

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7103-2AF74-1EA1

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)	14.0 Nm	Shaft height	100
Rated current	12.0 A	Cooling	Natural cooling
Static torque (60 K)	30.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	36.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	21.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	26.00 A	Vibration severity grade	Grade A
Moment of inertia	104.000 kgcm ²	Connector size	1.5
Efficiency	93.0 %	Degree of protection	IP65
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	1.35 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	89.5 V/1000*min ⁻¹	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.09 Ω	Holding brake	without holding brake
Rotating field inductance	2.4 mH	Shaft extension	Feather key
Electrical time constant	27.00 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
Mechanical time constant	1.46 ms		
Thermal time constant	65 min		
Shaft torsional stiffness	148000 Nm/rad		
Net weight of the motor	28.5 kg		



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	90 A
Limiting data		Maximum torque	108.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	5000 rpm		
Maximum torque	108.0 Nm		
Maximum current	84.0 A		