constant	1.17 Nm/A
Voltage constant at 20° C	75.0 V/1000*min^{-1}
Winding resistance at 20° C	0.43 Ω
Rotary field inductance	8.2 mH
Electrical time constant	19.00 ms
Mechanical time constant	0.60 ms
Thermal time constant	9 min
Shaft torsional stiffness	23,500 Nm/rad
Net weight of the motor	17.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	63
Cooling	Water cooling
Radial runout tolerance	0.040 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 (new flange design)
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	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.)	9,000 rpm
Max. permissible speed (inverter)	7,700 rpm
Maximum torque	45.0 Nm
Maximum current	49.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	45.0 Nm

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	18.0 Nm
Braking torque	11.0 Nm
Power supply voltage	DC 24 V
Coil current	0.80 A
Permissible brake work	880 J
Opening time	150 ms
Closing time	50 ms

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