

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7105-3BC74-1AG0-Z
N05



Figure similar

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data			
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	High Inertia		
Rated torque (100 K)	37.0 Nm	Shaft height	100		
Rated current	16.0 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)	16.20 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	20.00 A	Vibration severity grade	Grade A		
Moment of inertia	249.000 kgcm ²	Connector size	1.5		
Efficiency	93.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	2.37 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	157.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.17 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	4.5 mH	Holding brake	without holding brake
		Electrical time constant	25.50 ms	Shaft end	Plain shaft
		Mechanical time constant	2.33 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
		Thermal time constant	70 min		
		Shaft torsional stiffness	125000 Nm/rad		
		Net weight of the motor	44.4 kg		



Figure similar

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Optimum operating point

Optimum speed 2000 rpm

Optimum power 7.7 kW

Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 3650 rpm

Maximum torque 150.0 Nm

Maximum current 71.0 A

Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 72 A

Maximum torque 150.00 Nm

Special design

N05 Non-standard shaft end (dimensions as for 1FT5 motors)