

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7101-2AC71-1RB0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data	
Rated speed (100 K)	2000 rpm
Number of poles	8
Rated torque (100 K)	20.5 Nm
Rated current	9.7 A
Static torque (60 K)	22.50 Nm
Static torque (100 K)	27.00 Nm
Stall current (60 K)	10.00 A
Stall current (100 K)	12.30 A
Moment of inertia	87.000 kgcm²
Efficiency	93.0 %
Physical constants	
Torque constant	2.15 Nm/A
Voltage constant at 20° C	144.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.34 Ω
Rotating field inductance	8.5 mH
Electrical time constant	25.00 ms
Mechanical time constant	1.62 ms
Thermal time constant	60 min
Shaft torsional stiffness	116000 Nm/rad
Net weight of the motor	27.5 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Natural cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
Vibration severity grade	Grade A
Connector size	1.5
Degree of protection	IP64
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	Pt1000 temperature sensor
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	with holding brake
Shaft end	Feather key
Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)



Figure similar

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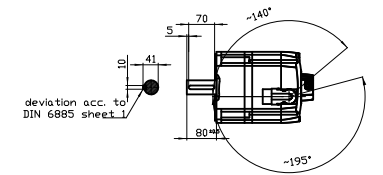
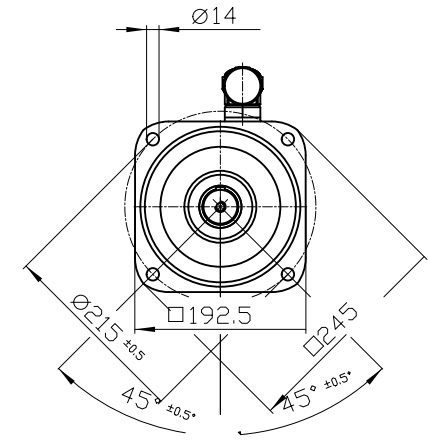
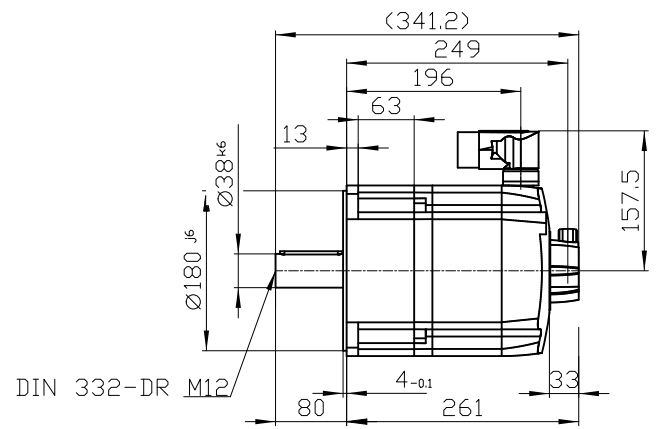
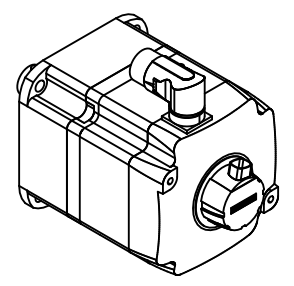
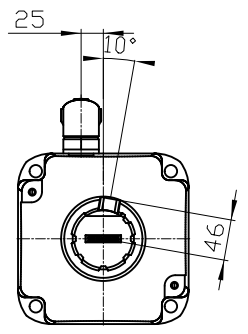
Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	18 A
Optimum power	4.3 kW	Maximum inverter current	54 A
Limiting data		Maximum torque	80.00 Nm
Max. permissible speed (mech.)	5000 rpm		
Max. permissible speed (inverter)	4000 rpm		
Maximum torque	80.0 Nm		
Maximum current	40.5 A		
Holding brake			
Holding brake version	Permanent-magnet brake		
Holding torque	43.0 Nm		
Power supply voltage	DC 24 V ± 10 %		
Coil current	1.0 A		
Opening time	300 ms		
Closing time	70 ms		
Highest braking work	3380 J		

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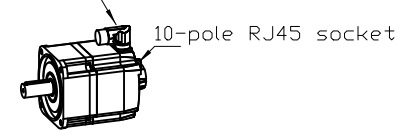
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Connector size 1.5 = M40;
6-pole for power and brake



Unit		mm [in]	1FK7101-2AC71-1RB0
Date		7/21/23	
SIEMENS AG			
		DT	