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Data sheet for SIMOTICS S-1FK7

Figure similar

MLFB-Ordering data **1FK7060-2AF71-1CA2**

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	3000 rpm
Number of poles	8
Rated torque (100 K)	4.7 Nm
Rated current	3.7 A
Static torque (60 K)	5.00 Nm
Static torque (100 K)	6.0 Nm
Stall current (60 K)	3.60 A
Stall current (100 K)	4.45 A
Moment of inertia	7.700 kgcm²
Efficiency	90.0 %

Physical constants

Torque constant	1.33 Nm/A
Voltage constant at 20° C	85.5 V/1000*min^{-1}
Winding resistance at 20° C	1.35 Ω
Rotating field inductance	15.2 mH
Electrical time constant	11.30 ms
Mechanical time constant	1.71 ms
Thermal time constant	30 min
Shaft torsional stiffness	40500 Nm/rad
Net weight of the motor	7.1 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 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	Pt1000 temperature sensor
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Feather key
Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Optimum operating point

Optimum speed	3000 rpm
Optimum power	1.5 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	6700 rpm
Maximum torque	18.0 Nm
Maximum current	15.0 A

Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	18.00 Nm