

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7102-5WF70-1DH2



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)	45.5 Nm	Shaft height	100 mm
Rated current	38.8 A	Cooling	Water cooling
Static torque (60 K)	40.00 Nm	Radial runout tolerance	N
Static torque (100 K)	50.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	32.8 A	Degree of protection	IP67
Stall current (100 K)	40.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0125000 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	95.0 %	Color of the housing	
Physical constants		Holding brake version	Permanent-magnet brake
Torque constant	1.22 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	77.0 V/1000*min ⁻¹	Sensor design	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Winding resistance at 20° C	0.06 Ω	Electrical connectors	Connector turnable
Rotating field inductance	1.2 mH	Connector size	1.5
Electrical time constant	20.00 ms		
Mechanical time constant	1.20 ms		
Thermal time constant	2 min		
Shaft torsional stiffness	124000 Nm/rad		
Net weight of the motor	40.9 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	45 A
Optimum power	14.3 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	89.50 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	130.0 Nm		
Maximum current	135.0 A		