

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7103-2AC71-1BA2-Z
N16+Q31



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)	25.0 Nm	Shaft height	100		
Rated current	11.0 A	Cooling	Natural cooling		
Static torque (60 K)	30.00 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	36.00 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	11.60 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	14.40 A	Vibration severity grade	Grade A		
Moment of inertia	104.000 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	Pt1000 temperature sensor		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	Standard (Anthracite RAL 7016)		
		Holding brake	without holding brake		
		Shaft end	Feather key		
		Encoder system	Encoder AS24DQI with nickel-plated M17 round connector: absolute encoder single-turn 24 bits		
		Torque constant	2.45 Nm/A		
		Voltage constant at 20° C	162.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.29 Ω		
Rotating field inductance	7.9 mH				
Electrical time constant	27.50 ms				
Mechanical time constant	1.43 ms				
Thermal time constant	65 min				
Shaft torsional stiffness	148000 Nm/rad				
Net weight of the motor	28.5 kg				



Figure similar

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Optimum operating point

Optimum speed	2000 rpm
Optimum power	5.2 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	3550 rpm
Maximum torque	108.0 Nm
Maximum current	46.5 A

Recommended Motor Module

Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	108.00 Nm

Special design

N16	Nickel plated connectors and paint varnish for increased chemical resistance
Q31	Metal rating plate on the motor