

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7108-5WF70-1FD1



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)	109.0 Nm	Shaft height	100 mm		
Rated current	60.0 A	Cooling	Water cooling		
Static torque (60 K)	100.00 Nm	Radial runout tolerance	R		
Static torque (100 K)	125.0 Nm	Vibration severity grade	Grade A		
Stall current (60 K)	53.8 A	Degree of protection	IP65		
Stall current (100 K)	65.0 A	Design acc. to Code I	IM B5 (new flange design)		
Rotor moment of inertia	0.0265000 kgm ²	Temperature monitoring	Pt1000 temperature sensor		
Efficiency	95.0 %	Color of the housing			
<th colspan="2">Physical constants</th>		Physical constants		Holding brake version	no value
		Torque constant	1.86 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	117.0 V/1000*min ⁻¹	Sensor design	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)		
Winding resistance at 20° C	0.04 Ω				
Rotating field inductance	0.9 mH				
Electrical time constant	21.00 ms				
Mechanical time constant	1.00 ms				
Thermal time constant	2 min	Electrical connectors	Transverse facing to right site		
Shaft torsional stiffness	96000 Nm/rad	Connector size	3		
Net weight of the motor	68.6 kg				

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	85 A
Optimum power	34.2 kW	Maximum inverter current	141 A
Limiting data		Maximum torque	238.50 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	4900 rpm		
Maximum torque	330.0 Nm		
Maximum current	205.0 A		