SIEMENS

Data sheet for SIMOTICS S-1FK2

Figure similar

Article No. : 1FK2104-5AK00-0MA0-Z
A41+M01+R10

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

Item no. :
Consignment no. :
Project :

Basic data of geared motor	
Motor type	Permanent-magnet synchronous motor, Planetary gearbox, Natural cooling, Degree of protection IP64
Motor type	High Dynamic
Static torque at output $M_{2,0}$	21.50 Nm
Static current I_0	4.4 A
Maximum torque at output M_{2max}	72.00 Nm
Maximum output speed n_{2max}	650 rpm
Moment of inertia motor + gearbox (related to the input) J_1	1.938 kgcm²
Mass m	8.74 kg
Lubrication	Standard

Rated data of geared motor	
SINAMICS S210, 1AC 230V	
Rated speed related to the gear output n_{2N}	250 rpm
Rated torque related to the gear output M_{2N}	20.00 Nm
Rated power P_N	0.524 kW

Basic data of gearbox	
Gearbox type and size	Planetary gearbox NRB120
Transmission ratio i	1 : 10 (Output to input)
Number of gear stages z	1
Output torque (fatigue strength) $M_{2N,G}$	95.0 Nm
Maximum permissible output torque (short-time, end of fatigue strength) $M_{2max,G}$	152.0 Nm
Emergency off output moment (1000 cycles) $M_{2Em.Off}$	480.0 Nm
Torsional backlash related to the output φ_2	7 '
Torsional stiffness related to the output c_{T2}	16.4 Nm/'
Maximum static radial force $F_{R\,max}$	2,000 N
Max. average radial force for 20000 h $F_{R\,eq\,20k}$ [4]	1,750 N
Maximum static axial force $F_{A\,max}$	3,800 N
Max. average axial force for 20000 h $F_{A\,eq\,20k}$ [5]	2,500 N
Max. average breakdown torque M_K	101 Nm
Max. bending moment on the flange to the motor M_B	40 Nm
Efficiency η_G	0.97
Degree of protection gearbox	IP64
Gearbox shaft extension	Fitted key

Basic motor data	
Maximum average torque (incl. derating due to mounted gearing) $M_{0,M}$	2.15 Nm
Maximum average continuous current (incl. derating due to mounted gearing) $I_{0,M}$	3.94 A
Maximum acceleration torque $M_{max,M}$	7.28 Nm
Maximum short-time permissible current $I_{max,M}$	16.00 A
Degree of protection motor	IP64
Connection type	OCC for S210
Connector size	M17
Encoder system	Encoder AM22DQC: Absolute encoder 22 bit + 12 bit multiturn

[4] based on an output speed of 100 rpm and a force application point in the center of the shaft
[5] based on an output speed of 100 rpm