

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7083-2AF71-1CG0-Z
K23

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	7.2 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 kgcm²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.58 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.38 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	7.0 mH	Holding brake	without holding brake
Electrical time constant	18.60 ms	Shaft extension	Plain shaft
Mechanical time constant	1.18 ms	Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	50 min		
Shaft torsional stiffness	101000 Nm/rad		
Net weight of the motor	15.6 kg		



Figure similar

MLFB-Ordering data

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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	
K23	Special painting for climate group Worldwide: Primer and varnish