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Data sheet for SIMOTICS S-1FK7 servo geared motor



Figure similar

Article No. : 1FK7063-5AF71-1KV5-Z
B47+G68+H62

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)	7.3 Nm
Rated current	5.6 A
Static torque (60 K)	9.10 Nm
Static torque (100 K)	11.00 Nm
Stall current (60 K)	6.60 A
Stall current (100 K)	8.00 A
Moment of inertia	17.300 kgcm²

Physical constants	
Torque constant	1.37 Nm/A
Voltage constant at 20° C	87.5 V/1000*min⁻¹
Winding resistance at 20° C	0.65 Ω
Rotating field inductance	7.7 mH
Electrical time constant	11.80 ms
Mechanical time constant	1.56 ms
Thermal time constant	40 min
Shaft torsional stiffness	35,000 Nm/rad
Net weight of the motor	58.8 kg

Recommended Motor Module	
Rated inverter current	9 A
Maximum inverter current	18 A
Maximum torque	24.50 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	M23
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	with 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	Bevel geared B / K
Designation	K402
Gearbox ratio	46
Output speed at the gearbox shaft	65 rpm
Rated output torque at duty type S3-60 %	328 Nm
Acceleration torque max.	600 Nm
Power at duty type S3-60%	2.22 kW
Radial output shaft loading, max.	7,570 N
Precise ratio	602/13
Overload factor	1.20
Type of construction	no value
Mounting position	EL 6
Connector position	Connector position on gearbox side 4, right
Type	Foot-mounted and tapped hole group
Gearbox shaft end	Hollow shaft with clamping element
Gearbox output arrangement	Insertion side 4
Arrangement of shrink disk	Shrink disk side 3

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens

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Limiting data	
Max. permissible speed (mech.)	7,200 rpm
Max. permissible speed (inverter)	6,600 rpm
Maximum torque	35.0 Nm
Maximum current	28.0 A

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	400 J

Special design	
B47	Bevel geared motors
G68	Foot-mounted and tapped hole group, (Gearbox side 3)
H62	Connector position on gearbox side 4, right