

Data sheet for SIMOTICS S-1FK7

No image available for this configuration.

MLFB-Ordering data

1FK7083-5AH71-1EG3

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

Rated speed (100 K)	4500 rpm
Number of poles	8
Rated torque (100 K)	3.0 Nm
Rated current	3.6 A
Static torque (60 K)	13.30 Nm
Static torque (100 K)	16.0 Nm
Stall current (60 K)	12.40 A
Stall current (100 K)	15.00 A
Moment of inertia	27.300 kgcm ²
Efficiency	93.0 %

Physical constants

Torque constant	1.05 Nm/A
Voltage constant at 20° C	67.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.17 Ω
Rotating field inductance	2.9 mH
Electrical time constant	17.00 ms
Mechanical time constant	1.26 ms
Thermal time constant	50 min
Shaft torsional stiffness	105000 Nm/rad
Net weight of the motor	14.0 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
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	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 AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface

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Figure similar

Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	3.3 kW	Maximum inverter current	36 A
Limiting data		Maximum torque	37.70 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	8600 rpm		
Maximum torque	50.0 Nm		
Maximum current	52.0 A		