

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7042-5AK71-1FG5



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Design of the motor type	Compact
Rated torque (100 K)	2.0 Nm	Shaft height	48 mm
Rated current	3.0 A	Cooling	Natural cooling
Static torque (60 K)	2.40 Nm	Radial runout tolerance	N
Static torque (100 K)	3.0 Nm	Vibration severity grade	Grade R
Stall current (60 K)	3.1 A	Degree of protection	IP67
Stall current (100 K)	3.9 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0002810 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	91.0 %	Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Physical constants		Holding brake version	no value
Torque constant	0.77 Nm/A	Shaft end type	Plain shaft
Voltage constant at 20° C	48.6 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	1.11 Ω		
Rotating field inductance	6.5 mH		
Electrical time constant	6.00 ms		
Mechanical time constant	1.60 ms	Electrical connectors	Connector turnable
Thermal time constant	20 min	Connector size	1
Shaft torsional stiffness	11700 Nm/rad		
Net weight of the motor	4.6 kg		



Figure similar

Optimum operating point		Recommended Motor Module	
Optimum speed	6000 rpm	Rated inverter current	5 A
Optimum power	1.3 kW	Maximum inverter current	15 A
Limiting data		Maximum torque	10.40 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9000 rpm		
Maximum torque	13.0 Nm		
Maximum current	21.0 A		