

8GA50-070 standard

Technical data



8GA50-070hh003klmm
 8GA50-070hh004klmm
 8GA50-070hh005klmm
 8GA50-070hh008klmm
 8GA50-070hh010klmm
 8GA50-070hh009klmm
 8GA50-070hh012klmm
 8GA50-070hh015klmm
 8GA50-070hh016klmm
 8GA50-070hh020klmm
 8GA50-070hh025klmm
 8GA50-070hh032klmm
 8GA50-070hh040klmm
 8GA50-070hh064klmm
 8GA50-070hh100klmm

Gearbox

Number of gear stages	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Gear ratio i	3	4	5	8	10	9	12	15	16	20	25	32	40	64	100
Nominal output torque T_{2N} [Nm]	14	19	24	18	15	33	33	33	33	33	30	33	30	18	15
Max. output torque T_{2max} [Nm]	22	30	38	29	24	53	53	53	53	53	48	53	48	29	24
E-stop torque T_{2stop} [Nm]	66	86	80	80	70	88	88	88	88	88	80	88	80	80	80
Idle torque [Nm] at 20°C and 3000 rpm	0.5	0.4	0.35	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.2	0.2	0.2	0.2	0.2
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	4200	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	3300	3500	3600	4500	4500	4000	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. drive speed n_{1max} [rpm]	13000														
Max. backlash J_1 [arcmin]	16	16	16	16	16	18	18	18	18	18	18	18	18	18	18
Reduced backlash J_1 [arcmin] less than	0														
Torsional rigidity C_{t21} [Nm/arcmin]	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force Fr_{max} [N] for 30,000 h	900														
Max. radial force Fr_{max} [N] for 20,000 h	1050														
Max. axial force Fa_{max} [N] for 30,000 h	1000														
Max. axial force Fa_{max} [N] for 20,000 h	1350														
Operating noise L_{pA} [dB(A)]	70														
Efficiency at full load η [%]	94	94	94	94	94	92	92	92	92	92	92	92	92	92	92
Min. operating temperature $B_{Tempmin}$ [°C]	-25														
Max. operating temperature $B_{Tempmax}$ [°C]	90														
Mounting orientation	Any														
Protection	IP54														
Weight m [kg]	2.3	2.3	2.3	2.3	2.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Moment of inertia J_1 [kgcm ²]	0.157	0.106	0.086	0.068	0.066	0.133	0.128	0.078	0.089	0.076	0.075	0.064	0.064	0.064	0.064

NOTE – Output torque / Max. output torque: This refers to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!

NOTE – E-stop torque: Approved for 1000x

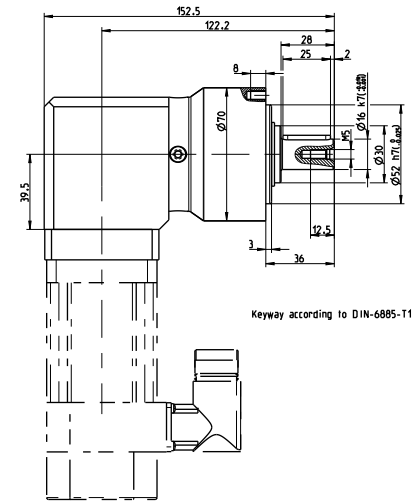
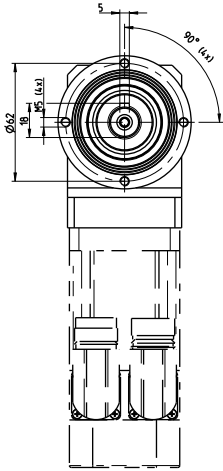
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of $n_1 = 3000$ rpm without a load; $i = 5$

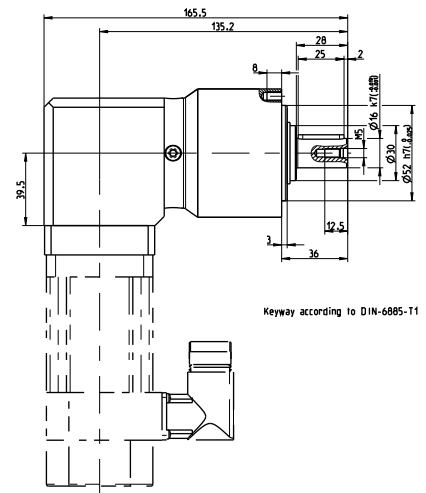
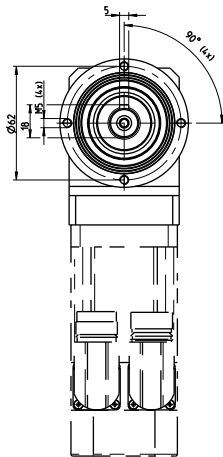
NOTE – Operating temperature: With reference to the middle of the housing surface

NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

1-stage gear



2-stage gear



Adapter flange - Overview of dimensions

The flange length L completes the diagram for determining the gearbox length.

8GA50-070	8LSA2	8LSA3	8LVA2	8JSA2	8JSA3	80MPD	80MPF	80MPH
Flange length L [mm]	17.1	23.1	23.1	16.1	23.1	16.1	16.1	25.1
Flange diameter Q [mm]	60	90	60	60	70	60	60	80