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Data sheet for SIMOTICS S-1FK7

Figure similar

MLFB-Ordering data **1FK7064-4CF71-1CG0**

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	3000 rpm
Number of poles	6
Rated torque (100 K)	8.0 Nm
Rated current	7.6 A
Static torque (60 K)	10.00 Nm
Static torque (100 K)	12.00 Nm
Stall current (60 K)	8.70 A
Stall current (100 K)	10.80 A
Moment of inertia	7.500 kgcm²
Efficiency	93.0 %

Physical constants

Torque constant	1.11 Nm/A
Voltage constant at 20° C	70.5 V/1000*min^{-1}
Winding resistance at 20° C	0.35 Ω
Rotating field inductance	12.0 mH
Electrical time constant	34.50 ms
Mechanical time constant	0.64 ms
Thermal time constant	55 min
Shaft torsional stiffness	29500 Nm/rad
Net weight of the motor	15.4 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
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	IP64
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 end	Plain shaft
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	2.5 kW

Limiting data

Max. permissible speed (mech.)	7500 rpm
Max. permissible speed (inverter)	7500 rpm
Maximum torque	32.0 Nm
Maximum current	33.0 A

Recommended Motor Module

Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	32.00 Nm