

Data sheet for SIMOTICS S-1FG1

Article No. : **1FG1510-1TG52-2AP1-Z**
D11+K06+N23



Figure similar

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

Item no. :
 Consignment no. :
 Project :

Gearbox data

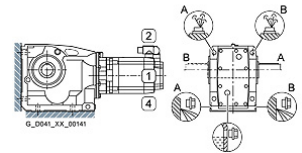
| | |
|---|------------------------|
| Gear box type | K89 |
| Gearbox basic type | Bevel geared B / K |
| Gearbox size | 89 |
| Transmission stages | 3 |
| Transmission (ratio) | 31.03 |
| Gear number relation | 37975/1224 |
| Output moment maximum (short-time) | 1,610 Nm |
| max. input speed (briefly) | 4,500 rpm |
| Output speed short-time | 145 rpm |
| Emergency off output moment (1000 cycles) | 2,720 Nm |
| Radial force maximum | 18,100 N |
| Max. permissible radial force with Mmax | 18,100 N |
| Moment of inertia | 2.40 kgcm ² |
| Torsional stiffness | 143 Nm/° |
| Efficiency | 0.95 |
| Mounting position | M1-A |
| Mounting type | Foot-mounted |
| Output shaft version | Solid shaft standard |
| Output shaft dimension | V50 x 100 mm |
| Gearbox flange diameter | -/- |
| Figure 2 torque support | - |

General tech. specifications

| | |
|---|---|
| Color of the housing | Standard painting (Anthracite RAL 7016) |
| Specification | CE / UL / CSA / EAC / cRUus |
| Net weight | 110.01 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 | Mineral oil CLP VG220 |
| Output shaft sealing | Standard |
| Oil charge | 1.80 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) | 34.00 Nm |
| Rated power | 7.12 kW |
| Rated current (100K) | 14.80 A |
| Static torque | 45.00 Nm |
| Static current | 19.00 A |
| Moment of inertia | 162.00000 kgcm ² |
| Efficiency η | 93 % |
| Temperature monitoring | Pt1000 temperature sensor |
| Connector size | 1.5 |
| Degree of protection | IP65 |
| Encoder system | Resolver 2-pole |

Limiting data

| | |
|----------------------------|-----------|
| Maximum speed (short-time) | 5,000 rpm |
| Maximum torque | 150.00 Nm |
| Motor current short term | 71.0 A |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 2,000 rpm |
| Optimum power | 7.10 kW |

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Recommended Motor Module

| | |
|--------------------------|----------|
| Rated inverter current | 30.0 A |
| Maximum inverter current | 56.0 A |
| Maximum torque | 126.0 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 |
| Rated current | 1.0 A |
| 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

- D11 M1-A for bevel and worm gearboxes
- K06 Mineral oil CLP ISO VG220
- 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.