

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7084-5AF71-1CA1



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)	14.5 Nm	Shaft height	80 mm
Rated current	8.5 A	Cooling	Natural cooling
Static torque (60 K)	16.80 Nm	Radial runout tolerance	N
Static torque (100 K)	20.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	9.2 A	Degree of protection	IP65
Stall current (100 K)	11.0 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0045100 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	1.82 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	115.5 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	0.35 Ω	Electrical connectors	Connector turnable
Rotating field inductance	6.0 mH	Connector size	1
Electrical time constant	17.00 ms		
Mechanical time constant	1.40 ms		
Thermal time constant	55 min		
Shaft torsional stiffness	65000 Nm/rad		
Net weight of the motor	20.8 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	4.5 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	79.50 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	81.0 Nm		
Maximum current	55.0 A		