

8GA50-050 standard

Technical data



8GA50-050hh003klmm
 8GA50-050hh004klmm
 8GA50-050hh005klmm
 8GA50-050hh008klmm
 8GA50-050hh010klmm
 8GA50-050hh009klmm
 8GA50-050hh012klmm
 8GA50-050hh015klmm
 8GA50-050hh016klmm
 8GA50-050hh020klmm
 8GA50-050hh025klmm
 8GA50-050hh032klmm
 8GA50-050hh040klmm
 8GA50-050hh064klmm
 8GA50-050hh100klmm

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]	4.5	6	7.5	6	5	12	15	13	15	15	13	15	13	7.5	5
Max. output torque T_{2max} [Nm]	7	10	12	10	8	19	24	21	24	24	21	24	21	12	8
E-stop torque T_{2stop} [Nm]	23	28	35	27	25	33	40	36	40	40	36	40	36	27	27
Idle torque [Nm] at 20°C and 3000 rpm	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Max. average drive speed $n_{1N50\%}$ [rpm] at 50% T_{2N} and S1	5000														
Max. average drive speed $n_{1N100\%}$ [rpm] at 100% T_{2N} and S1	5000														
Max. drive speed n_{1max} [rpm]	18000														
Max. backlash J_1 [arcmin]	21	21	21	21	21	25	25	25	25	25	25	25	25	25	25
Reduced backlash J_1 [arcmin] less than	0														
Torsional rigidity C_{t21} [Nm/arcmin]	0.7	0.7	0.7	0.7	0.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Tilting rigidity C_{2K} [Nm/arcmin]	0														
Max. breakdown torque M_{2Kmax} [Nm]	0														
Max. radial force F_{rmax} [N] for 30,000 h	700														
Max. radial force F_{rmax} [N] for 20,000 h	800														
Max. axial force F_{amax} [N] for 30,000 h	800														
Max. axial force F_{amax} [N] for 20,000 h	1000														
Operating noise L_{pA} [dB(A)]	68														
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]	0.86	0.86	0.86	0.86	0.86	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Moment of inertia J_1 [kgcm ²]	0.031	0.022	0.019	0.017	0.016	0.03	0.029	0.023	0.022	0.019	0.019	0.017	0.016	0.016	0.016

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

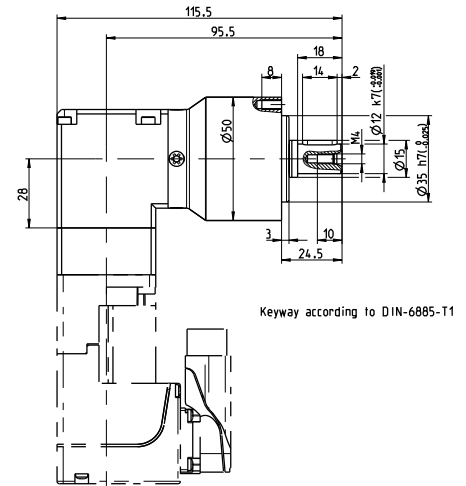
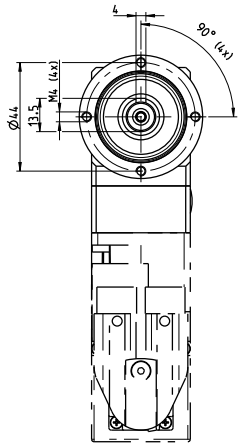
NOTE – Axial / radial force: With reference to the middle of the output shaft; the entries refer to an output shaft speed of $n_2 = 100$ rpm and application factor $K_A = 1$ as well as S1 operating mode for electrical machines and $T = 30^\circ\text{C}$

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

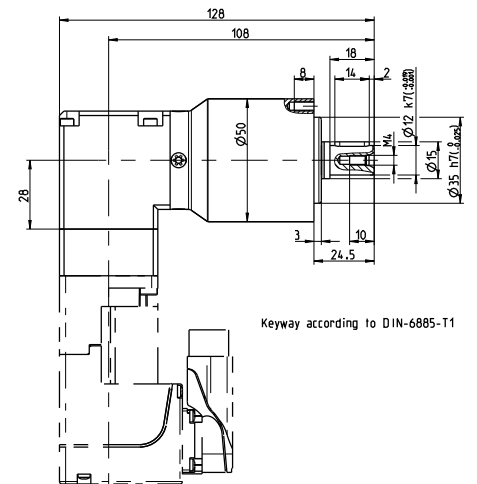
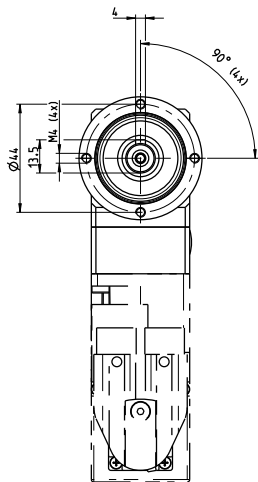
NOTE – Operating temperature: With reference to the middle of the housing surface

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.

8GA50-050	8LSA2	8LVA1	8JSA2	80MPD	80MPF
Flange length L [mm]	19	19	19	15	15
Flange diameter Q [mm]	60	40	60	60	60