

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7086-5AF71-1CH0-Z
N05



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	IP64
Stall current (100 K)	15.5 A	Design acc. to Code I	IM B5 (compatible with 1FT6)
Rotor moment of inertia	0.0079000 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	93.0 %	Color of the housing	
Physical constants		Holding brake version	Permanent-magnet brake
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	31.8 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	Special design	
Max. permissible speed (inverter)	5100 rpm	N05	Non-standard shaft extension (dimensions as for 1FT5 motors)
Maximum torque	120.0 Nm		
Maximum current	78.0 A		