

## Data sheet for SIMOTICS S-1FK7



Figure similar

Article No. : **1FK7062-2AF71-1RB2-Z**  
Q31+X01

Client order no. :  
Order no. :  
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Item no. :  
Consignment no. :  
Project :

### Engineering data

Rated speed (100 K)	3,000 rpm
Number of poles	8
Rated torque (100 K)	6.0 Nm
Rated current	4.0 A
Static torque (60 K)	7.10 Nm
Static torque (100 K)	8.50 Nm
Stall current (60 K)	4.30 A
Stall current (100 K)	5.30 A
Moment of inertia	12.200 kgcm <sup>2</sup>
Efficiency	91.0 %

### Physical constants

Torque constant	1.60 Nm/A
Voltage constant at 20° C	102.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	1.15 Ω
Rotating field inductance	14.6 mH
Electrical time constant	12.80 ms
Mechanical time constant	1.49 ms
Thermal time constant	35 min
Shaft torsional stiffness	26,500 Nm/rad
Net weight of the motor	10.5 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
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	IP65 and DE flange IP67
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	Jet black, matt RAL 9005
Holding brake	with holding brake
Shaft end	Feather key
Encoder system	Encoder AM20DQ1: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	1.9 kW

### Limiting data

Max. permissible speed (mech.)	7,200 rpm
Max. permissible speed (inverter)	5,600 rpm
Maximum torque	26.0 Nm
Maximum current	19.2 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

### Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	22.10 Nm

### Special design

Q31	Metal rating plate on the motor
X01	Paint finish: Jet black, matt RAL 9005

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