

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7084-5AH71-1NH0-Z
X09**



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)	9.5 Nm
Rated current	7.80 A
Static torque (60 K)	16.8 Nm
Static torque (100 K)	20.0 Nm
Stall current (60 K)	13.40 A
Stall current (100 K)	15.60 A
Rotor moment of inertia	60.40 kgcm ²
Efficiency	93.0 %

Physical constants	
Torque constant	1.25 Nm/A
Voltage constant at 20° C	79.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.17 Ω
Rotary field inductance	2.9 mH
Electrical time constant	17.00 ms
Mechanical time constant	1.50 ms
Thermal time constant	55 min
Shaft torsional stiffness	65,000 Nm/rad
Net weight of the motor	25.1 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	80
Cooling	Natural cooling
Radial runout tolerance	0.050 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 (compatible with 1FT6)
Temperature monitoring	KTY84 temperature sensor in the stator winding
Color of the housing	Anthracite RAL 7016
Shaft end type	Plain shaft
Sensor design	Encoder IC2048S/R; incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	4,000 rpm
Optimum power	4.8 kW

Limiting data	
Max. permissible speed (mech.)	8,000 rpm
Max. permissible speed (inverter)	7,200 rpm
Maximum torque	81.0 Nm
Maximum current	80.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	60.0 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

Special design	
X09	Paint finish anthracite, similar to RAL 7016