

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7066-5WH70-1DB0



Figure similar

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)	19.4 Nm
Rated current	20.81 A
Static torque (60 K)	16.0 Nm
Static torque (100 K)	20.0 Nm
Stall current (60 K)	15.90 A
Stall current (100 K)	19.70 A
Rotor moment of inertia	20.20 kgcm ²
Efficiency	91.0 %

Physical constants

Torque constant	1.01 Nm/A
Voltage constant at 20° C	63.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.20 Ω
Rotary field inductance	2.1 mH
Electrical time constant	10.00 ms
Mechanical time constant	1.00 ms
Thermal time constant	2 min
Shaft torsional stiffness	24,000 Nm/rad
Net weight of the motor	17.4 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
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	IP64
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
Electrical connection	Connector turnable
Connector size	1

Optimum operating point

Optimum speed	4,500 rpm
Optimum power	9.1 kW

Limiting data

Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	8,000 rpm
Maximum torque	55.0 Nm
Maximum current	70.50 A

Recommended Motor Module

Rated inverter current	30.00 A
Maximum inverter current	90.00 A
Maximum torque	55.0 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