

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7032-5AK71-1UG3



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
Number of poles	6
Rated torque (100 K)	0.8 Nm
Rated current	1.4 A
Static torque (60 K)	0.85 Nm
Static torque (100 K)	1.10 Nm
Stall current (60 K)	1.40 A
Stall current (100 K)	1.70 A
Moment of inertia	0.610 kgcm <sup>2</sup>
Efficiency	88.0 %

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	36
Cooling	Natural cooling
Radial runout tolerance	0.035 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP64
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft end	Plain shaft
Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)

### Physical constants

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		Recommended Motor Module	
Optimum speed	6000 rpm	Rated inverter current	3 A
Optimum power	0.5 kW	Maximum inverter current	6 A
Limiting data		Maximum torque	3.90 Nm
Max. permissible speed (mech.)	10000 rpm		
Max. permissible speed (inverter)	12800 rpm		
Maximum torque	4.5 Nm		
Maximum current	7.0 A		