

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7083-2AF74-1EA2

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)	10.5 Nm	Shaft height	80																				
Rated current	7.2 A	Cooling	Natural cooling																				
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm																				
Static torque (100 K)	16.0 Nm	Concentricity tolerance	0.10 mm																				
Stall current (60 K)	8.20 A	Axial runout tolerance	0.10 mm																				
Stall current (100 K)	10.10 A	Vibration severity grade	Grade A																				
Moment of inertia	26.000 kgcm ²	Connector size	1																				
Efficiency	93.0 %	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>1.58 Nm/A</td> </tr> <tr> <td>Voltage constant at 20° C</td> <td>102.5 V/1000*min⁻¹</td> </tr> <tr> <td>Winding resistance at 20° C</td> <td>0.38 Ω</td> </tr> <tr> <td>Rotating field inductance</td> <td>7.0 mH</td> </tr> <tr> <td>Electrical time constant</td> <td>18.60 ms</td> </tr> <tr> <td>Mechanical time constant</td> <td>1.18 ms</td> </tr> <tr> <td>Thermal time constant</td> <td>50 min</td> </tr> <tr> <td>Shaft torsional stiffness</td> <td>101000 Nm/rad</td> </tr> <tr> <td>Net weight of the motor</td> <td>15.6 kg</td> </tr> </tbody> </table>		Physical constants		Torque constant	1.58 Nm/A	Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Winding resistance at 20° C	0.38 Ω	Rotating field inductance	7.0 mH	Electrical time constant	18.60 ms	Mechanical time constant	1.18 ms	Thermal time constant	50 min	Shaft torsional stiffness	101000 Nm/rad	Net weight of the motor	15.6 kg	Design acc. to Code I	IM B5 (IM V1, IM V3)
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Net weight of the motor	15.6 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	Feather key	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface																				



Figure similar

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Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	9 A
Optimum power	3.3 kW	Maximum inverter current	27 A
Limiting data		Maximum torque	40.00 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	5600 rpm		
Maximum torque	50.0 Nm		
Maximum current	37.0 A		