

## Data sheet for SIMOTICS S-1FT7



Figure similar

MLFB-Ordering data

1FT7102-5AF70-1CH1

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)	25.00 Nm	Radial runout tolerance	N
Static torque (100 K)	30.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	15.0 A	Degree of protection	IP65
Stall current (100 K)	18.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0119000 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	1.67 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	106.0 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	0.15 Ω	Electrical connectors	Connector turnable
Rotating field inductance	3.1 mH	Connector size	1.5
Electrical time constant	21.00 ms		
Mechanical time constant	1.50 ms		
Thermal time constant	70 min		
Shaft torsional stiffness	124000 Nm/rad		
Net weight of the motor	32.3 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	6.3 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	79.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	5360 rpm		
Maximum torque	120.0 Nm		
Maximum current	90.0 A		