

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7060-2AF71-1RA1-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)	3000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	4.7 Nm	Shaft height	63		
Rated current	3.7 A	Cooling	Natural cooling		
Static torque (60 K)	5.00 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	6.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	3.60 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	4.45 A	Vibration severity grade	Grade A		
Moment of inertia	7.700 kgcm ²	Connector size	1		
Efficiency	90.0 %	Degree of protection	IP65		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.33 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	85.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	1.35 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	15.2 mH	Holding brake	without holding brake
		Electrical time constant	11.30 ms	Shaft end	Feather key
		Mechanical time constant	1.71 ms	Encoder system	Encoder AM20DQI with nickel-plated M17 round connector: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	30 min		
		Shaft torsional stiffness	40500 Nm/rad		
		Net weight of the motor	7.1 kg		



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Optimum operating point

Optimum speed	3000 rpm
Optimum power	1.5 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	6700 rpm
Maximum torque	18.0 Nm
Maximum current	15.0 A

Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	18.00 Nm

Special design

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