

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7062-2AH71-1CG0-Z
N05

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)	3.0 Nm	Shaft height	63																				
Rated current	3.3 A	Cooling	Natural cooling																				
Static torque (60 K)	7.10 Nm	Radial runout tolerance	0.040 mm																				
Static torque (100 K)	8.5 Nm	Concentricity tolerance	0.10 mm																				
Stall current (60 K)	6.50 A	Axial runout tolerance	0.10 mm																				
Stall current (100 K)	8.00 A	Vibration severity grade	Grade A																				
Moment of inertia	11.200 kgcm ²	Connector size	1																				
Efficiency	91.0 %	Degree of protection	IP64																				
<table border="1"> <thead> <tr> <th colspan="2">Physical constants</th> </tr> </thead> <tbody> <tr> <td>Torque constant</td> <td>1.06 Nm/A</td> </tr> <tr> <td>Voltage constant at 20° C</td> <td>67.5 V/1000*min⁻¹</td> </tr> <tr> <td>Winding resistance at 20° C</td> <td>0.48 Ω</td> </tr> <tr> <td>Rotating field inductance</td> <td>6.4 mH</td> </tr> <tr> <td>Electrical time constant</td> <td>13.20 ms</td> </tr> <tr> <td>Mechanical time constant</td> <td>1.44 ms</td> </tr> <tr> <td>Thermal time constant</td> <td>35 min</td> </tr> <tr> <td>Shaft torsional stiffness</td> <td>37000 Nm/rad</td> </tr> <tr> <td>Net weight of the motor</td> <td>9.1 kg</td> </tr> </tbody> </table>		Physical constants		Torque constant	1.06 Nm/A	Voltage constant at 20° C	67.5 V/1000*min ⁻¹	Winding resistance at 20° C	0.48 Ω	Rotating field inductance	6.4 mH	Electrical time constant	13.20 ms	Mechanical time constant	1.44 ms	Thermal time constant	35 min	Shaft torsional stiffness	37000 Nm/rad	Net weight of the motor	9.1 kg	Design acc. to Code I	IM B5 (IM V1, IM V3)
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Net weight of the motor	9.1 kg																						
Temperature monitoring	Pt1000 temperature sensor	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 AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)																				



Figure similar

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Optimum operating point

Optimum speed	3500 rpm
Optimum power	1.9 kW

Limiting data

Max. permissible speed (mech.)	7200 rpm
Max. permissible speed (inverter)	7200 rpm
Maximum torque	26.0 Nm
Maximum current	29.0 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	24.80 Nm

Special design

N05 Non-standard shaft extension (dimensions as for 1FT5 motors)