

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data1FK7080-5AF71-1KH2

Figure similar

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

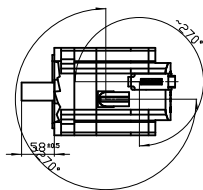
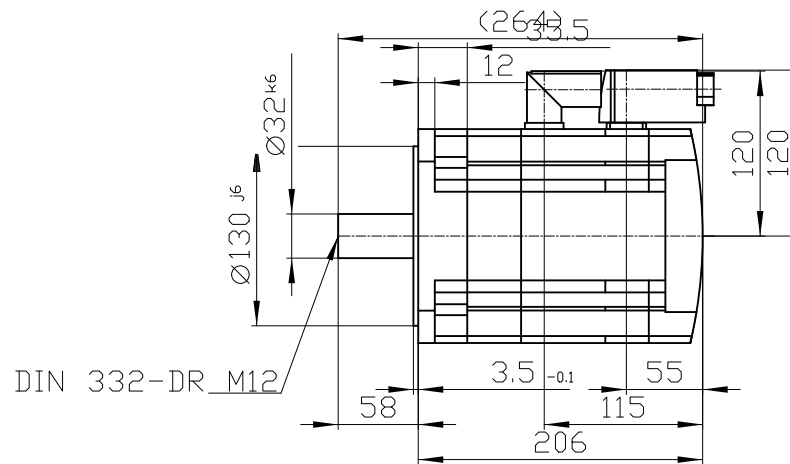
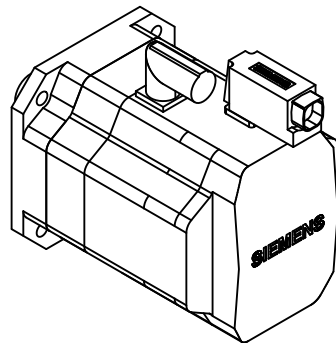
Item no. :
Consignment no. :
Project :

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)	6.8 Nm	Shaft height	80
Rated current	4.4 A	Cooling	Natural cooling
Static torque (60 K)	6.60 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	8.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	4.00 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	4.80 A	Vibration severity grade	Grade A
Moment of inertia	18.100 kgcm²	Connector size	1
Efficiency	92.0 %	Degree of protection	IP65 and DE flange IP67
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.61 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	102.5 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	1.04 Ω	Color of the housing	without
Rotating field inductance	14.0 mH	Holding brake	with holding brake
Electrical time constant	13.50 ms	Shaft end	Plain shaft
Mechanical time constant	1.78 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	40 min		
Shaft torsional stiffness	126000 Nm/rad		
Net weight of the motor	12.5 kg		

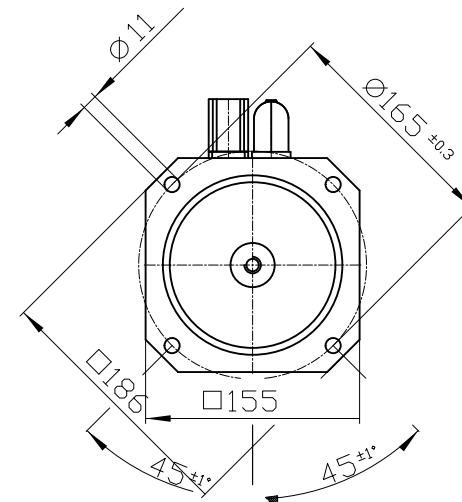
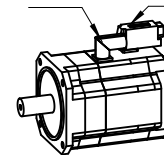
MLFB-Ordering data 1FK7080-5AF71-1KH2

Optimum operating point		Recommended Motor Module	
Optimum speed	3000 rpm	Rated inverter current	5 A
Optimum power	2.1 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	16.60 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	5600 rpm		
Maximum torque	25.0 Nm		
Maximum current	18.0 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		

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10-pole RJ45 socket



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Unit	mm [in]	1FK7080-5AF71-1KH2	
Date	6/29/23		
SIEMENS AG		—	
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