

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7102-5AF70-1DG2



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)	20.0 Nm	Shaft height	100 mm
Rated current	12.0 A	Cooling	Natural cooling
Static torque (60 K)	25.00 Nm	Radial runout tolerance	N
Static torque (100 K)	30.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	15.0 A	Degree of protection	IP67
Stall current (100 K)	18.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0091400 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	
Physical constants		Holding brake version	no value
Torque constant	1.67 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	106.0 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	0.15 Ω	Electrical connectors	Connector turnable
Rotating field inductance	3.1 mH	Connector size	1.5
Electrical time constant	21.00 ms		
Mechanical time constant	1.50 ms		
Thermal time constant	70 min		
Shaft torsional stiffness	124000 Nm/rad		
Net weight of the motor	26.1 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	6.3 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	79.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	5360 rpm		
Maximum torque	120.0 Nm		
Maximum current	90.0 A		