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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7105-5AC71-1FH2**

Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	2000 rpm
Number of poles	8
Rated torque (100 K)	37.0 Nm
Rated current	16.0 A
Static torque (60 K)	40.00 Nm
Static torque (100 K)	48.0 Nm
Stall current (60 K)	17.00 A
Stall current (100 K)	20.00 A
Moment of inertia	169.000 kgcm²
Efficiency	93.0 %

Physical constants

Torque constant	2.37 Nm/A
Voltage constant at 20° C	151.0 V/1000*min⁻¹
Winding resistance at 20° C	0.17 Ω
Rotating field inductance	4.4 mH
Electrical time constant	26.00 ms
Mechanical time constant	1.40 ms
Thermal time constant	70 min
Shaft torsional stiffness	125000 Nm/rad
Net weight of the motor	41.5 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Natural cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
Vibration severity grade	Grade A
Connector size	1.5
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	without
Holding brake	with holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Figure similar

MLFB-Ordering data **1FK7105-5AC71-1FH2**

Optimum operating point

Optimum speed	2000 rpm
Optimum power	7.8 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	3800 rpm
Maximum torque	150.0 Nm
Maximum current	72.0 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	43.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	1.0 A
Opening time	300 ms
Closing time	70 ms
Highest braking work	3380 J

Recommended Motor Module

Rated inverter current	30 A
Maximum inverter current	56 A
Maximum torque	127.00 Nm