

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7087-7WH70-3CB0



Figure similar

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	8	Design of the motor type	High Dynamic
Rated torque (100 K)	46.0 Nm	Shaft height	80 mm
Rated current	53.0 A	Cooling	Water cooling
Static torque (60 K)	48.00 Nm	Radial runout tolerance	N
Static torque (100 K)	61.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	53.0 A	Degree of protection	IP64
Stall current (100 K)	67.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0041600 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	94.0 %	Color of the housing	
<b>Physical constants</b>		Holding brake version	Permanent-magnet brake
Torque constant	0.91 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	58.0 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	0.05 Ω	Electrical connectors	Axial NDE
Rotating field inductance	1.2 mH	Connector size	3
Electrical time constant	26.00 ms		
Mechanical time constant	0.50 ms		
Thermal time constant	11 min		
Shaft torsional stiffness	45500 Nm/rad		
Net weight of the motor	44.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	85 A
Optimum power	21.7 kW	Maximum inverter current	141 A
Limiting data		Maximum torque	116.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	8000 rpm		
Maximum torque	150.0 Nm		
Maximum current	225.0 A		