

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7042-3BK71-1RB0

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	High Inertia
Rated torque (100 K)	1.5 Nm	Shaft height	48
Rated current	2.5 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)	3.55 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.40 A	Vibration severity grade	Grade A
Moment of inertia	5.400 kgcm²	Connector size	1
Efficiency	89.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.68 Nm/A	Temperature monitoring	Pt1000 temperature sensor
Voltage constant at 20° C	44.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.15 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	8.6 mH	Holding brake	with holding brake
Electrical time constant	7.50 ms	Shaft end	Feather key
Mechanical time constant	3.80 ms	Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	30 min		
Shaft torsional stiffness	10900 Nm/rad		
Net weight of the motor	5.8 kg		



Figure similar

MLFB-Ordering data 1FK7042-3BK71-1RB0

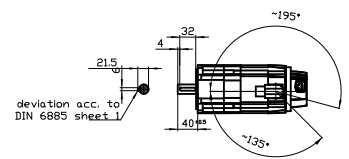
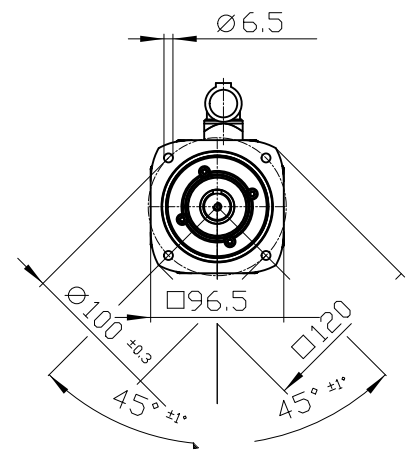
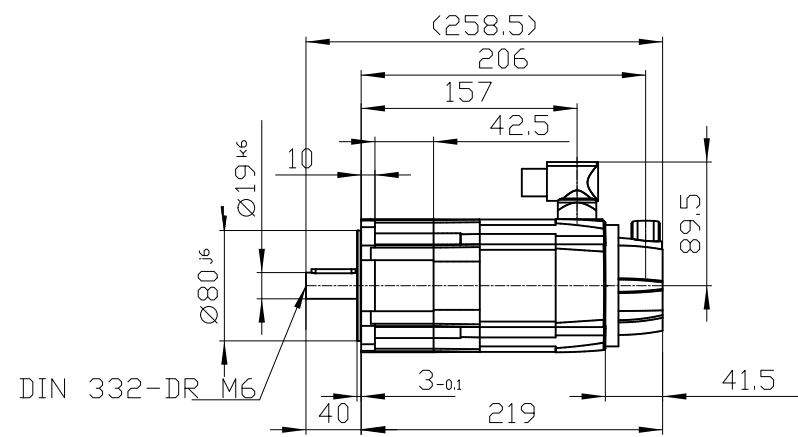
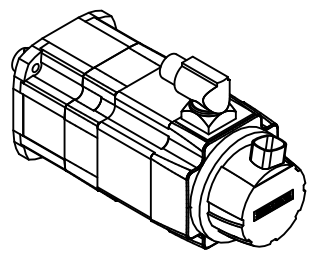
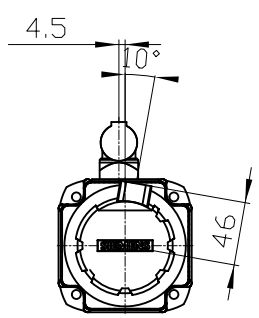
Optimum operating point		Recommended Motor Module	
Optimum speed	5000 rpm	Rated inverter current	5 A
Optimum power	1.0 kW	Maximum inverter current	15 A
Limiting data		Maximum torque	10.30 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9000 rpm		
Maximum torque	10.5 Nm		
Maximum current	15.3 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	4.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.5 A		
Opening time	70 ms		
Closing time	30 ms		
Highest braking work	150 J		

Copyright© Siemens AG 2005
Cod-drawing do not make any
manual changes

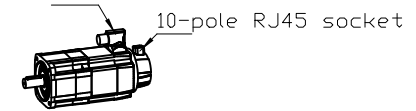
The reproduction or use of this document or its
contents is not permitted without express written authority.
Offenders will be liable for damages. All rights, including rights
created by patent grant or registration of a utility model or design,
are reserved.

Weitergabe sowie Vervielfältigung dieser Unterlage, Verwer-
tung und Mitteilung ihres Inhalts nicht gestattet, soweit nicht
ausdrücklich zugestanden. Zuwahlhandlungen verpflichten
zu Schadenersatz. Alle Rechte vorbehalten, insbesondere fuer
den Fall der Patenterteilung oder GK-Entragung.

Confie a titre de secret d'entreprise. Tous droits reserves.
Confido 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



		-
		-
Unit	mm [in]	1FK7042-3BK71-1RB0
Date	2/28/23	
SIEMENS AG		-
-		DT