

## Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1603-5RE22-2HQ1-Z**  
**D22+G23+G34+G53+K08**



Figure similar

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

Item no. :  
 Consignment no. :  
 Project :

### Gearbox data

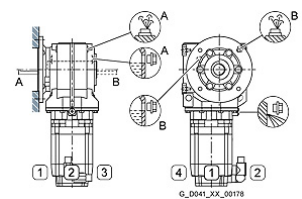
Gear box type	C49
Gearbox basic type	Helical worm gearbox
Gearbox size	49
Transmission (ratio)	30.67
Gear number relation	92/3
Output moment maximum (short-time)	400 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	147 rpm
Emergency off output moment (1000 cycles)	450 Nm
Radial force maximum	2,600 N
Max. permissible radial force with Mmax	2,470 N
Moment of inertia	0.19 kgcm <sup>2</sup>
Torsional stiffness	-/-
Efficiency	0.89
Mounting position	M2-B
Mounting type	Housing flange (C type)
Output shaft version	Hollow shaft standard
Output shaft dimension	H30 mm
Gearbox flange diameter	-/-
Output shaft bearing	No
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	23.98 kg
1 m-sound pressure level L <sub>pA</sub> (Tol.+3dB(A))	70
Plug position	top (default) (2)
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	1.92 l



### Motor data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
DC-link voltage, max.	510...720V
Shaft height	63 mm
Cooling	Natural cooling
Rated speed	2,000 rpm
Rated torque (100K)	6.20 Nm
Rated power	1.30 kW
Rated current (100K)	2.40 A
Static torque	7.50 Nm
Static current	2.75 A
Moment of inertia	11.20 kgcm <sup>2</sup>
Efficiency η	91 %
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)	7,200 rpm
Maximum torque	26.00 Nm
Motor current short term	10.9 A

### Optimum operating point

Optimum speed	2,000 rpm
Optimum power	1.30 kW

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### Recommended Motor Module

Rated inverter current	3.0 A
Maximum inverter current	9.0 A
Maximum torque	22.9 Nm

### Standards

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

### Options

D22	M2-B for bevel and worm gearboxes
G23	Seal longer service life
G34	Oil inspection glass
G53	Oil drain plug magnetic
K08	Polyglycol oil CLP ISO PG VG460

### 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.