

Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1510-5RG12-2FA1-Z**
B02+D21+G23+G99+K08+N23+Q92+Y84



Figure similar

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

Item no. :
 Consignment no. :
 Project :

Gearbox data

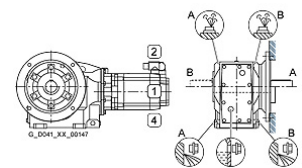
Gear box type	K89
Gearbox basic type	Bevel geared B / K
Gearbox size	89
Transmission stages	3
Transmission (ratio)	5.81
Gear number relation	93/16
Output moment maximum (short-time)	445 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	775 rpm
Emergency off output moment (1000 cycles)	1,140 Nm
Radial force maximum	13,800 N
Max. permissible radial force with Mmax	13,800 N
Moment of inertia	17.50 kgcm ²
Torsional stiffness	94 Nm/°
Efficiency	0.96
Mounting position	M1-B
Mounting type	Flange version (A type)
Output shaft version	Hollow shaft standard
Output shaft dimension	H50 mm
Gearbox flange diameter	300 mm
Figure 2 torque support	-

General tech. specifications

Color of the housing	Standard painting (Anthracite RAL 7016)
Specification	CE / UL / CSA / EAC / cRUus
Net weight	90.63 kg
1m-sound pressure level L _{pA} (Tol.+3dB(A))	75
Plug position	bottom (4)
Adapter flange position	top (default) (2)

Lubrication and sealing

Gear oil	Polyglycol oil CLP ISO PG VG460
Output shaft sealing	Seal longer service life
Oil charge	2.20 l



Motor data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
DC-link voltage, max.	510...720V
Shaft height	100 mm
Cooling	Natural cooling
Rated speed	2,000 rpm
Rated torque (100K)	18.00 Nm
Rated power	3.77 kW
Rated current (100K)	8.60 A
Static torque	24.50 Nm
Static current	11.10 A
Moment of inertia	87.00000 kgcm ²
Efficiency η	93 %
Temperature monitoring	Pt1000 temperature sensor
Connector size	1.5
Degree of protection	IP65
Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

Limiting data

Maximum speed (short-time)	5,000 rpm
Maximum torque	80.00 Nm
Motor current short term	40.5 A

Optimum operating point

Optimum speed	2,000 rpm
Optimum power	3.75 kW

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Recommended Motor Module

Rated inverter current	18.0 A
Maximum inverter current	54.0 A
Maximum torque	80.0 Nm

Holding brake

Holding brake	with holding brake
Holding brake version	Permanent-magnet brake
Power supply voltage	DC 24 V \pm 10 %
Dynamic braking torque M_{1Br}	25.00 Nm
Holding torque M_{4Br}	43.00 Nm
Opening time	300.0 ms
Closing time	70.0 ms
Maximum switching energy per braking action	3,380.0 J

Standards

Compliance with standards	CE / UL / CSA / EAC / cRUus
CE marking	EN 60034

Options

B02	Test certification (for ordered motor)
D21	M1-B for bevel and worm gearboxes
G23	Seal longer service life
G99	Version with reduced backlash
K08	Polyglycol oil CLP ISO PG VG460
N23	Standard holding brake (permanent magnet brake)
Q92	Plug position bottom
Y84	Additional data on the rating plate and on the packing label :

Info servo geared motor

Outside the standard temperature range of -10 to +40 °C, further selectable options must be observed, in addition to the lubricant selection.

Further, you have to check the suitability of the components and options used for the requested temperature range.