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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7100-5AF71-1DA2**

Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	3000 rpm
Number of poles	8
Rated torque (100 K)	12.0 Nm
Rated current	8.0 A
Static torque (60 K)	15.00 Nm
Static torque (100 K)	18.00 Nm
Stall current (60 K)	9.20 A
Stall current (100 K)	11.20 A
Moment of inertia	55.300 kgcm²
Efficiency	92.0 %

Physical constants

Torque constant	1.59 Nm/A
Voltage constant at 20° C	101.0 V/1000*min⁻¹
Winding resistance at 20° C	0.34 Ω
Rotating field inductance	7.0 mH
Electrical time constant	20.50 ms
Mechanical time constant	2.23 ms
Thermal time constant	55 min
Shaft torsional stiffness	184000 Nm/rad
Net weight of the motor	19.0 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
Degree of protection	IP65 and DE flange IP67
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	KTY84 temperature sensor in the stator winding
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	without
Holding brake	without holding brake
Shaft end	Feather key
Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits

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No image available for this configuration.

Figure similar

MLFB-Ordering data **1FK7100-5AF71-1DA2**

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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Cad-drawing do not make any manual changes

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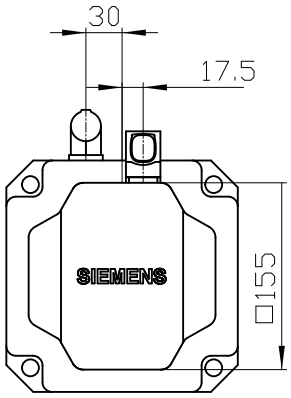
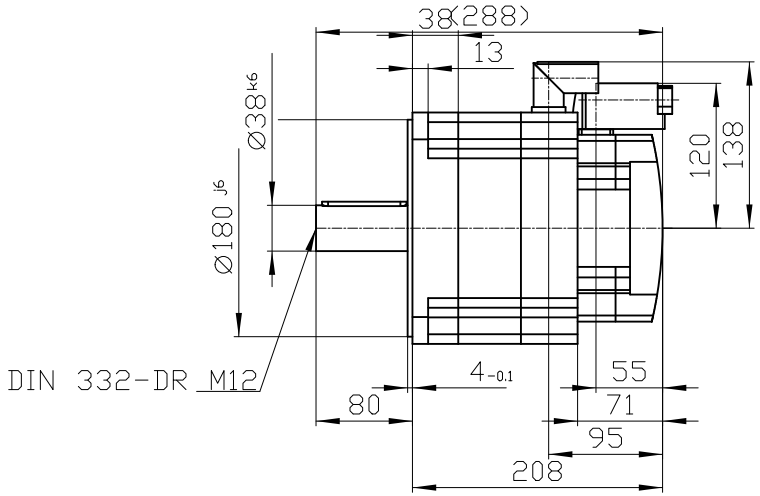
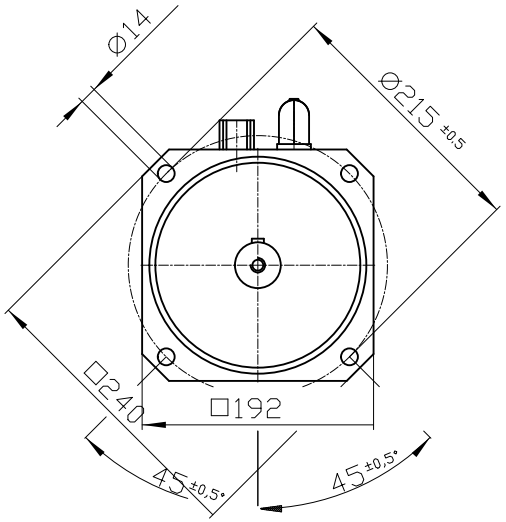
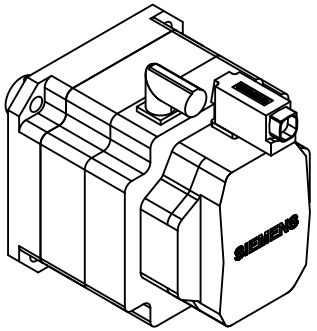
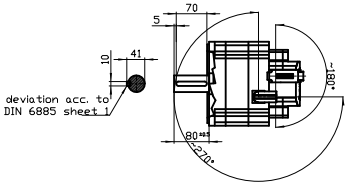




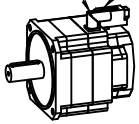






Connector size 1 = M23;
6-pole for power and brake

10-pole RJ45 socket



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Unit	mm [in]	1FK7100-5AF71-1DA2
Date	7/24/23	
SIEMENS AG		–
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