

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7042-2AC71-1KA2

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)	2.8 Nm	Shaft height	48		
Rated current	1.6 A	Cooling	Natural cooling		
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	3.0 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.30 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	1.61 A	Vibration severity grade	Grade A		
Moment of inertia	2.900 kgcm <sup>2</sup>	Connector size	1		
Efficiency	88.0 %	Degree of protection	IP65 and DE flange IP67		
<b>Physical constants</b>		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 extension	Feather key		
		Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)		
		Torque constant	1.86 Nm/A		
		Voltage constant at 20° C	122.0 V/1000*min <sup>-1</sup>		
		Winding resistance at 20° C	8.60 Ω		
Rotating field inductance	64.0 mH				
Electrical time constant	7.40 ms				
Mechanical time constant	2.15 ms				
Thermal time constant	30 min				
Shaft torsional stiffness	15500 Nm/rad				
Net weight of the motor	4.6 kg				



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### Optimum operating point

Optimum speed 2000 rpm

Optimum power 0.6 kW

### Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 4750 rpm

Maximum torque 10.5 Nm

Maximum current 5.6 A

### Recommended Motor Module

Rated inverter current 3 A

Maximum inverter current 9 A

Maximum torque 10.50 Nm