SIEMENS

Data sheet for SIMOTICS S-1FT7



Figure similar

Article No. : 1FT7082-5AH70-1BD2

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	4,500 rpm
Number of poles	10
Rated torque (100 K)	8.0 Nm
Rated current	7.80 A
Static torque (60 K)	10.6 Nm
Static torque (100 K)	13.0 Nm
Stall current (60 K)	10.30 A
Stall current (100 K)	12.30 A
Rotor moment of inertia	26.50 kgcm²
Efficiency	93.0 %

Physical constants	
Torque constant	1.03 Nm/A
Voltage constant at 20° C	65.5 V/1000*min^{-1}
Winding resistance at 20° C	0.23 Ω
Rotary field inductance	3.5 mH
Electrical time constant	15.00 ms
Mechanical time constant	1.70 ms
Thermal time constant	40 min
Shaft torsional stiffness	108,000 Nm/rad
Net weight of the motor	14.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Natural cooling
Radial runout tolerance	0.025 mm
Concentricity tolerance	0.050 mm
Axial runout tolerance	0.050 mm
Vibration severity grade	Grade A
Degree of protection	IP67
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 AS24DQI: Absolut encoder Singleturn 24 bit - with signal connection RJ45
Electrical connection	Connector turnable
Connector size	1

Optimum operating point	
Optimum speed	4,500 rpm
Optimum power	3.8 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	8,000 rpm
Maximum torque	52.0 Nm
Maximum current	63.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	48.0 Nm