

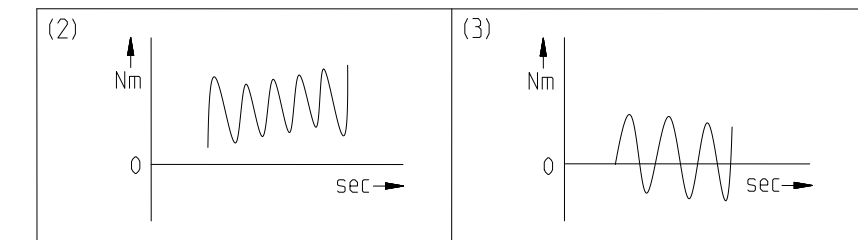


General gearbox data	Character	Unit	
Planetary gearbox - gearing type	-	-	Straight teeth
Rotation direction	-	-	Input and output in the same direction
Number of stages	p	-	1-stage
Output shaft bearing	-	-	Deep groove ball bearing
Service life (L10h)	$t_L$	h	30.000
Max. operating temperature	$T_{min} / T_{max}$	°C	-25 / +90
Protection class	-	-	IP 54
Lubrication (lifetime lubrication)	-	-	Standard lubrication (Klübersynth GE 14-112)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	$M_b$	Nm	4,5
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,03 / 0,06 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20 min}$	mm	17,5
Reference operating mode	-	-	S1
Reference operating factor	$K_A$	-	1
Reference speed	$n_2$	rpm	100
Reference ambient temperature	$T_{Amb}$	°C	20
Radial force for output bearing based on shaft center after L10h=20,000h with Fa=0N	$F_r 20.000h$	N	200
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	$F_a 20.000h$	N	200
Radial force for output bearing based on shaft center after L10h=30,000h with Fa=0N	$F_r 30.000h$	N	160
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	$F_a 30.000h$	N	160
Maximum radial force based on shaft center and T2=0Nm	$F_r Max$	N	200
Maximum axial force based on gearbox axis and T2=0Nm	$F_a Max$	N	240

Ratio-dependent gearbox data	Character	Unit							
Ratio	aii	-	3	4	5	7	8	10	
Nominal output torque No alternating torque (2)	$T_{2N}$	Nm	11	15	14	8,5	6	5	
Nominal output torque Alternating torque permitted for 10,000,000 load changes (3)	$T_{2N 10Mio}$	Nm	9	9	9	8,5	6	5	
Nominal output torque Alternating torque permitted for 100,000,000 load changes (3)	$T_{2N 100Mio}$	Nm	7	7	7	7	6	5	
Max. output torque for 30,000 output shaft rotations (2)	$T_{2max}$	Nm	17,5	24	22	13,5	10	8	
Emergency stop torque permitted 1000 times	$T_{2stop}$	Nm	22,5	30	36	26	27	27	
Average idle torque for $n_1=3,000$ rpm and 20 °C gearbox temperature	$T_0$	Nm	0,05	0,05	0,05	0,05	0,05	0,05	
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N 50\%}$	rpm	5000	5000	5000	5000	5000	5000	
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N 100\%}$	rpm	5000	5000	5000	5000	5000	5000	
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1 Limit}$	rpm	18000	18000	18000	18000	18000	18000	
Torsional backlash based on output shaft	$j_t$	arcmin	< 15	< 15	< 15	< 15	< 15	< 15	
Torsional stiffness based on output shaft	$c_g$	Nm/arcmin	0,65	0,85	0,9	0,8	0,8	0,75	
Efficiency at T2N, gearbox temperature 70 °C and $n_1=1,000$ rpm	$\eta$	%	98	98	98	97	96	95	
Running noise at $n_1=3,000$ rpm without load at a distance of 1m	$Q_g$	dB(A)	58	58	58	58	58	58	
Gearbox weight	$m_G$	kg	0,35	0,35	0,35	0,35	0,35	0,35	
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	0,033	0,027	0,025	0,023	0,022	0,022	

$$(1) \text{ Max. motor weight* in kg} = \frac{0,2 \times M_b}{\text{motor length in m}}$$

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



Subject to modifications.



PLE040-aii-SSSA3AB-Y(D20)  
/(L20)/(D21)/(D22)/B5/(G3)

Sheet 2/2

Revision status: L from: 07/2022