

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7083-2AC71-1RB0

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Physical constants	
Rated speed	2000 rpm	Torque constant	2.13 Nm/A
Number of poles	8	Voltage constant at 20° C	138.5 V/1000*min ⁻¹
Rated torque (100 K)	12.5 Nm	Winding resistance at 20° C	0.66 Ω
Rated current	6.3 A	Rotating field inductance	12.8 mH
Static torque (60 K)	13.30 Nm	Electrical time constant	19.40 ms
Static torque (100 K)	16.0 Nm	Mechanical time constant	1.13 ms
Stall current (60 K)	6.1 A	Thermal time constant	50 min
Stall current (100 K)	7.5 A	Shaft torsional stiffness	101000 Nm/rad
Rotor moment of inertia	29.500 kgcm ²	Net weight of the motor	18.6 kg
Efficiency	93.0 %		

Mechanical data			
Motor type	Compact	Electrical connectors	Connectors for signals and power rotatable
Shaft height	80	Color of the housing	Standard painting (Anthracite RAL 7016)
Cooling	Natural cooling	Holding brake	with holding brake
Radial runout tolerance	0.050 mm	Shaft extension	Feather key
Concentricity tolerance	0.10 mm	Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Axial runout tolerance	0.10 mm		
Vibration severity grade	Grade A		
Connector size	1		
Degree of protection	IP64		
Design acc. to Code I	IM B5 (IM V1, IM V3)		
Temperature monitoring	KTY84 temperature sensor in the stator winding		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	9 A
Optimum power	2.6 kW	Maximum inverter current	18 A
Limiting data		Maximum torque	36.70 Nm
Max. permissible speed (mech.)	4150 rpm		