

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7043-4CH71-1CB1



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	2.6 Nm	Shaft height	48
Rated current	3.3 A	Cooling	Natural cooling
Static torque (60 K)	2.90 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.50 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	3.30 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.10 A	Vibration severity grade	Grade A
Moment of inertia	1.360 kgcm ²	Connector size	1
Efficiency	90.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	0.85 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	54.0 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	1.20 Ω	Holding brake	with holding brake
Rotating field inductance	13.6 mH	Shaft end	Feather key
Electrical time constant	11.30 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	0.49 ms		
Thermal time constant	40 min		
Shaft torsional stiffness	9000 Nm/rad		
Net weight of the motor	6.6 kg		



Figure similar

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Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.2 kW

Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	9000 rpm
Maximum torque	10.0 Nm
Maximum current	12.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	4.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.5 A
Opening time	70 ms
Closing time	30 ms
Highest braking work	150 J

Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	10.00 Nm