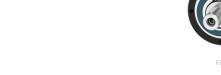
SIEMENS

Data sheet for SIMOTICS S-1FK2

Article No.: 1FK2104-4AF00-2SB0-Z B22+M01+R20

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





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 $M_{2,0}$	23.50 Nm	
Static current I ₀	1.2 A	
Maximum torque at output $M_{2max}^{1)}$	53.00 Nm	
Maximum output speed $n_{2\text{max}}$	360 rpm	
Moment of inertia motor + gearbox (related to the input) $ J_1 $	0.447 kgcm²	
Mass m	3.76 kg	
Lubrication	Standard	

	1 ' '				
N	lass m	3.76 kg			
Lubrication		Standard			
	Rated data of geared motor				
SINAMICS S120, BLM/SLM 3AC 400V					
	Rated speed related to the gear output n_{2N}	150 rpm			
	Rated torque related to the gear output M_{2N}	19.90 Nm			
	Rated power P _N	0.313 kW			

Basic data of gearbox				
Gearbox type and size	Planetary gearbox NRK070			
Transmission ratio i	1 : 20 (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) $M_{2\text{max},G}^{(2)}$	53.0 Nm			
Emergency off output moment (1000 cycles) $M_{2Em.Off}$	88.0 Nm			
Torsional backlash related to the output $\;\phi_2\;$	12'			
Torsional stiffness related to the output c_{T2}	5.7 Nm/'			
Maximum static radial force F_{Rmax}	1,650 N			
Max. average radial force for 20000 h $\rm F_{Req}$ $_{\rm 20k}^{\rm 3)}$	1,050 N			
Maximum static axial force $F_{A max}$	2,100 N			
Max. average axial force for 20000 h $\;F_{Aeq}^{}$ $_{20k}^{4)}$	1,350 N			
Max. average breakdown torque M_K	42 Nm			
$\mbox{Max.}$ bending moment on the flange to the motor $\mbox{ M}_{\mbox{\scriptsize B}}$	12 Nm			
Efficiency η_G	0.95			
Degree of protection gearbox	IP64			
Gearbox shaft end	Fitted key			

Basic motor data		
Maximum average torque (incl. derating due to mounted gearing) $M_{0,M}$	1.18 Nm	
Maximum average continuous current (incl. derating due to mounted gearing) $ I_{0,M} $	1.11 A	
Maximum acceleration torque $M_{\text{max},M}^{2}$	3.58 Nm	
	4.20 A	
Degree of protection motor	IP64	
Connection type	Double cable connection for S120	
Connector size	M17	
Encoder system	Encoder AS22DQC: Absolute encoder single turn 22 bit	
Color of the housing	Standard (Anthracite, similar to RAL 7016)	

Item no. :

Project :

 $Consignment\ no.:$

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