

Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7042-5AK71-1FH0

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	1.5 Nm	Shaft height	48
Rated current	2.5 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)	3.60 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.40 A	Vibration severity grade	Grade A
Moment of inertia	3.450 kgcm ²	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	0.69 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	44.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.20 Ω	Color of the housing	without
Rotating field inductance	6.7 mH	Holding brake	with holding brake
Electrical time constant	5.60 ms	Shaft extension	Plain shaft
Mechanical time constant	2.27 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	30 min		
Shaft torsional stiffness	16000 Nm/rad		
Net weight of the motor	5.4 kg		

MLFB-Ordering data

1FK7042-5AK71-1FH0

Figure similar

Optimum operating point

Optimum speed 5000 rpm

Optimum power 1.0 kW

Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 9990 rpm

Maximum torque 10.5 Nm

Maximum current 15.3 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 4.0 Nm

Power supply voltage DC 24 V \pm 10 %

Coil current 0.5 A

Opening time 70 ms

Closing time 30 ms

Highest braking work 150 J

Recommended Motor Module

Rated inverter current 5 A

Maximum inverter current 10 A

Maximum torque 6.80 Nm