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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7033-7AK71-1PA0**

Figure similar

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	6000 rpm
Number of poles	6
Rated torque (100 K)	0.9 Nm
Rated current	1.5 A
Static torque (60 K)	1.00 Nm
Static torque (100 K)	1.3 Nm
Stall current (60 K)	1.70 A
Stall current (100 K)	2.20 A
Moment of inertia	0.270 kgcm²
Efficiency	88.0 %

Physical constants

Torque constant	0.60 Nm/A
Voltage constant at 20° C	40.0 V/1000*min⁻¹
Winding resistance at 20° C	3.70 Ω
Rotating field inductance	18.0 mH
Electrical time constant	4.90 ms
Mechanical time constant	0.83 ms
Thermal time constant	25 min
Shaft torsional stiffness	8000 Nm/rad
Net weight of the motor	3.1 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	36
Cooling	Natural cooling
Radial runout tolerance	0.035 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP64
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	KTY84 temperature sensor in the stator winding
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	without
Holding brake	without holding brake
Shaft extension	Feather key
Encoder system	Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole)

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Figure similar

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Optimum operating point

Optimum speed	6000 rpm
Optimum power	0.6 kW

Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	13300 rpm
Maximum torque	4.3 Nm
Maximum current	7.2 A

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	6 A
Maximum torque	3.50 Nm