

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7061-7AF71-1DA0

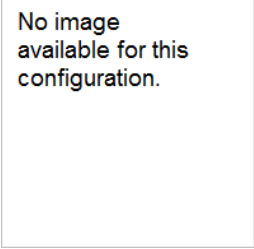


Figure similar

Client order no. :  
 Order no. :  
 Offer no. :  
 Remarks :

Item no. :  
 Consignment no. :  
 Project :

### Engineering data

### Mechanical data

Rated speed (100 K)	3000 rpm
Number of poles	6
Rated torque (100 K)	5.4 Nm
Rated current	5.3 A
Static torque (60 K)	4.90 Nm
Static torque (100 K)	6.40 Nm
Stall current (60 K)	4.80 A
Stall current (100 K)	6.10 A
Moment of inertia	3.400 kgcm <sup>2</sup>
Efficiency	93.0 %

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 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	without
Holding brake	without holding brake
Shaft end	Feather key
Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits

### Physical constants

Torque constant	1.00 Nm/A
Voltage constant at 20° C	66.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.74 Ω
Rotating field inductance	20.0 mH
Electrical time constant	27.00 ms
Mechanical time constant	0.75 ms
Thermal time constant	45 min
Shaft torsional stiffness	37000 Nm/rad
Net weight of the motor	10.0 kg

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Figure similar

### Optimum operating point

Optimum speed	3000 rpm
Optimum power	1.7 kW

### Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	8700 rpm
Maximum torque	17.3 Nm
Maximum current	17.5 A

### Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	18 A
Maximum torque	17.30 Nm