

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data1FK7100-5AF71-1KA0



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)	12.0 Nm	Shaft height	100
Rated current	8.0 A	Cooling	Natural cooling
Static torque (60 K)	15.00 Nm	Radial runout tolerance	0.050 mm
Static torque (100 K)	18.00 Nm	Concentricity tolerance	0.10 mm
Stall current (60 K)	9.20 A	Axial runout tolerance	0.10 mm
Stall current (100 K)	11.20 A	Vibration severity grade	Grade A
Moment of inertia	55.300 kgcm²	Connector size	1
Efficiency	92.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
Torque constant	1.59 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
Voltage constant at 20° C	101.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
Winding resistance at 20° C	0.34 Ω	Color of the housing	without
Rotating field inductance	7.0 mH	Holding brake	without holding brake
Electrical time constant	20.50 ms	Shaft end	Feather key
Mechanical time constant	2.23 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	55 min		
Shaft torsional stiffness	184000 Nm/rad		
Net weight of the motor	19.0 kg		

No image available for this configuration.

Figure similar

MLFB-Ordering data

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Optimum operating point	
Optimum speed	3000 rpm
Optimum power	3.8 kW
Limiting data	
Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	5700 rpm
Maximum torque	55.0 Nm
Maximum current	37.0 A

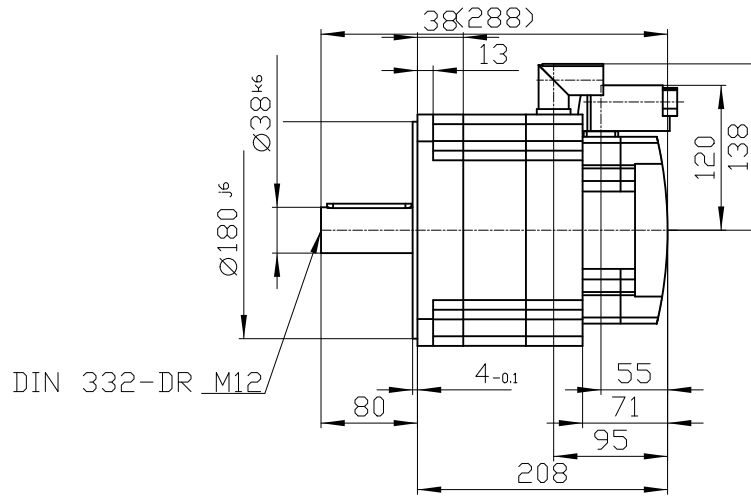
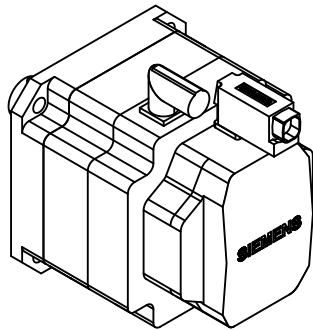
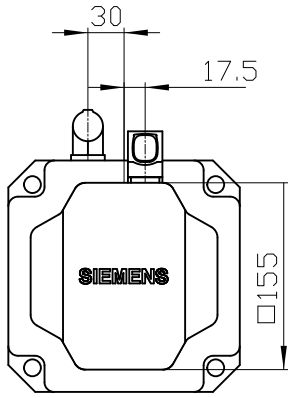
Recommended Motor Module	
Rated inverter current	18 A
Maximum inverter current	36 A
Maximum torque	53.80 Nm

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Cada-drawing do not make any
manual changes

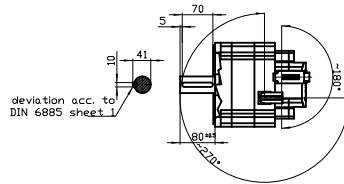
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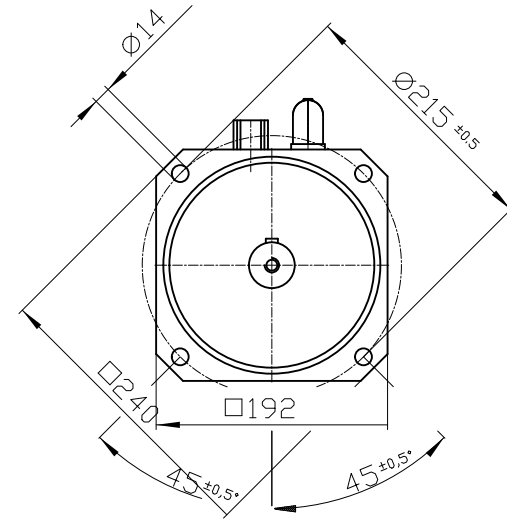
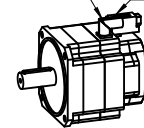


DIN 332-DR M12



deviation acc. to
DIN 6885 sheet 1

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



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Unit	mm [in]	1FK7100-5AF71-1KA0
Date	7/21/23	
SIEMENS AG		-
-		DT