

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7060-2AF71-1RA0

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

Item no. :
Consignment no. :
Project :

Engineering data		Physical constants	
Rated speed	3000 rpm	Torque constant	1.33 Nm/A
Number of poles	8	Voltage constant at 20° C	85.5 V/1000*min ⁻¹
Rated torque (100 K)	4.7 Nm	Winding resistance at 20° C	1.35 Ω
Rated current	3.7 A	Rotating field inductance	15.2 mH
Static torque (60 K)	5.00 Nm	Electrical time constant	11.30 ms
Static torque (100 K)	6.0 Nm	Mechanical time constant	1.71 ms
Stall current (60 K)	3.6 A	Thermal time constant	30 min
Stall current (100 K)	4.5 A	Shaft torsional stiffness	40500 Nm/rad
Rotor moment of inertia	7.700 kgcm ²	Net weight of the motor	7.1 kg
Efficiency	90.0 %		

Mechanical data			
Motor type	Compact	Electrical connectors	Connectors for signals and power rotatable
Shaft height	63	Color of the housing	Standard painting (Anthracite RAL 7016)
Cooling	Natural cooling	Holding brake	without holding brake
Radial runout tolerance	0.040 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	3000 rpm	Rated inverter current	5 A
Optimum power	1.5 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	13.20 Nm
Max. permissible speed (mech.)	6700 rpm		