

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7060-2AC71-1FB2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data																					
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor																				
Number of poles	8	Motor type	Compact																				
Rated torque (100 K)	5.3 Nm	Shaft height	63																				
Rated current	3.0 A	Cooling	Natural cooling																				
Static torque (60 K)	5.00 Nm	Radial runout tolerance	0.040 mm																				
Static torque (100 K)	6.0 Nm	Concentricity tolerance	0.10 mm																				
Stall current (60 K)	2.55 A	Axial runout tolerance	0.10 mm																				
Stall current (100 K)	3.15 A	Vibration severity grade	Grade A																				
Moment of inertia	8.700 kgcm ²	Connector size	1																				
Efficiency	90.0 %	Degree of protection	IP65 and DE flange IP67																				
<table border="1"> <thead> <tr> <th colspan="2">Physical constants</th> </tr> </thead> <tbody> <tr> <td>Torque constant</td> <td>1.91 Nm/A</td> </tr> <tr> <td>Voltage constant at 20° C</td> <td>121.0 V/1000*min⁻¹</td> </tr> <tr> <td>Winding resistance at 20° C</td> <td>2.75 Ω</td> </tr> <tr> <td>Rotating field inductance</td> <td>30.5 mH</td> </tr> <tr> <td>Electrical time constant</td> <td>11.10 ms</td> </tr> <tr> <td>Mechanical time constant</td> <td>1.75 ms</td> </tr> <tr> <td>Thermal time constant</td> <td>30 min</td> </tr> <tr> <td>Shaft torsional stiffness</td> <td>28500 Nm/rad</td> </tr> <tr> <td>Net weight of the motor</td> <td>8.5 kg</td> </tr> </tbody> </table>		Physical constants		Torque constant	1.91 Nm/A	Voltage constant at 20° C	121.0 V/1000*min ⁻¹	Winding resistance at 20° C	2.75 Ω	Rotating field inductance	30.5 mH	Electrical time constant	11.10 ms	Mechanical time constant	1.75 ms	Thermal time constant	30 min	Shaft torsional stiffness	28500 Nm/rad	Net weight of the motor	8.5 kg	Design acc. to Code I	IM B5 (IM V1, IM V3)
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Net weight of the motor	8.5 kg																						
Temperature monitoring	Pt1000 temperature sensor	Electrical connectors	Connectors for signals and power rotatable																				
Color of the housing	Standard (Anthracite RAL 7016)	Holding brake	with holding brake																				
Holding brake	with holding brake	Shaft extension	Feather key																				
Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)																						



Figure similar

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Optimum operating point

Optimum speed	2000 rpm
Optimum power	1.1 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	4750 rpm
Maximum torque	18.0 Nm
Maximum current	10.7 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	9 A
Maximum torque	15.90 Nm