

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7082-5AF71-1DA2



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)	10.3 Nm	Shaft height	80 mm
Rated current	6.6 A	Cooling	Natural cooling
Static torque (60 K)	10.60 Nm	Radial runout tolerance	N
Static torque (100 K)	13.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	6.3 A	Degree of protection	IP67
Stall current (100 K)	7.6 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0026500 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	
<b>Physical constants</b>		Holding brake version	no value
Torque constant	1.67 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	106.5 V/1000*min <sup>-1</sup>	Sensor design	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Winding resistance at 20° C	0.61 Ω	Electrical connectors	Connector turnable
Rotating field inductance	9.3 mH	Connector size	1
Electrical time constant	15.00 ms		
Mechanical time constant	1.70 ms		
Thermal time constant	40 min		
Shaft torsional stiffness	76000 Nm/rad		
Net weight of the motor	14.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	3.2 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	39.80 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	5400 rpm		
Maximum torque	52.0 Nm		
Maximum current	39.0 A		