



Figure similar

Article No. : **1FK2103-4AH11-2MA0-Z**
B22+M01+R32

Client order no. :
 Order no. :
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Item no. :
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 Project :

Basic data of geared motor

Motor type	Permanent-magnet synchronous motor, Planetary gearbox, Natural cooling, Degree of protection IP64/IP65
Motor type	High Dynamic
Static torque at output $M_{2,0}$	32.50 Nm
Static current I_0	1.7 A
Maximum torque at output $M_{2max}^{1)}$	53.00 Nm
Maximum output speed n_{2max}	250 rpm
Moment of inertia motor + gearbox (related to the input) J_1	0.225 kgcm ²
Mass m	3.71 kg
Lubrication	Standard

Rated data of geared motor

SINAMICS S210, 3AC 400V

Rated speed related to the gear output n_{2N}	100 rpm
Rated torque related to the gear output M_{2N}	23.00 Nm
Rated power P_N	0.241 kW

Basic data of gearbox

Gearbox type and size	Planetary gearbox NRK070
Transmission ratio i	1 : 32 (Output to input)
Number of gear stages z	2
Output torque (fatigue strength) $M_{2N,G}$	33.0 Nm
Maximum permissible output torque (short-time, end of fatigue strength) $M_{2max,G}^{2)}$	53.0 Nm
Emergency off output moment (1000 cycles) $M_{2Em,Off}$	88.0 Nm
Torsional backlash related to the output φ_2	12'
Torsional stiffness related to the output c_{T2}	5.1 Nm/l
Maximum static radial force $F_{R,max}$	1,650 N
Max. average radial force for 20000 h $F_{R,eq}^{20k^3)}$	1,050 N
Maximum static axial force $F_{A,max}$	2,100 N
Max. average axial force for 20000 h $F_{A,eq}^{20k^4)}$	1,350 N
Max. average breakdown torque M_K	Nm
Max. bending moment on the flange to the motor M_B	12 Nm
Efficiency η_G	0.94
Degree of protection gearbox	IP64
Gearbox shaft end	Fitted key

Basic motor data

Maximum average torque (incl. derating due to mounted gearing) $M_{0,M}$	1.03 Nm
Maximum average continuous current (incl. derating due to mounted gearing) $I_{0,M}$	1.36 A
Maximum acceleration torque $M_{max,M}^{2)}$	3.90 Nm
Maximum short-time permissible current $I_{max,M}$	7.10 A
Degree of protection motor	IP65
Connection type	OCC for S210
Connector size	M17
Encoder system	Encoder AM22DQC: Absolute encoder 22 bit + 12 bit multitrack
Color of the housing	Standard (Anthracite, similar to RAL 7016)

Holding brake

Holding torque	1.30 Nm
Average dynamic torque	1.30 Nm
Opening time	40 ms
Closing time	30 ms
Maximum single switching energy ⁵⁾	62 J
Service life, operating energy	17,500 J
Holding current ⁶⁾	0.15 A
Break-induced current for 500 ms ⁶⁾	0.8 A

¹⁾ Fatigue limit range - for max. 30 000 revolutions of the output shaft, utilization only with service life calculation

²⁾ The maximum acceleration torque $M_{max,M}$ x of transmission ratio i is greater than the maximum permitted output torque (short-time fixed) $M_{2max,G}$. Depending on the load conditions, a torque limitation and service life calculation may be necessary.

³⁾ based on an output speed of 100 rpm and a force application point in the center of the shaft

⁴⁾ based on an output speed of 100 rpm

⁵⁾ Up to three consecutive emergency stops and up to 25% of all emergency stops as a W_{max} high energy stop possible.

⁶⁾ Typical value for 20°C ambient temperature. At -15°C the break-induced currents can be increased by up to 30%.