

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7042-5AF71-1CH1



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Design of the motor type	Compact
Rated torque (100 K)	2.7 Nm	Shaft height	48 mm
Rated current	2.1 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	N
Static torque (100 K)	3.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	1.8 A	Degree of protection	IP65
Stall current (100 K)	2.1 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0003680 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	92.0 %	Color of the housing	
Physical constants		Holding brake version	Permanent-magnet brake
Torque constant	1.38 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	87.5 V/1000*min ⁻¹	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
Winding resistance at 20° C	3.60 Ω	Electrical connectors	Connector turnable
Rotating field inductance	21.4 mH	Connector size	1
Electrical time constant	5.90 ms		
Mechanical time constant	1.60 ms		
Thermal time constant	20 min		
Shaft torsional stiffness	11700 Nm/rad		
Net weight of the motor	5.5 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	3 A
Optimum power	0.8 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	10.90 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	6600 rpm		
Maximum torque	13.0 Nm		
Maximum current	11.0 A		