

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7103-2AC71-1RG1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	25.0 Nm	Shaft height	100
Rated current	11.0 A	Cooling	Natural cooling
Static torque (60 K)	30.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	36.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	11.60 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	14.40 A	Vibration severity grade	Grade A
Moment of inertia	104.000 kgcm <sup>2</sup>	Connector size	1.5
Efficiency	93.0 %	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)

Physical constants	
Torque constant	2.45 Nm/A
Voltage constant at 20° C	162.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.29 Ω
Rotating field inductance	7.9 mH
Electrical time constant	27.50 ms
Mechanical time constant	1.43 ms
Thermal time constant	65 min
Shaft torsional stiffness	148000 Nm/rad
Net weight of the motor	28.5 kg



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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	18 A
Optimum power	5.2 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	108.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	3550 rpm		
Maximum torque	108.0 Nm		
Maximum current	46.5 A		