

Data sheet for SIMOTICS S-1FT7



Figure similar

MLFB-Ordering data

1FT7042-5AF70-1FA2-Z
Q12

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	6	Design of the motor type	Compact
Rated torque (100 K)	2.7 Nm	Shaft height	48 mm
Rated current	2.1 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	N
Static torque (100 K)	3.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	1.8 A	Degree of protection	IP67
Stall current (100 K)	2.1 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0002810 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	92.0 %	Color of the housing	
Physical constants		Holding brake version	no value
Torque constant	1.38 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	87.5 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	3.60 Ω	Electrical connectors	Connector turnable
Rotating field inductance	21.4 mH	Connector size	1
Electrical time constant	5.90 ms		
Mechanical time constant	1.60 ms		
Thermal time constant	20 min		
Shaft torsional stiffness	11700 Nm/rad		
Net weight of the motor	4.6 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	3 A
Optimum power	0.8 kW	Maximum inverter current	9 A
Limiting data		Maximum torque	10.90 Nm
Max. permissible speed (mech.)	9000 rpm	Special design	
Max. permissible speed (inverter)	6600 rpm	Q12	Sealing air connection
Maximum torque	13.0 Nm		
Maximum current	11.0 A		