

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7081-2AH74-1AG1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	3.8 Nm	Shaft height	80
Rated current	4.9 A	Cooling	Natural cooling
Static torque (60 K)	10.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	12.0 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	10.60 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	13.10 A	Vibration severity grade	Grade A
Moment of inertia	20.000 kgcm <sup>2</sup>	Connector size	1
Efficiency	93.0 %	Degree of protection	IP65
<b>Physical constants</b>		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	Pt1000 temperature sensor
Torque constant	0.92 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	59.0 V/1000*min <sup>-1</sup>	Color of the housing	Standard (Anthracite RAL 7016)
Winding resistance at 20° C	0.19 Ω	Holding brake	without holding brake
Rotating field inductance	3.4 mH	Shaft extension	Plain shaft
Electrical time constant	17.90 ms	Encoder system	Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track
Mechanical time constant	1.36 ms		
Thermal time constant	45 min		
Shaft torsional stiffness	109000 Nm/rad		
Net weight of the motor	12.9 kg		



Figure similar

MLFB-Ordering data

1FK7081-2AH74-1AG1

Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	2.8 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	37.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	6000 rpm		
Maximum torque	37.0 Nm		
Maximum current	45.0 A		