

Data sheet for SIMOTICS S-1FK7 servo geared motor

Article No. : **1FK7063-5AF71-1KU5-Z**
B47+G31+H42



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)	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	15.100 kgcm ²

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	58.3 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	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	Bevel geared
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 4
Connector position	Connector position on gearbox side 4, right
Type	Flange (round)
Gearbox shaft end	Solid shaft with fitted key
Gearbox output arrangement	Gearbox side 4
Arrangement of shrink disk	no value

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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

Special design

- B47 Bevel geared motors
- G31 Flange (round), Solid shaft with fitted key (Plug-in gearbox side 5 for parallel shaft gearboxes; plug-in side 4 for bevel and worm gearboxes)
- H42 Connector position on gearbox side 4, right