

Article No. : 1FG1603-3RF52-4AC2-Z
D14+G23+K12+N23

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

Item no. :
Consignment no. :
Project :

Figure similar

Gearbox data	
Gear box type	C49
Gearbox basic type	Helical worm geared C
Gearbox size	49
Transmission (ratio)	91.93
Gear number relation	1287/14
Output moment maximum (short-time)	365 Nm
max. input speed (briefly)	4,500 rpm
Output speed short-time	49 rpm
Emergency off output moment (1000 cycles)	470 Nm
Radial force maximum	6,180 N
Max. permissible radial force with Mmax	6,030 N
Moment of inertia	0.30 kgcm²
Torsional stiffness	-/-
Efficiency	0.74
Mounting position	M4-A
Mounting type	Foot-mounted
Output shaft version	Solid shaft standard III
Output shaft dimension	V40 x 80 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	42.34 kg
1m-sound pressure level LpA (Tol.+3dB(A))	75
Plug position	top (default) (2)
Adapter flange position	top (default) (2)

Lubrication and sealing	
Gear oil	Synthetic oil CLP PAO VG220
Output shaft sealing	Seal longer service life
Oil charge	1.80 l

Motor data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
DC-link voltage, max.	510...720V
Shaft height	80 mm
Cooling	Natural cooling
Rated speed	2,000 rpm
Rated torque (100K)	14.80 Nm
Rated power	3.10 kW
Rated current (100K)	9.80 A
Static torque	20.00 Nm
Static current	12.50 A
Moment of inertia	25.50000 kgcm²
Efficiency η	92 %
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	65.00 Nm
Motor current short term	51.0 A

Optimum operating point	
Optimum speed	2,000 rpm
Optimum power	3.10 kW

Recommended Motor Module	
Rated inverter current	18.0 A
Maximum inverter current	54.0 A
Maximum torque	65.0 Nm

Data sheet for SIMOTICS S-1FG1

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Holding brake	
Holding brake	with holding brake
Holding brake version	Permanent-magnet brake
Power supply voltage	DC 24 V ± 10 %
Dynamic braking torque M _{1Br}	11.00 Nm
Holding torque M _{4Br}	22.00 Nm
Rated current	0.9 A
Opening time	200.0 ms
Closing time	60.0 ms
Maximum switching energy per braking action	1,400.0 J

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

Options	
D14	M4-A for bevel and worm gearboxes
G23	Seal longer service life
K12	Poly-alpha-olefin oil CLP ISO PAO 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.