

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AF71-1BA2-Z
X08

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	Compact		
Rated torque (100 K)	10.5 Nm	Shaft height	80		
Rated current	7.4 A	Cooling	Natural cooling		
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	16.0 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	8.20 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	10.10 A	Vibration severity grade	Grade A		
Moment of inertia	26.000 kgcm ²	Connector size	1		
Efficiency	93.0 %	Degree of protection	IP65 and DE flange IP67		
Physical constants		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	Suitable for food grade applications white aluminum RAL 9006		
		Holding brake	without holding brake		
		Shaft extension	Feather key		
		Encoder system	Encoder AS24DQI: absolute encoder single-turn 24 bits		
		Torque constant	1.58 Nm/A		
		Voltage constant at 20° C	102.5 V/1000*min ⁻¹		
		Winding resistance at 20° C	0.38 Ω		
Rotating field inductance	7.0 mH				
Electrical time constant	18.60 ms				
Mechanical time constant	1.18 ms				
Thermal time constant	50 min				
Shaft torsional stiffness	101000 Nm/rad				
Net weight of the motor	15.6 kg				



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Optimum operating point

Optimum speed	3000 rpm
Optimum power	3.3 kW

Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5600 rpm
Maximum torque	50.0 Nm
Maximum current	37.0 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	40.00 Nm

Special design

X08 Paint finish: Food-suited color white aluminium RAL 9006