

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7063-2AF71-1RH2-Z  
N16+Q31



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	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	7.3 Nm	Shaft height	63		
Rated current	5.6 A	Cooling	Natural cooling		
Static torque (60 K)	9.10 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	11.00 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	6.50 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	8.00 A	Vibration severity grade	Grade A		
Moment of inertia	15.700 kgcm <sup>2</sup>	Connector size	1		
Efficiency	91.0 %	Degree of protection	IP65 and DE flange IP67		
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)		
		Torque constant	1.37 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	90.5 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.64 Ω	Color of the housing	Standard (Anthracite RAL 7016)
		Rotating field inductance	8.5 mH	Holding brake	with holding brake
		Electrical time constant	13.40 ms	Shaft end	Plain shaft
		Mechanical time constant	1.48 ms	Encoder system	Encoder AM20DQI with nickel-plated M17 round connector: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Thermal time constant	40 min		
		Shaft torsional stiffness	25000 Nm/rad		
		Net weight of the motor	12.5 kg		



Figure similar

## MLFB-Ordering data

**1FK7063-2AF71-1RH2-Z**  
N16+Q31

### Optimum operating point

Optimum speed	3000 rpm
Optimum power	2.3 kW

### Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	6400 rpm
Maximum torque	35.0 Nm
Maximum current	28.0 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V $\pm$ 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	9 A
Maximum inverter current	27 A
Maximum torque	34.00 Nm

### Special design

N16	Nickel plated connectors and paint varnish for increased chemical resistance
Q31	Metal rating plate on the motor