

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7062-2AH71-1CG1-Z
Q31

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	3.0 Nm	Shaft height	63
Rated current	3.3 A	Cooling	Natural cooling
Static torque (60 K)	7.10 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	8.5 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	6.50 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	8.00 A	Vibration severity grade	Grade A
Moment of inertia	11.200 kgcm ²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.06 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	67.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.48 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	6.4 mH	Holding brake	without holding brake
Electrical time constant	13.20 ms	Shaft extension	Plain shaft
Mechanical time constant	1.44 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	35 min		
Shaft torsional stiffness	37000 Nm/rad		
Net weight of the motor	9.1 kg		



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Optimum operating point

Optimum speed	3500 rpm
Optimum power	1.9 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	7200 rpm
Maximum torque	26.0 Nm
Maximum current	29.0 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	24.80 Nm

Special design

Q31 Metal rating plate on the motor