

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7085-4CF71-1RH0

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)	6.5 Nm
Rated current	7.0 A
Static torque (60 K)	18.30 Nm
Static torque (100 K)	22.00 Nm
Stall current (60 K)	17.80 A
Stall current (100 K)	22.00 A
Moment of inertia	25.000 kgcm²
Efficiency	92.0 %
Physical constants	
Torque constant	1.00 Nm/A
Voltage constant at 20° C	64.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.12 Ω
Rotating field inductance	3.7 mH
Electrical time constant	31.50 ms
Mechanical time constant	0.78 ms
Thermal time constant	65 min
Shaft torsional stiffness	63000 Nm/rad
Net weight of the motor	26.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	80
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	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	with holding brake
Shaft end	Plain shaft
Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2500 rpm	Rated inverter current	30 A
Optimum power	3.1 kW	Maximum inverter current	72 A
Limiting data		Maximum torque	59.80 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	65.0 Nm		
Maximum current	84.0 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	22.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.9 A		
Opening time	200 ms		
Closing time	60 ms		
Highest braking work	1400 J		