

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7086-5AF70-1DB3



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)	18.0 Nm	Shaft height	80 mm
Rated current	11.0 A	Cooling	Natural cooling
Static torque (60 K)	23.00 Nm	Radial runout tolerance	N
Static torque (100 K)	28.0 Nm	Vibration severity grade	Grade R
Stall current (60 K)	12.9 A	Degree of protection	IP64
Stall current (100 K)	15.5 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0079000 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	Standard (pearl dark gray similar to RAL 9023)
<b>Physical constants</b>		Holding brake version	Permanent-magnet brake
Torque constant	1.78 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	113.5 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	0.23 Ω	Electrical connectors	Connector turnable
Rotating field inductance	4.0 mH	Connector size	1.5
Electrical time constant	17.00 ms		
Mechanical time constant	1.40 ms		
Thermal time constant	60 min		
Shaft torsional stiffness	57000 Nm/rad		
Net weight of the motor	31.8 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	5.7 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	86.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	5100 rpm		
Maximum torque	120.0 Nm		
Maximum current	78.0 A		