

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7081-3BF71-1CG1



Figure similar

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)	8.7 Nm
Rated current	6.8 A
Static torque (60 K)	10.00 Nm
Static torque (100 K)	12.00 Nm
Stall current (60 K)	7.10 A
Stall current (100 K)	8.70 A
Moment of inertia	49.000 kgcm²
Efficiency	93.0 %
Physical constants	
Torque constant	1.38 Nm/A
Voltage constant at 20° C	88.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.42 Ω
Rotating field inductance	7.7 mH
Electrical time constant	18.20 ms
Mechanical time constant	3.30 ms
Thermal time constant	45 min
Shaft torsional stiffness	100000 Nm/rad
Net weight of the motor	15.2 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Inertia
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
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	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)



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	2.8 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	34.10 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	37.0 Nm		
Maximum current	30.0 A		