

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-5AF71-1SA3-Z
N05+X01

No image
available for this
configuration.

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	1.9 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	3.010 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	1.40 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	89.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	5.15 Ω	Color of the housing	Jet black, matt RAL 9005
		Rotating field inductance	29.0 mH	Holding brake	without holding brake
		Electrical time constant	5.60 ms	Shaft end	Feather key
		Mechanical time constant	2.37 ms	Encoder system	Multi-pole resolver (number of pole pairs corresponds to number of pole pairs of the motor)
		Thermal time constant	30 min		
		Shaft torsional stiffness	16000 Nm/rad		
		Net weight of the motor	4.9 kg		

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Optimum operating point

Optimum speed	3000 rpm
Optimum power	0.8 kW

Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	6500 rpm
Maximum torque	10.5 Nm
Maximum current	7.4 A

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	6 A
Maximum torque	8.40 Nm

Special design

N05	Non-standard shaft end (dimensions as for 1FT5 motors)
X01	Paint finish: Jet black, matt RAL 9005