

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7043-7AH71-1EH3



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	6	Motor type	High Dynamic
Rated torque (100 K)	2.6 Nm	Shaft height	48
Rated current	4.0 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.10 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	3.60 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	4.50 A	Vibration severity grade	Grade A
Moment of inertia	1.140 kgcm²	Connector size	1
Efficiency	90.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.67 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	44.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.20 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	15.0 mH	Holding brake	with holding brake
Electrical time constant	12.50 ms	Shaft end	Plain shaft
Mechanical time constant	0.81 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
Thermal time constant	40 min		
Shaft torsional stiffness	11000 Nm/rad		
Net weight of the motor	7.0 kg		

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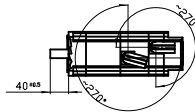
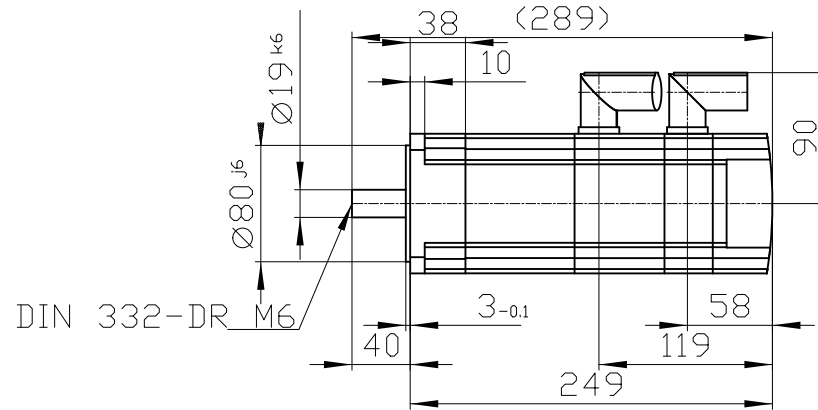
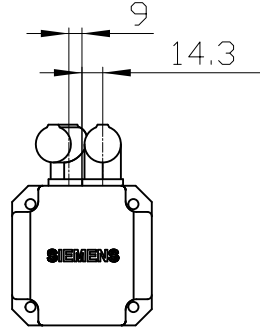
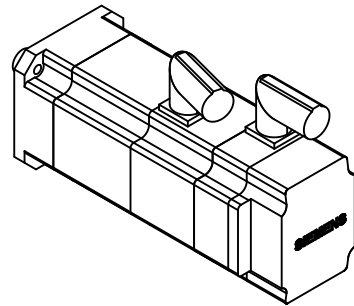
Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	5 A
Optimum power	1.2 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	6.80 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	13100 rpm		
Maximum torque	9.4 Nm		
Maximum current	14.8 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		

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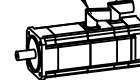
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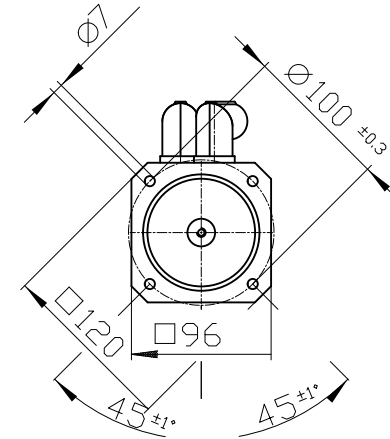
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Connector size 1 = M23;
6-pole for power and brake



Connector size M23, 17-pole



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Unit	mm [in]	1FK7043-7AH71-1EH3
Date	3/14/23	
SIEMENS AG		—
—		DT