

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7085-7SH70-1CH0



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)	17.5 Nm	Shaft height	80 mm
Rated current	22.5 A	Cooling	Forced ventilation
Static torque (60 K)	26.00 Nm	Radial runout tolerance	N
Static torque (100 K)	34.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	30.0 A	Degree of protection	IP64
Stall current (100 K)	40.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0034900 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	92.0 %	Color of the housing	
Physical constants		Holding brake version	Permanent-magnet brake
Torque constant	0.86 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	55.0 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	0.06 Ω	Electrical connectors	Connector turnable
Rotating field inductance	1.6 mH	Connector size	1.5
Electrical time constant	27.00 ms		
Mechanical time constant	0.50 ms		
Thermal time constant	24 min		
Shaft torsional stiffness	51000 Nm/rad		
Net weight of the motor	37.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	45 A
Optimum power	8.2 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	68.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	8000 rpm		
Maximum torque	105.0 Nm		
Maximum current	178.0 A		