

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7081-2AH71-1CG1

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	8	Motor type	Compact		
Rated torque (100 K)	3.8 Nm	Shaft height	80		
Rated current	4.9 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)	10.60 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	13.10 A	Vibration severity grade	Grade A		
Moment of inertia	20.000 kgcm <sup>2</sup>	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor		
		Torque constant	0.92 Nm/A	Electrical connectors	Connectors for signals and power rotatable
		Voltage constant at 20° C	59.0 V/1000*min <sup>-1</sup>	Color of the housing	Standard (Anthracite RAL 7016)
		Winding resistance at 20° C	0.19 Ω	Holding brake	without holding brake
		Rotating field inductance	3.4 mH	Shaft extension	Plain shaft
		Electrical time constant	17.90 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
		Mechanical time constant	1.36 ms		
		Thermal time constant	45 min		
		Shaft torsional stiffness	109000 Nm/rad		
Net weight of the motor	12.9 kg				



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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	2.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	37.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	37.0 Nm		
Maximum current	45.0 A		