

Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1603-6UD43-4HU1-Z**
D11+G23+K08+N23



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 geared C
Gearbox size	49
Transmission (ratio)	49.87
Gear number relation	748/15
Output moment maximum (short-time)	320 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	90 rpm
Emergency off output moment (1000 cycles)	450 Nm
Radial force maximum	4,190 N
Max. permissible radial force with Mmax	4,190 N
Moment of inertia	0.08 kgcm ²
Torsional stiffness	-/-
Efficiency	0.89
Mounting position	M1-A
Mounting type	Housing flange (C type)
Output shaft version	Hollow shaft standard II
Output shaft dimension	H35 mm
Gearbox flange diameter	-/-
Output shaft bearing	No
Figure 2 torque support	-

General tech. specifications

Color of the housing	Standard painting (Anthracite RAL 7016)
Specification	CE / UL / CSA / EAC / cRUus
Net weight	22.76 kg
1m-sound pressure level L _{pA} (Tol.+3dB(A))	65
Plug position	top (default) (2)
Adapter flange position	top (default) (2)

Lubrication and sealing

Gear oil	Synthetic oil CLP PG VG460
Output shaft sealing	Seal longer service life
Oil charge	0.60 l

Motor data

Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
DC-link voltage, max.	510...720V
Shaft height	48 mm
Cooling	Natural cooling
Rated speed	3,000 rpm
Rated torque (100K)	3.20 Nm
Rated power	1.01 kW
Rated current (100K)	3.15 A
Static torque	4.05 Nm
Static current	3.80 A
Moment of inertia	1.62000 kgcm ²
Efficiency η	91 %
Temperature monitoring	Pt1000 temperature sensor
Connector size	1
Degree of protection	IP65
Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)

Limiting data

Maximum speed (short-time)	9,000 rpm
Maximum torque	11.30 Nm
Motor current short term	10.4 A

Optimum operating point

Optimum speed	3,000 rpm
Optimum power	1.01 kW

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Recommended Motor Module

Rated inverter current	5.0 A
Maximum inverter current	15.0 A
Maximum torque	11.3 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}	3.00 Nm
Holding torque M_{4Br}	4.00 Nm
Opening time	70.0 ms
Closing time	30.0 ms
Maximum switching energy per braking action	150.0 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
K08	Polyglycol oil CLP ISO PG VG460
N23	Standard holding brake (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.