

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7105-2AC71-1EG2-Z
N16



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	Compact		
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)	48.0 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	154.000 kgcm ²	Connector size	1.5		
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67		
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Temperature monitoring	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	Standard (Anthracite RAL 7016)		
		Holding brake	without holding brake		
		Shaft extension	Plain shaft		
		Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface		
		Torque constant	2.37 Nm/A		
		Voltage constant at 20° C	157.5 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.17 Ω		
Rotating field inductance	4.5 mH				
Electrical time constant	25.50 ms				
Mechanical time constant	1.40 ms				
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	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

N16 Nickel plated connectors and paint varnish for increased chemical resistance