

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7044-4CH71-1PA1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	High Dynamic
Rated torque (100 K)	3.0 Nm	Shaft height	48
Rated current	3.9 A	Cooling	Natural cooling
Static torque (60 K)	3.75 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	4.5 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	4.35 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	5.40 A	Vibration severity grade	Grade A
Moment of inertia	1.260 kgcm <sup>2</sup>	Connector size	1
Efficiency	91.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.83 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	53.0 V/1000*min <sup>-1</sup>	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.81 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	10.2 mH	Holding brake	without holding brake
Electrical time constant	12.50 ms	Shaft extension	Feather key
Mechanical time constant	0.44 ms	Encoder system	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)
Thermal time constant	45 min		
Shaft torsional stiffness	9800 Nm/rad		
Net weight of the motor	7.4 kg		



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### Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.4 kW

### Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	9000 rpm
Maximum torque	13.0 Nm
Maximum current	16.4 A

### Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	13.00 Nm