

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7101-3BF74-1AG1



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	High Inertia
Rated torque (100 K)	15.5 Nm	Shaft height	100
Rated current	11.6 A	Cooling	Natural cooling
Static torque (60 K)	22.50 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	27.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	15.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	18.80 A	Vibration severity grade	Grade A
Moment of inertia	127.000 kgcm <sup>2</sup>	Connector size	1.5
Efficiency	92.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.44 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	92.5 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.14 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	3.5 mH	Holding brake	without holding brake
Electrical time constant	25.00 ms	Shaft extension	Plain shaft
Mechanical time constant	2.61 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Thermal time constant	60 min		
Shaft torsional stiffness	164000 Nm/rad		
Net weight of the motor	25.7 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	4.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	72.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	80.0 Nm		
Maximum current	63.0 A		