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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7043-7AK71-1PG5**

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)	2.0 Nm
Rated current	4.4 A
Static torque (60 K)	2.50 Nm
Static torque (100 K)	3.1 Nm
Stall current (60 K)	4.80 A
Stall current (100 K)	6.40 A
Moment of inertia	1.010 kgcm²
Efficiency	90.0 %

Physical constants

Torque constant	0.48 Nm/A
Voltage constant at 20° C	32.0 V/1000*min⁻¹
Winding resistance at 20° C	0.65 Ω
Rotating field inductance	9.0 mH
Electrical time constant	13.80 ms
Mechanical time constant	0.85 ms
Thermal time constant	40 min
Shaft torsional stiffness	11000 Nm/rad
Net weight of the motor	6.3 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	48
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP65 and DE flange IP67
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Plain shaft
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	1.3 kW

Limiting data

Max. permissible speed (mech.)	8000 rpm
Max. permissible speed (inverter)	13300 rpm
Maximum torque	9.4 Nm
Maximum current	20.0 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	18 A
Maximum torque	8.50 Nm