

Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1307-9RG53-2HP1-Z**
D01+G24+H3A+K07+N16+N24

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

Item no. :
 Consignment no. :
 Project :



Figure similar

Gearbox data	
Gear box type	FZ109
Gearbox basic type	Offset-shaft
Gearbox size	109
Transmission stages	2
Transmission (ratio)	24.82
Gear number relation	3103/125
Output moment maximum (short-time)	3,360 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	181 rpm
Emergency off output moment (1000 cycles)	5,270 Nm
Radial force maximum	21,200 N
Max. permissible radial force with Mmax	20,300 N
Moment of inertia	19.20 kgcm ²
Torsional stiffness	300 Nm/l
Efficiency	0.96
Mounting position	M1
Mounting type	Housing flange (C type)
Output shaft version	Hollow shaft S disk standard I
Output shaft dimension	HS65 mm
Gearbox flange diameter	-/-
Figure 2 torque support	-

General tech. specifications	
Degree of protection	IP65
Color of the housing	Standard painting (Anthracite RAL 7016)
Specification	CE / UL / CSA / EAC / cRUus
Net weight	153.40 kg
1m-sound pressure level L _{pA} (Tol.+3dB(A))	75
Plug position	top (default) (2)
Adapter flange position	top (default) (2)

Lubrication and sealing	
Gear oil	Polyglycol oil CLP ISO PG VG220
Output shaft sealing	Seal increased environmental load
Oil charge	8.70 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	3,000 rpm
Rated torque (100K)	23.50 Nm
Rated power	7.38 kW
Rated current (100K)	16.00 A
Static torque	45.00 Nm
Static current	29.00 A
Moment of inertia	181.60000 kgcm ²
Efficiency η	94 %
Temperature monitoring	Pt1000 temperature sensor
Connector size	1.5
Encoder system	Encoder AM20DQI with nickel-plated M17 round connector: 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	150.00 Nm
Motor current short term	109.0 A

Optimum operating point	
Optimum speed	2,640 rpm
Optimum power	7.60 kW

Recommended Motor Module	
Rated inverter current	30.0 A
Maximum inverter current	56.0 A
Maximum torque	87.0 Nm

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Holding brake	
Holding brake	reinforced brake
Holding brake version	Permanent-magnet brake
Power supply voltage	DC 24 V ± 10 %
Dynamic braking torque M _{1Br}	35.00 Nm
Holding torque M _{4Br}	85.00 Nm
Opening time	250.0 ms
Closing time	70.0 ms
Maximum switching energy per braking action	5,300.0 J

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

Options	
D01	M1 for helical and parallel shaft gearboxes
G24	Seal increased environmental load
H3A	Hollow shaft S disk standard I
K07	Polyglycol oil CLP ISO PG VG220
N16	Nickel plated connectors and paint varnish for increased chemical resistance
N24	Holding brake with increased braking torque (permanent magnet brake)

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.