

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7105-2AF71-1DB1



Figure similar

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	8	Motor type	Compact
Rated torque (100 K)	26.0 Nm	Shaft height	100
Rated current	18.0 A	Cooling	Natural cooling
Static torque (60 K)	40.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	48.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	25.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	31.00 A	Vibration severity grade	Grade A
Moment of inertia	162.000 kgcm ²	Connector size	1.5
Efficiency	94.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.55 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	102.0 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.07 Ω	Holding brake	with holding brake
Rotating field inductance	1.9 mH	Shaft end	Feather key
Electrical time constant	26.00 ms	Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Mechanical time constant	1.40 ms		
Thermal time constant	70 min		
Shaft torsional stiffness	95000 Nm/rad		
Net weight of the motor	43.5 kg		



Figure similar

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Optimum operating point

Optimum speed 3000 rpm

Optimum power 8.2 kW

Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 5000 rpm

Maximum torque 150.0 Nm

Maximum current 109.0 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 43.0 Nm

Power supply voltage DC 24 V \pm 10 %

Coil current 1.0 A

Opening time 300 ms

Closing time 70 ms

Highest braking work 3380 J

Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 90 A

Maximum torque 129.70 Nm