

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7084-3BC71-1BG2-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	High Inertia		
Rated torque (100 K)	15.0 Nm	Shaft height	80		
Rated current	6.7 A	Cooling	Natural cooling		
Static torque (60 K)	16.60 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	20.00 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	6.90 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	8.50 A	Vibration severity grade	Grade A		
Moment of inertia	99.000 kgcm ²	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	2.36 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	152.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.58 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	12.0 mH	Holding brake	without holding brake
		Electrical time constant	20.50 ms	Shaft end	Plain shaft
		Mechanical time constant	3.10 ms	Encoder system	Encoder AS24DQI with nickel-plated M17 round connector: absolute encoder single-turn 24 bits
		Thermal time constant	55 min		
		Shaft torsional stiffness	82000 Nm/rad		
		Net weight of the motor	23.0 kg		



Figure similar

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Optimum operating point

Optimum speed	2000 rpm
Optimum power	3.1 kW

Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	3800 rpm
Maximum torque	61.0 Nm
Maximum current	28.5 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	58.40 Nm

Special design

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