



General gearbox data	Character	Unit	
Planetary gearbox – gearing type	-	-	Helical teeth
Rotation direction	-	-	Input and output in the same direction
Number of stages	p	-	1-stage
Output shaft bearing	-	-	Inclined roller bearings
Service life (L10h)	t <sub>L</sub>	h	20.000
Max. operating temperature	T <sub>min</sub> / T <sub>max</sub>	°C	-25 / +90
Protection class	-	-	IP 65
Lubrication (Lifetime lubrication)	-	-	Standard lubrication (Castrol Optigear Synthetic 800/220)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	M <sub>b</sub>	Nm	18
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,015 / 0,04 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	L <sub>20 min</sub>	mm	15
Reference operating mode	-	-	S1
Reference operating factor	K <sub>A</sub>	-	1
Reference speed	n <sub>2</sub>	rpm	100
Reference ambient temperature	T <sub>Amb</sub>	°C	20
Radial force for output bearing based on shaft end after L10h=20,000h with Fa=0N	F <sub>r 20.000h</sub>	N	2150
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	F <sub>a 20.000h</sub>	N	4300
Radial force for output bearing based on shaft end after L10h=30,000h with Fa=0N	F <sub>r 30.000h</sub>	N	1900
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	F <sub>a 30.000h</sub>	N	3800
Maximum radial force based on shaft end and T2=0Nm	F <sub>r Max</sub>	N	2150
Maximum axial force based on gearbox axis and T2=0Nm	F <sub>a Max</sub>	N	4300

(1) Max. motor weight\* in kg =

0,2 x M<sub>b</sub>

motor length in m

- \* with symmetrically distributed motor weight
- \* with horizontal and stationary mounting

Ratio-dependent gearbox data	Character	Unit					
Ratio	aii	-	4	5	7	8	10
Nominal output torque	T <sub>2N</sub>	Nm	39	40	37	39	28
Max. output torque for 30,000 output shaft rotations	T <sub>2max</sub>	Nm	62	64	59	62	45
Emergency stop torque permitted 1000 times	T <sub>2Stop</sub>	Nm	120	130	80	90	90
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T <sub>0</sub>	Nm	0,65	0,5	0,35	0,3	0,25
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n <sub>1N 50%</sub>	rpm	3200	3800	4500	4500	4500
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n <sub>1N 100%</sub>	rpm	3000	3600	4500	4500	4500
Max. mechanical input speed Operating temperature may not be exceeded!	n <sub>1 Limit</sub>	rpm	14000	14000	14000	14000	14000
Torsional backlash based on output shaft	j <sub>t</sub>	arcmin	< 3	< 3	< 3	< 3	< 3
Torsional stiffness based on output shaft	c <sub>g</sub>	Nm/arcmin	10,8	11,8	9,4	10,7	8,2
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	97	97	96	96	95
Running noise at n1=3,000 rpm without load at a distance of 1m	Q <sub>g</sub>	dB(A)	57	57	57	57	57
Gearbox weight	m <sub>G</sub>	kg	1,35	1,35	1,35	1,35	1,4
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	0,188	0,161	0,139	0,135	0,128



PSFN064-aii-SSSD3AC-Z(D20)  
/(L20)/(D 21)/(D 22)/B5/(G3)