

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7084-3BF71-1RG1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K)	3000 rpm
Number of poles	8
Rated torque (100 K)	10.0 Nm
Rated current	6.5 A
Static torque (60 K)	16.60 Nm
Static torque (100 K)	20.0 Nm
Stall current (60 K)	9.80 A
Stall current (100 K)	12.10 A
Moment of inertia	99.000 kgcm <sup>2</sup>
Efficiency	93.0 %

### Physical constants

Torque constant	1.66 Nm/A
Voltage constant at 20° C	106.5 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.28 Ω
Rotating field inductance	5.9 mH
Electrical time constant	21.00 ms
Mechanical time constant	3.10 ms
Thermal time constant	55 min
Shaft torsional stiffness	82000 Nm/rad
Net weight of the motor	23.0 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Inertia
Shaft height	80
Cooling	Natural cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP65
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2500 rpm	Rated inverter current	18 A
Optimum power	3.2 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	61.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	5400 rpm		
Maximum torque	61.0 Nm		
Maximum current	41.0 A		