

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7044-5AK71-1DG1



Figure similar

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

Item no. :  
Consignment no. :  
Project :

Engineering data		Mechanical data	
Rated speed	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Design of the motor type	Compact
Rated torque (100 K)	2.0 Nm	Shaft height	48 mm
Rated current	2.5 A	Cooling	Natural cooling
Static torque (60 K)	4.40 Nm	Radial runout tolerance	N
Static torque (100 K)	5.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	4.9 A	Degree of protection	IP65
Stall current (100 K)	5.7 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0005430 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	91.0 %	Color of the housing	
<b>Physical constants</b>		Holding brake version	no value
Torque constant	0.89 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	56.5 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	4.2 mH	Connector size	1
Electrical time constant	7.00 ms		
Mechanical time constant	1.30 ms		
Thermal time constant	35 min		
Shaft torsional stiffness	9500 Nm/rad		
Net weight of the motor	7.2 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	9 A
Optimum power	1.4 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	21.90 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9000 rpm		
Maximum torque	23.0 Nm		
Maximum current	30.0 A		