

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7042-5AF71-1EH3

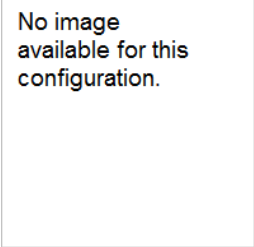


Figure similar

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)	2.6 Nm	Shaft height	48		
Rated current	1.9 A	Cooling	Natural cooling		
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	3.00 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	1.80 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	2.20 A	Vibration severity grade	Grade A		
Moment of inertia	3.450 kgcm ²	Connector size	1		
Efficiency	89.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	KTY84 temperature sensor in the stator winding		
		Electrical connectors	Connectors for signals and power rotatable		
		Color of the housing	Standard (Anthracite RAL 7016)		
		Holding brake	with holding brake		
		Shaft end	Plain shaft		
		Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface		
		Torque constant	1.40 Nm/A		
		Voltage constant at 20° C	89.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	5.15 Ω		
Rotating field inductance	29.0 mH				
Electrical time constant	5.60 ms				
Mechanical time constant	2.37 ms				
Thermal time constant	30 min				
Shaft torsional stiffness	16000 Nm/rad				
Net weight of the motor	5.4 kg				

MLFB-Ordering data

1FK7042-5AF71-1EH3

Figure similar

Optimum operating point

Optimum speed	3000 rpm
Optimum power	0.8 kW

Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	6500 rpm
Maximum torque	10.5 Nm
Maximum current	7.4 A

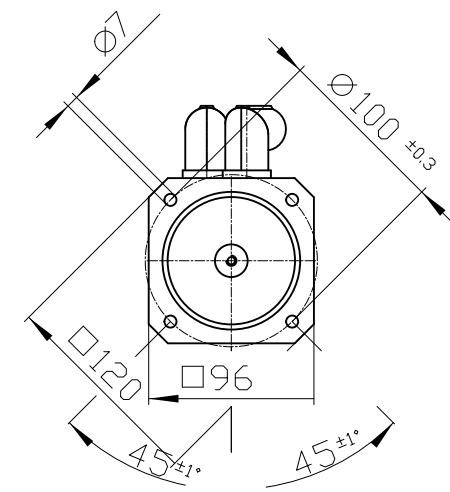
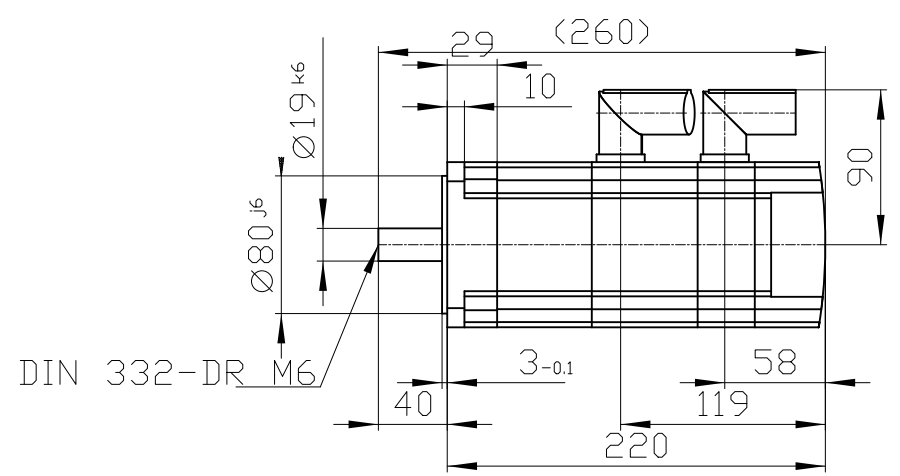
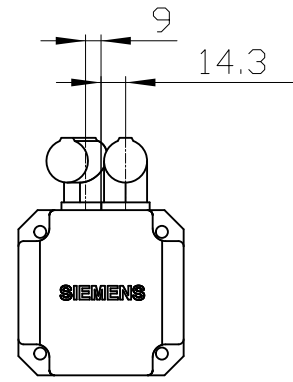
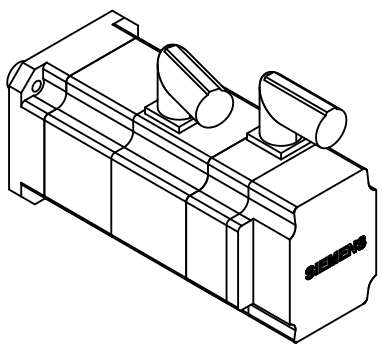
Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	4.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	0.5 A
Opening time	70 ms
Closing time	30 ms
Highest braking work	150 J

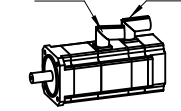
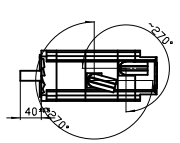
Recommended Motor Module

Rated inverter current	3 A
Maximum inverter current	6 A
Maximum torque	8.40 Nm

Copyright © Siemens AG 2005
 Code-drawing do not make any manual changes
 The reproduction or use of this document or its contents is not permitted without express written authority. Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.
 Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhalts ist nicht gestattet, soweit nicht ausdrücklich zugestanden. Zuwahlungen verpflichten zu Schadenersatz. Alle Rechte vorbehalten, insbesondere fuer den Fall der Patenterteilung oder Gk-Entragung.
 Conflicto a titre de secret d'entreprise. Tous droits reserves. Confiado como secreto industrial. Nos reservamos todos los derechos Comunicado como segredo empresarial. Reservados todos os direitos



Connector size 1 = M23;
 6-pole for power and brake
 Connector size M23, 17-pole



		-
Unit	mm (in)	1FK7042-5AF71-1EH3
Date	3/9/23	
SIEMENS AG		-
		DT