

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7083-5AH71-1FB3



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	80
Rated current	3.6 A	Cooling	Natural cooling
Static torque (60 K)	13.30 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	16.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	12.40 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	15.00 A	Vibration severity grade	Grade A
Moment of inertia	35.900 kgcm²	Connector size	1
Efficiency	93.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.05 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	67.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.17 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	2.9 mH	Holding brake	with holding brake
Electrical time constant	17.00 ms	Shaft end	Feather key
Mechanical time constant	1.26 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	50 min		
Shaft torsional stiffness	105000 Nm/rad		
Net weight of the motor	16.5 kg		

MLFB-Ordering data 1FK7083-5AH71-1FB3

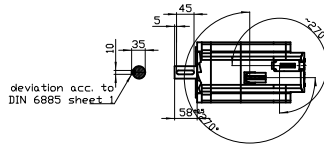
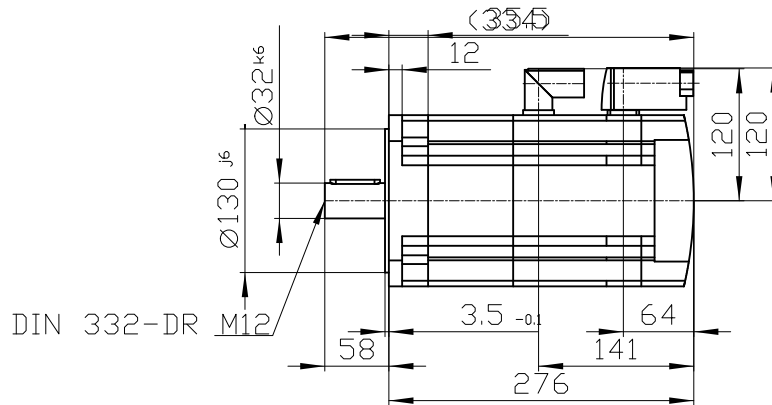
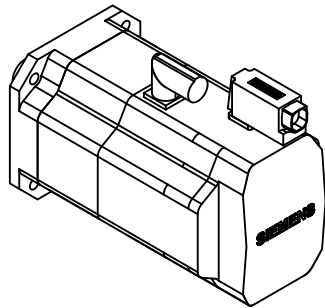
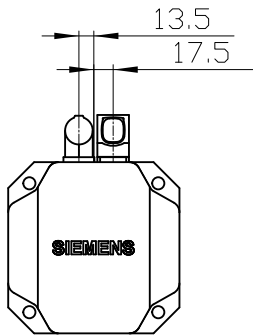
Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	18 A
Optimum power	3.3 kW	Maximum inverter current	36 A
Limiting data		Maximum torque	37.70 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	8600 rpm		
Maximum torque	50.0 Nm		
Maximum current	52.0 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	22.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	0.9 A		
Opening time	200 ms		
Closing time	60 ms		
Highest braking work	1400 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.

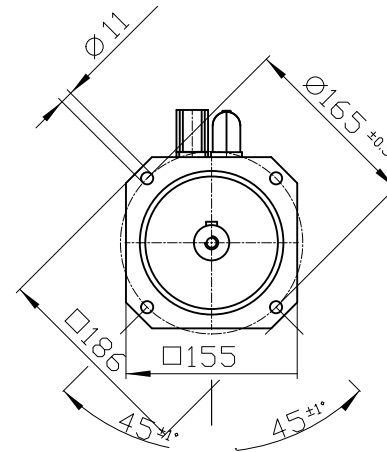
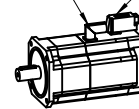
Weitergabe sowie Vervielfältigung dieser Unterlage, Verwer-
tung und Mitteilung ihres Inhalts nicht gestattet, soweit nicht
ausdrücklich zugestanden. Zuwiderhandlungen verpflichten
zu Schadenersatz. Alle Rechte vorbehalten, insbesondere fuer
den Fall der Patenterteilung oder GK-Entragung.

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



deviation acc. to
DIN 6885 sheet 1

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



Unit	mm [in]	1FK7083-5AH71-1FB3	
Date	7/13/23		
SIEMENS AG			
		DT	