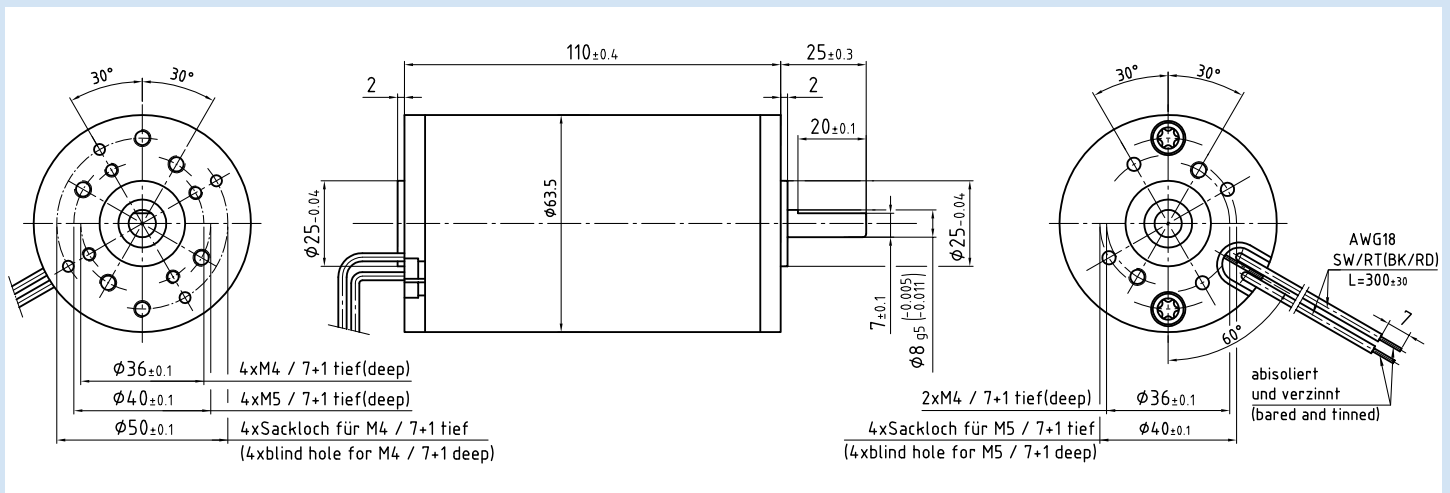


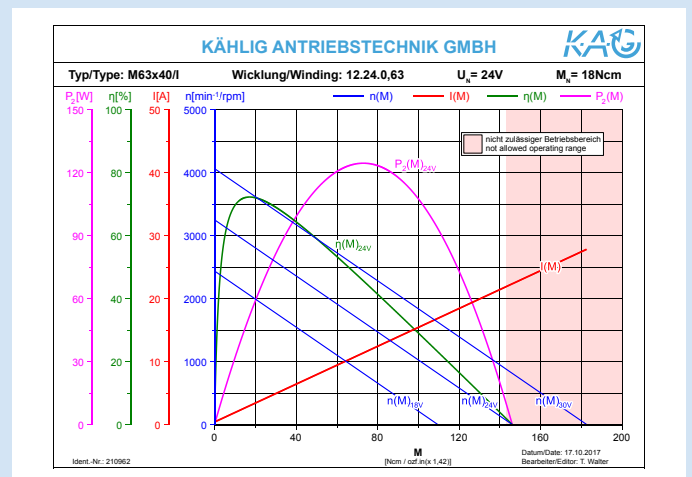
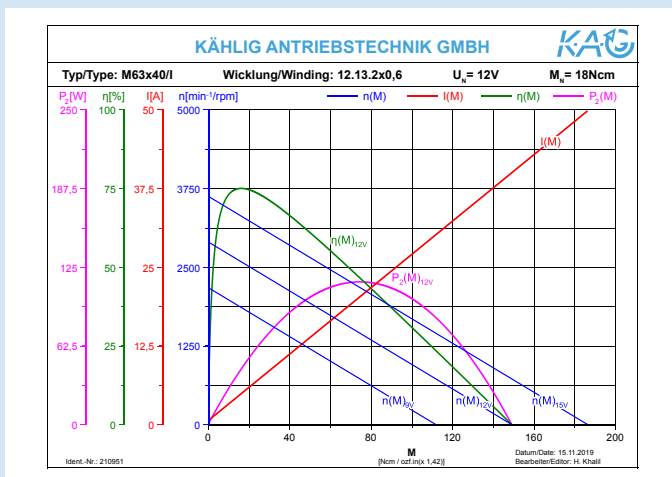
DC-Motor M63x40/I

Id.-Nr. 210951 (12V) 210962 (24V)

- Brushed DC motor with permanent magnets
- Ball bearings
- Lead wires
- Chromatised housing with zinc-die-cast bearing flanges
- Direction of rotation CW / CCW
- Multiple combination possibilities with gears, encoders, brakes and control electronics



Application on request



Stand: 23. Juli 2020 – changes reserved

DC-Motor M63x40/I

Id.-Nr. 210951 (12V) 210962 (24V)

Performance

	Sign	Unit	Value 12V	Value 24V	Tolerances
Rated Voltage	U_N	V	12	24	
Rated torque ¹⁾	M_N	Ncm	18	18	
Rated speed ¹⁾	n_N	min ⁻¹	2550	2850	±10%
Rated current ¹⁾	I_N	A	5.35	3.1	±20%
No load speed ¹⁾	n_0	min ⁻¹	2900	3250	±15%
No load current ¹⁾	I_0	A	0.6	0.4	±50%
Rated power output ¹⁾	P_{2N}	W	48.1	53.7	
Rated power input ¹⁾	P_{1N}	W	64.2	74.4	
Rated efficiency ¹⁾	η_N	%	74.9	72.2	
Maximum power output ²⁾³⁾	P_{2max}	W	113.2	124.4	
Maximum continuous torque ²⁾³⁾	M_{max}	Ncm	18	18	
Maximum continuous current ²⁾³⁾	I_{max}	A	5.35	3.1	
Maximum speed ¹⁾³⁾	n_{max}	min ⁻¹	8000	8000	
Anhaltmoment ¹⁾	M_H	Ncm	149.1	146.2	
Stall torque ¹⁾	I_H	A	40	22.3	
Demagnetization current	I_E	A	34.4	21.5	
Connecting resistance	R	Ω	0.3	1.074	
Armature resistance ¹⁾	R_A	Ω	0.2	0.67	±5%
Armature inductance [1 kHz] ¹⁾	L_A	mH	0.41	1	
Rise of speed-characteristic ¹⁾	k_D	Ncm/min	- 19.4	- 22.2	
Torque constant ¹⁾	k_M	Ncm/A	3.8	6.7	
Voltage constant ¹⁾	k_E	V/10 ³ min ⁻¹	4.1	7.3	
Friction torque ¹⁾	M_R	Ncm	- 2.3	- 2.7	
Mechanical time constant ¹⁾	T_M	ms	10.1	10.67	
Electrical time constant ¹⁾	T_e	ms	1.4	0.93	
Rotor inertia	J_R	gcm ²	792	792	
Maximum case temperature ²⁾	ϑ_G	°C	80	80	
Starting voltage ¹⁾	U_A	V	2	2	
Permissible axial shaft loads ³⁾	F_{axial}	N	110	110	
Permissible radial shaft loads ³⁾	F_{radial}	N	300	300	
Protection class DIN VDE 0530			IP40		
Duty cycle DIN VDE 0530			S1		
Insulation class DIN VDE 0530			E		
Lifetime at rated torque _N			≥ 3000 h		
Ambient temperature			-30°C to +40°C		
Bearing			2 ball bearings		
Interference suppression			feasible		

1) ϑ_w Winding temperature ≈ 20°C 2) $\Delta\vartheta_w$ allowable = 100K
 3) The operating at maximum levels reduces the lifespan

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