SIEMENS

Data sheet for SIMOTICS S-1FK7

Article No. : **1FK7060-3BF71-1CH1**



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed (100 K)	3,000 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)	6.00 Nm
Stall current (60 K)	3.60 A
Stall current (100 K)	4.45 A
Moment of inertia	13.500 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	2.80 ms
Thermal time constant	30 min
Shaft torsional stiffness	27,500 Nm/rad
Net weight of the motor	9.3 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Inertia
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	M23
Degree of protection	IP65
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	with 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)

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	1.5 kW

Limiting data	
Max. permissible speed (mech.)	7,200 rpm
Max. permissible speed (inverter)	6,700 rpm
Maximum torque	18.0 Nm
Maximum current	15.0 A

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module	
Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	18.00 Nm