

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7108-5AF71-1CB1



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	10	Design of the motor type	Compact
Rated torque (100 K)	20.0 Nm	Shaft height	100 mm
Rated current	12.0 A	Cooling	Natural cooling
Static torque (60 K)	58.00 Nm	Radial runout tolerance	N
Static torque (100 K)	70.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	28.0 A	Degree of protection	IP65
Stall current (100 K)	36.0 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0276000 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	
Physical constants		Holding brake version	Permanent-magnet brake
Torque constant	1.94 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	127.0 V/1000*min <sup>-1</sup>	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	0.07 Ω	Electrical connectors	Connector turnable
Rotating field inductance	1.7 mH	Connector size	1.5
Electrical time constant	26.00 ms		
Mechanical time constant	1.30 ms		
Thermal time constant	95 min		
Shaft torsional stiffness	96000 Nm/rad		
Net weight of the motor	65.1 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	45 A
Optimum power	8.2 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	150.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	4500 rpm		
Maximum torque	280.0 Nm		
Maximum current	165.0 A		