

Data sheet for SIMOTICS S-1FK7 servo geared motor

Article No. : 1FK7060-5AF71-1KU5-Z
D37+G11+H13



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed (100 K)	3,000 rpm
Number of poles	8
Rated torque (100 K)	4.7 Nm
Rated current	3.7 A
Static torque (60 K)	5.00 Nm
Static torque (100 K)	6.00 Nm
Stall current (60 K)	3.70 A
Stall current (100 K)	4.50 A
Moment of inertia	7.950 kgcm²

Physical constants	
Torque constant	1.33 Nm/A
Voltage constant at 20° C	84.5 V/1000*min ⁻¹
Winding resistance at 20° C	1.44 Ω
Rotating field inductance	14.7 mH
Electrical time constant	10.20 ms
Mechanical time constant	1.94 ms
Thermal time constant	30 min
Shaft torsional stiffness	42,000 Nm/rad
Net weight of the motor	34.4 kg

Recommended Motor Module	
Rated inverter current	5 A
Maximum inverter current	10 A
Maximum torque	13.20 Nm

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft end	Fitted key and keyway
Encoder system	Encoder AM16DQ: absolute encoder 16 bits (resolution 65536, encoder-internal 32 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

Gearbox data	
Gearbox type	Helical geared
Designation	C302
Gearbox ratio	50
Output speed at the gearbox shaft	60 rpm
Rated output torque at duty type S3-60 %	227 Nm
Acceleration torque max.	400 Nm
Power at duty type S3-60%	1.43 kW
Radial output shaft loading, max.	3,911 N
Precise ratio	2736/55
Overload factor	1.40
Type of construction	IM B3 / IM B5 / IM B14 / IM B34 / IM B35
Mounting position	no value
Connector position	Connector position on gearbox side 1, below
Type	Foot-mounted
Gearbox shaft end	Solid shaft with fitted key
Gearbox output arrangement	no value
Arrangement of shrink disk	no value

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Limiting data	
Max. permissible speed (mech.)	7,200 rpm
Max. permissible speed (inverter)	6,800 rpm
Maximum torque	18.0 Nm
Maximum current	15.0 A

Special design	
D37	Helical geared motors
G11	Foot-mounted, Solid shaft with fitted key (Gearbox side 4)
H13	Plug position on gear side 1, bottom