

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7105-2AF71-1KA2



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)	48.0 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	154.000 kgcm <sup>2</sup>	Connector size	1.5		
Efficiency	94.0 %	Degree of protection	IP65 and DE flange IP67		
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Torque constant	1.55 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	102.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.07 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	1.9 mH	Holding brake	without holding brake
		Electrical time constant	26.00 ms	Shaft extension	Feather key
		Mechanical time constant	1.40 ms	Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	70 min		
		Shaft torsional stiffness	125000 Nm/rad		
		Net weight of the motor	39.0 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

### Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 90 A

Maximum torque 129.70 Nm