

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7086-5WH70-1CG2



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	10	Design of the motor type	Compact
Rated torque (100 K)	43.0 Nm	Shaft height	80 mm
Rated current	38.0 A	Cooling	Water cooling
Static torque (60 K)	41.00 Nm	Radial runout tolerance	N
Static torque (100 K)	50.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	33.6 A	Degree of protection	IP67
Stall current (100 K)	40.5 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0067800 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	94.0 %	Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Physical constants		Holding brake version	no value
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 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	0.09 Ω	Electrical connectors	Connector turnable
Rotating field inductance	1.5 mH	Connector size	1.5
Electrical time constant	18.00 ms		
Mechanical time constant	1.20 ms		
Thermal time constant	2 min		
Shaft torsional stiffness	57000 Nm/rad		
Net weight of the motor	34.1 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	45 A
Optimum power	20.3 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	88.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	7500 rpm		
Maximum torque	125.0 Nm		
Maximum current	133.0 A		