

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-2AF71-1UA0-Z
X04



Figure similar

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)	2.6 Nm	Shaft height	48		
Rated current	2.0 A	Cooling	Natural cooling		
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	3.00 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.80 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	2.20 A	Vibration severity grade	Grade A		
Moment of inertia	2.900 kgcm ²	Connector size	1		
Efficiency	89.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	1.38 Nm/A	Temperature monitoring	Pt1000 temperature sensor
		Voltage constant at 20° C	90.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	4.67 Ω	Color of the housing	Pebble gray RAL 7032
		Rotating field inductance	35.0 mH	Holding brake	without holding brake
		Electrical time constant	7.50 ms	Shaft end	Feather key
		Mechanical time constant	2.15 ms	Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)
		Thermal time constant	30 min		
		Shaft torsional stiffness	15500 Nm/rad		
		Net weight of the motor	4.6 kg		



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	3 A
Optimum power	0.8 kW	Maximum inverter current	9 A
		Maximum torque	10.50 Nm
Limiting data		Special design	
Max. permissible speed (mech.)	9000 rpm	X04	Paint finish: Pebble gray RAL 7032
Max. permissible speed (inverter)	6400 rpm		
Maximum torque	10.5 Nm		
Maximum current	7.6 A		