

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7081-3BF71-1QA1

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	High Inertia		
Rated torque (100 K)	8.7 Nm	Shaft height	80		
Rated current	6.8 A	Cooling	Natural cooling		
Static torque (60 K)	10.00 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	12.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	7.10 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	8.70 A	Vibration severity grade	Grade A		
Moment of inertia	49.000 kgcm <sup>2</sup>	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65		
<b>Physical constants</b>		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	Feather key		
		Encoder system	Encoder AS20DQI: absolute encoder single-turn 20 bits		
		Torque constant	1.38 Nm/A		
		Voltage constant at 20° C	88.5 V/1000*min <sup>-1</sup>		
		Winding resistance at 20° C	0.42 Ω		
Rotating field inductance	7.7 mH				
Electrical time constant	18.20 ms				
Mechanical time constant	3.30 ms				
Thermal time constant	45 min				
Shaft torsional stiffness	100000 Nm/rad				
Net weight of the motor	15.2 kg				



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	2.8 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	34.10 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	37.0 Nm		
Maximum current	30.0 A		