

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7044-7AH71-1KG5



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)	3.0 Nm	Shaft height	48
Rated current	4.9 A	Cooling	Natural cooling
Static torque (60 K)	3.00 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	4.00 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	4.60 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	6.30 A	Vibration severity grade	Grade A
Moment of inertia	1.280 kgcm²	Connector size	1
Efficiency	91.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	0.63 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	42.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.81 Ω	Color of the housing	Standard (Anthracite RAL 7016)
Rotating field inductance	11.0 mH	Holding brake	without holding brake
Electrical time constant	13.50 ms	Shaft end	Plain shaft
Mechanical time constant	0.78 ms	Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Thermal time constant	45 min		
Shaft torsional stiffness	9500 Nm/rad		
Net weight of the motor	7.7 kg		

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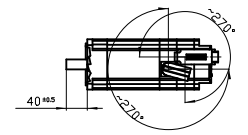
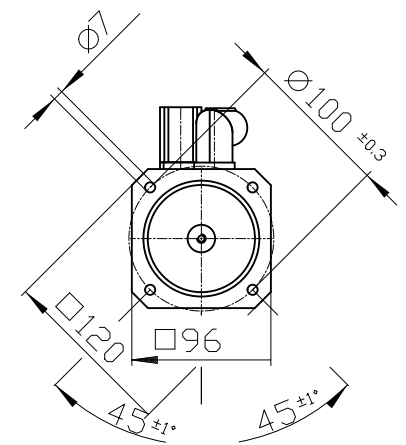
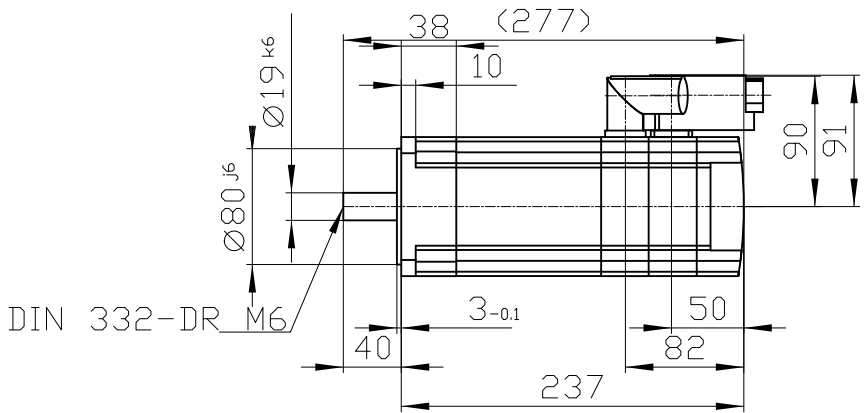
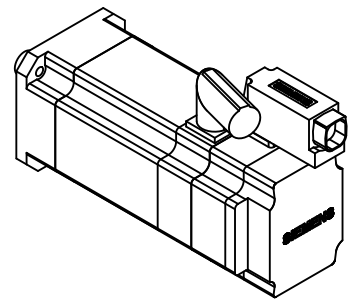
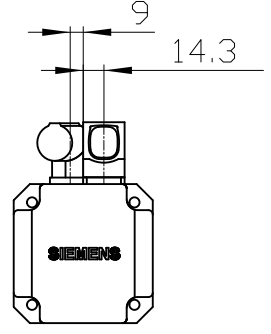
Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	9 A
Optimum power	1.4 kW	Maximum inverter current	18 A
Limiting data		Maximum torque	11.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	13300 rpm		
Maximum torque	12.0 Nm		
Maximum current	20.0 A		

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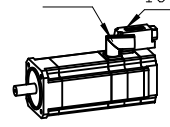
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Connector size 1 = M23;
6-pole for power and brake 10-pole RJ45 socket



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Unit	mm [in]	1FK7044-7AH71-1KG5
Date	3/20/23	
SIEMENS AG		-
-		DT