

## Data sheet for SIMOTICS S-1FT7



Figure similar

MLFB-Ordering data

1FT7046-5AH70-1DB2

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

Item no. :  
Consignment no. :  
Project :

Engineering data		Mechanical data	
Rated speed	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Design of the motor type	Compact
Rated torque (100 K)	2.4 Nm	Shaft height	48 mm
Rated current	3.2 A	Cooling	Natural cooling
Static torque (60 K)	6.00 Nm	Radial runout tolerance	N
Static torque (100 K)	7.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	6.9 A	Degree of protection	IP67
Stall current (100 K)	8.1 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0008390 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	90.0 %	Color of the housing	Pearl dark grey RAL 9023
Physical constants		Holding brake version	Permanent-magnet brake
Torque constant	0.87 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	55.5 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	0.41 Ω	Electrical connectors	Connector turnable
Rotating field inductance	2.9 mH	Connector size	1
Electrical time constant	7.00 ms		
Mechanical time constant	1.20 ms		
Thermal time constant	35 min		
Shaft torsional stiffness	8300 Nm/rad		
Net weight of the motor	10.2 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3500 rpm	Rated inverter current	9 A
Optimum power	1.3 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	22.40 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9000 rpm		
Maximum torque	31.0 Nm		
Maximum current	38.0 A		