8GA40-040 standard

Technical data

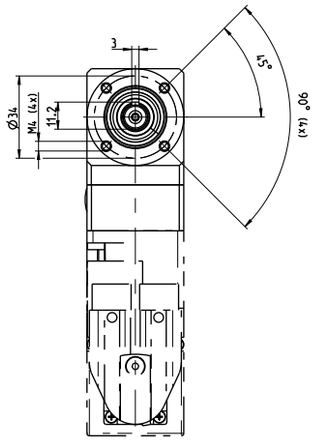
	8GA40-040hh003klmm	8GA40-040hh004klmm	8GA40-040hh005klmm	8GA40-040hh008klmm	8GA40-040hh010klmm	8GA40-040hh009klmm	8GA40-040hh012klmm	8GA40-040hh015klmm	8GA40-040hh016klmm	8GA40-040hh020klmm	8GA40-040hh025klmm	8GA40-040hh032klmm	8GA40-040hh040klmm	8GA40-040hh064klmm	8GA40-040hh100klmm
Gearbox															
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	16.5	20	18	20	20	18	20	18	7.5	5
Max. output torque T_{2max} [Nm]	7	10	12	10	8	26	32	29	32	32	29	32	29	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								0.1							
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_t [arcmin]	21	21	21	21	21	25	25	25	25	25	25	25	25	25	25
Reduced backlash J_t [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 Fr_{max} [N] for 30,000 h								160							
Max. radial force Fr_{max} [N] for 20,000 h								200							
Max. axial force Fa_{max} [N] for 30,000 h								160							
Max. axial force Fa_{max} [N] for 20,000 h								200							
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]	0.51	0.51	0.51	0.51	0.51	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Moment of inertia J_1 [kgcm^2]	0.044	0.035	0.032	0.03	0.03	0.043	0.042	0.036	0.035	0.032	0.032	0.03	0.029	0.029	0.029

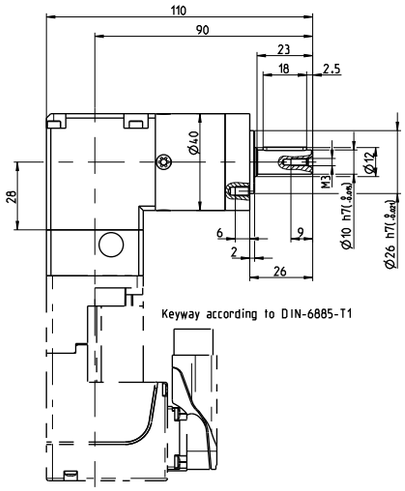
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

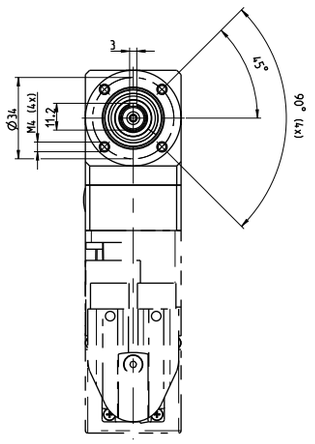
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

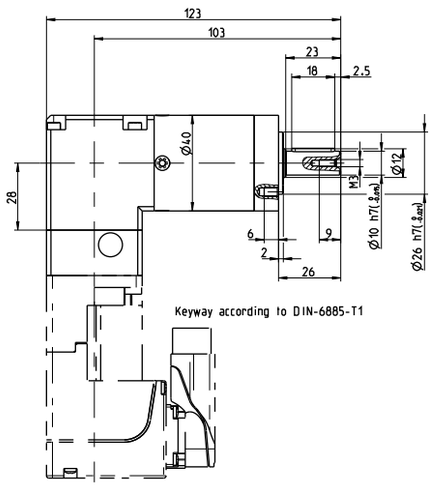
1-stage gear





2-stage gear





Adapter flange - Overview of dimensions

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

8GA40-040	8LSA2	8LVA1	8JSA2	80MPD	80MPF
Flange length L [mm]	19	19	19	15	15
Flange diameter Q [mm]	60	40	60	60	60

8GA40-040 standard

Technical data

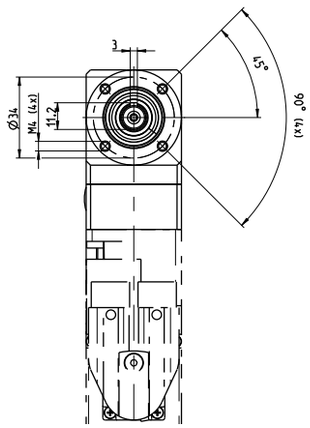
	8GA40-040hh060klmm	8GA40-040hh080klmm	8GA40-040hh120klmm	8GA40-040hh160klmm	8GA40-040hh200klmm	8GA40-040hh256klmm	8GA40-040hh320klmm	8GA40-040hh512klmm
Gearbox								
Number of gear stages	3							
Gear ratio i	60	80	120	160	200	256	320	512
Nominal output torque T_{2N} [Nm]	20	20	18	20	18	20	18	7.5
Max. output torque T_{2max} [Nm]	32	32	29	32	29	32	29	12
E-stop torque T_{2stop} [Nm]	40	40	36	40	36	40	36	27
Idle torque [Nm] at 20°C and 3000 rpm	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_t [arcmin]	28							
Reduced backlash J_t [arcmin] less than	0							
Torsional rigidity C_{t21} [Nm/arcmin]	1							
Tilting rigidity C_{2K} [Nm/arcmin]	0							
Max. breakdown torque M_{2Kmax} [Nm]	0							
Max. radial force Fr_{max} [N] for 30,000 h	160							
Max. radial force Fr_{max} [N] for 20,000 h	200							
Max. axial force Fa_{max} [N] for 30,000 h	160							
Max. axial force Fa_{max} [N] for 20,000 h	200							
Operating noise L_{PA} [dB(A)]	68							
Efficiency at full load ŋ [%]	88							
Min. operating temperature $B_{Tempmin}$ [°C]	-25							
Max. operating temperature $B_{Tempmax}$ [°C]	90							
Mounting orientation	Any							
Protection	IP54							
Weight m [kg]	0.71							
Moment of inertia J_1 [kgcm^2]	0.042	0.032	0.042	0.029	0.029	0.029	0.029	0.029

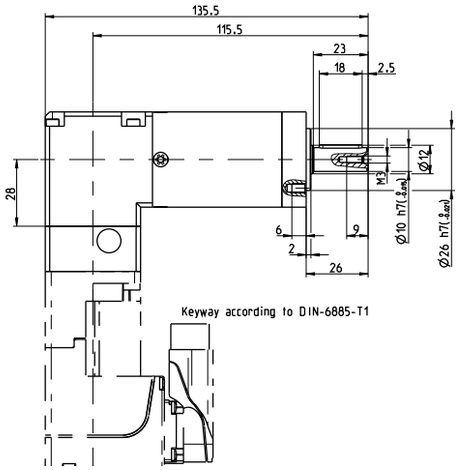
NOTE – Output torque / Max. output torque: This refers to an output shaft speed of n_2 = 100 rpm and application factor K_A = 1 as well as S1 operating mode for electrical machines and T = 30°C, depending on the diameter of the motor shaft. The maximum output torque is only permissible for 30,000 revolutions!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

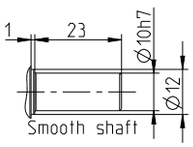
NOTE – Running noise: Noise level at a distance of 1 m; at an output speed of n_1 = 3000 rpm without a load; i = 5
NOTE – Operating temperature: With reference to the middle of the housing surface
NOTE – Weight: Planetary gearbox including universal flange (specific weight upon request)

3-stage gear





Alternative drive shaft options



Adapter flange - Overview of dimensions

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

8GA40-040	8LSA2	8LVA1	8JSA2	80MPD	80MPF
Flange length L [mm]	19	19	19	15	15
Flange diameter Q [mm]	60	40	60	60	60