

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7103-5AF71-1KG3

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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)	14.0 Nm
Rated current	12.0 A
Static torque (60 K)	30.00 Nm
Static torque (100 K)	36.0 Nm
Stall current (60 K)	22.80 A
Stall current (100 K)	27.50 A
Moment of inertia	105.000 kgcm ²
Efficiency	93.0 %

Physical constants

Torque constant	1.35 Nm/A
Voltage constant at 20° C	86.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.09 Ω
Rotating field inductance	2.0 mH
Electrical time constant	22.20 ms
Mechanical time constant	1.55 ms
Thermal time constant	65 min
Shaft torsional stiffness	149000 Nm/rad
Net weight of the motor	29.0 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
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	KTY84 temperature sensor in the stator winding
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

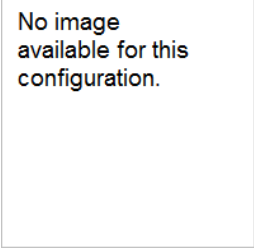


Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	2500 rpm	Rated inverter current	30 A
Optimum power	5.4 kW	Maximum inverter current	56 A
Limiting data		Maximum torque	73.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	6700 rpm		
Maximum torque	108.0 Nm		
Maximum current	84.0 A		