

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7042-2AF71-1UA0-Z
N05+X01

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)	3.0 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 kgcm²	Connector size	1
Efficiency	89.0 %	Degree of protection	IP64
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	Jet black, matt RAL 9005
Rotating field inductance	35.0 mH	Holding brake	without holding brake
Electrical time constant	7.50 ms	Shaft extension	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
Limiting data		Maximum torque	10.50 Nm
Max. permissible speed (mech.)	9000 rpm	Special design	
Max. permissible speed (inverter)	6400 rpm	N05	Non-standard shaft extension (dimensions as for 1FT5 motors)
Maximum torque	10.5 Nm	X01	Paint finish: Jet black, matt RAL 9005
Maximum current	7.6 A		