

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7032-5AK71-1PA5-Z  
X08

No image  
available for this  
configuration.

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data			
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	6	Motor type	Compact		
Rated torque (100 K)	0.8 Nm	Shaft height	36		
Rated current	1.4 A	Cooling	Natural cooling		
Static torque (60 K)	0.85 Nm	Radial runout tolerance	0.035 mm		
Static torque (100 K)	1.1 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.40 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	1.70 A	Vibration severity grade	Grade A		
Moment of inertia	0.610 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	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	Suitable for food grade applications white aluminum RAL 9006		
		Holding brake	without holding brake		
		Shaft extension	Feather key		
		Encoder system	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)		
		Torque constant	0.67 Nm/A		
		Voltage constant at 20° C	45.0 V/1000*min <sup>-1</sup>		
		Winding resistance at 20° C	5.20 Ω		
Rotating field inductance	18.5 mH				
Electrical time constant	3.60 ms				
Mechanical time constant	2.20 ms				
Thermal time constant	25 min				
Shaft torsional stiffness	6500 Nm/rad				
Net weight of the motor	2.7 kg				

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Figure similar

### Optimum operating point

Optimum speed 6000 rpm

Optimum power 0.5 kW

### Limiting data

Max. permissible speed (mech.) 10000 rpm

Max. permissible speed (inverter) 12800 rpm

Maximum torque 4.5 Nm

Maximum current 7.0 A

### Recommended Motor Module

Rated inverter current 3 A

Maximum inverter current 6 A

Maximum torque 3.90 Nm

### Special design

X08 Paint finish: Food-suited color white aluminium RAL 9006