

## Data sheet for SIMOTICS S-1FG1

Article No. : 1FG1502-9RF42-2DR1-Z  
D11+H3A+K07

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

Item no. :  
Consignment no. :  
Project :

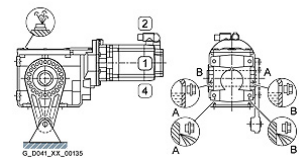


Figure similar

| Gearbox data                              |                                |
|-------------------------------------------|--------------------------------|
| Gear box type                             | B39                            |
| Gearbox basic type                        | Bevel geared B / K             |
| Gearbox size                              | 39                             |
| Transmission stages                       | 2                              |
| Transmission (ratio)                      | 25.00                          |
| Gear number relation                      | 25/1                           |
| Output moment maximum (short-time)        | 250 Nm                         |
| max. input speed (briefly)                | 4,500 rpm                      |
| Output speed short-time                   | 180 rpm                        |
| Emergency off output moment (1000 cycles) | 425 Nm                         |
| Radial force maximum                      | 6,980 N                        |
| Max. permissible radial force with Mmax   | 6,980 N                        |
| Moment of inertia                         | 0.25 kgcm <sup>2</sup>         |
| Torsional stiffness                       | 40 Nm/°                        |
| Efficiency                                | 0.94                           |
| Mounting position                         | M1-A                           |
| Mounting type                             | Torque plate                   |
| Output shaft version                      | Hollow shaft S disk standard I |
| Output shaft dimension                    | HS35 mm                        |
| Gearbox flange diameter                   | -/-                            |
| Output shaft bearing                      | No                             |
| Figure 2 torque support                   | 1                              |

| General tech. specifications                          |                                         |
|-------------------------------------------------------|-----------------------------------------|
| Color of the housing                                  | Standard painting (Anthracite RAL 7016) |
| Specification                                         | CE / UL / CSA / EAC / cRUus             |
| Net weight                                            | 29.66 kg                                |
| 1m-sound pressure level L <sub>pA</sub> (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    | Standard                        |
| Oil charge              | 0.50 l                          |



| Motor data             |                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor type             | Permanent-magnet synchronous motor                                                                                                                |
| Motor type             | Compact                                                                                                                                           |
| DC-link voltage, max.  | 510...720V                                                                                                                                        |
| Shaft height           | 80 mm                                                                                                                                             |
| Cooling                | Natural cooling                                                                                                                                   |
| Rated speed            | 2,000 rpm                                                                                                                                         |
| Rated torque (100K)    | 13.90 Nm                                                                                                                                          |
| Rated power            | 2.91 kW                                                                                                                                           |
| Rated current (100K)   | 6.30 A                                                                                                                                            |
| Static torque          | 18.70 Nm                                                                                                                                          |
| Static current         | 8.00 A                                                                                                                                            |
| Moment of inertia      | 32.50 kgcm <sup>2</sup>                                                                                                                           |
| Efficiency η           | 93 %                                                                                                                                              |
| Temperature monitoring | Pt1000 temperature sensor                                                                                                                         |
| Connector size         | 1                                                                                                                                                 |
| Degree of protection   | IP65                                                                                                                                              |
| 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) | 6,000 rpm |
| Maximum torque             | 61.00 Nm  |
| Motor current short term   | 28.5 A    |

| Optimum operating point |           |
|-------------------------|-----------|
| Optimum speed           | 2,000 rpm |
| Optimum power           | 2.90 kW   |



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| Recommended Motor Module |         |
|--------------------------|---------|
| Rated inverter current   | 9.0 A   |
| Maximum inverter current | 27.0 A  |
| Maximum torque           | 58.4 Nm |

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

| Options |                                   |
|---------|-----------------------------------|
| D11     | M1-A for bevel and worm gearboxes |
| H3A     | Hollow shaft S disk standard I    |
| K07     | Polyglycol oil CLP ISO PG VG220   |

**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.