

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7105-2AF71-1KG1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	26.0 Nm	Shaft height	100
Rated current	18.0 A	Cooling	Natural cooling
Static torque (60 K)	40.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	48.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	25.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	31.00 A	Vibration severity grade	Grade A
Moment of inertia	154.000 kgcm ²	Connector size	1.5
Efficiency	94.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.55 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	102.0 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.07 Ω	Holding brake	without holding brake
Rotating field inductance	1.9 mH	Shaft extension	Plain shaft
Electrical time constant	26.00 ms	Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	1.40 ms		
Thermal time constant	70 min		
Shaft torsional stiffness	125000 Nm/rad		
Net weight of the motor	39.0 kg		



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Optimum operating point

Optimum speed	3000 rpm
Optimum power	8.2 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	5000 rpm
Maximum torque	150.0 Nm
Maximum current	109.0 A

Recommended Motor Module

Rated inverter current	30 A
Maximum inverter current	90 A
Maximum torque	129.70 Nm