

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7061-4CF71-1CB1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	5.4 Nm	Shaft height	63
Rated current	5.3 A	Cooling	Natural cooling
Static torque (60 K)	5.30 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	6.40 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.95 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	6.10 A	Vibration severity grade	Grade A
Moment of inertia	5.100 kgcm ²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.05 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	67.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.71 Ω	Holding brake	with holding brake
Rotating field inductance	22.0 mH	Shaft end	Feather key
Electrical time constant	31.00 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	0.79 ms		
Thermal time constant	45 min		
Shaft torsional stiffness	26500 Nm/rad		
Net weight of the motor	11.0 kg		



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Optimum operating point

Optimum speed	3000 rpm
Optimum power	1.7 kW

Limiting data

Max. permissible speed (mech.)	7500 rpm
Max. permissible speed (inverter)	7500 rpm
Maximum torque	17.3 Nm
Maximum current	18.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	17.30 Nm