

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7086-5AF70-1CG1



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)	18.0 Nm	Shaft height	80 mm
Rated current	11.0 A	Cooling	Natural cooling
Static torque (60 K)	23.00 Nm	Radial runout tolerance	N
Static torque (100 K)	28.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	12.9 A	Degree of protection	IP65
Stall current (100 K)	15.5 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0063600 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Physical constants		Holding brake version	no value
Torque constant	1.78 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	113.5 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	0.23 Ω	Electrical connectors	Connector turnable
Rotating field inductance	4.0 mH	Connector size	1.5
Electrical time constant	17.00 ms		
Mechanical time constant	1.40 ms		
Thermal time constant	60 min		
Shaft torsional stiffness	57000 Nm/rad		
Net weight of the motor	27.5 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	5.7 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	86.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	5100 rpm		
Maximum torque	120.0 Nm		
Maximum current	78.0 A		