

## Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7105-5SF70-1CG0



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)	48.0 Nm	Shaft height	100 mm
Rated current	35.0 A	Cooling	Forced ventilation
Static torque (60 K)	51.00 Nm	Radial runout tolerance	N
Static torque (100 K)	65.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	36.0 A	Degree of protection	IP64
Stall current (100 K)	45.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0178000 kgm <sup>2</sup>	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	
<b>Physical constants</b>		Holding brake version	no value
Torque constant	1.43 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	91.0 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	Transverse facing to right site
Rotating field inductance	1.3 mH	Connector size	3
Electrical time constant	25.00 ms		
Mechanical time constant	1.30 ms		
Thermal time constant	50 min		
Shaft torsional stiffness	107000 Nm/rad		
Net weight of the motor	50.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	45 A
Optimum power	15.1 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	120.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	200.0 Nm		
Maximum current	158.0 A		