

## Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1507-1RD23-1AX1-Z**  
**D11+G23+K12+N24**



Figure similar

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

Item no. :  
 Consignment no. :  
 Project :

### Gearbox data

Gear box type	K69
Gearbox basic type	Bevel geared
Gearbox size	69
Transmission stages	3
Transmission (ratio)	83.96
Gear number relation	8816/105
Output moment maximum (short-time)	635 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	54 rpm
Emergency off output moment (1000 cycles)	1,020 Nm
Radial force maximum	10,100 N
Max. permissible radial force with Mmax	9,930 N
Moment of inertia	0.65 kgcm <sup>2</sup>
Torsional stiffness	59 Nm/°
Efficiency	0.92
Mounting position	M1-A
Mounting type	Foot-mounted
Output shaft version	Solid shaft standard
Output shaft dimension	V35 x 70 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	31.89 kg
1 m-sound pressure level L <sub>pA</sub> (Tol.+3dB(A))	65
Plug position	top (default) (2)
Adapter flange position	top (default) (2)

### Lubrication and sealing

Gear oil	Poly-alpha-olefin oil CLP ISO PAO VG220
Output shaft sealing	Seal longer service life
Oil charge	0.75 l

### Motor data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
DC-link voltage, max.	270...300V
Shaft height	48 mm
Cooling	Natural cooling
Rated speed	3,000 rpm
Rated torque (100K)	2.35 Nm
Rated power	0.74 kW
Rated current (100K)	3.35 A
Static torque	2.85 Nm
Static current	3.85 A
Moment of inertia	3.77000 kgcm <sup>2</sup>
Efficiency $\eta$	89 %
Temperature monitoring	Pt1000 temperature sensor
Connector size	1
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)	9,000 rpm
Maximum torque	10.50 Nm
Motor current short term	13.8 A

### Optimum operating point

Optimum speed	3,000 rpm
Optimum power	0.74 kW

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### Recommended Motor Module

Rated inverter current	3.9 A
Maximum inverter current	7.8 A
Maximum torque	6.0 Nm

### Holding brake

Holding brake	reinforced brake
Holding brake version	Permanent-magnet brake
Power supply voltage	DC 24 V $\pm$ 10 %
Dynamic braking torque $M_{1Br}$	5.00 Nm
Holding torque $M_{4Br}$	8.00 Nm
Opening time	90.0 ms
Closing time	30.0 ms
Maximum switching energy per braking action	270.0 J

### Standards

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

### Options

D11	M1-A for bevel and worm gearboxes
G23	Seal longer service life
K12	Poly-alpha-olefin oil CLP ISO PAO VG220
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.