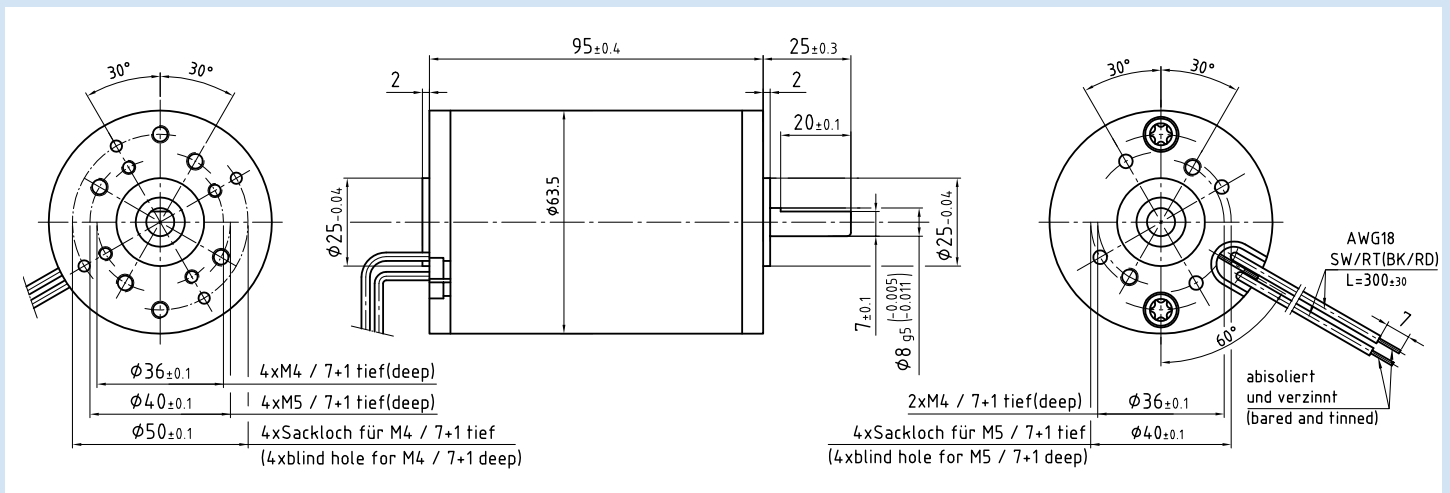


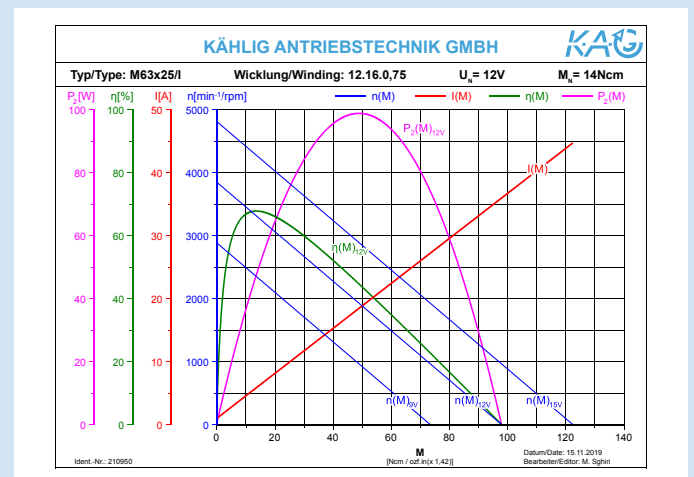
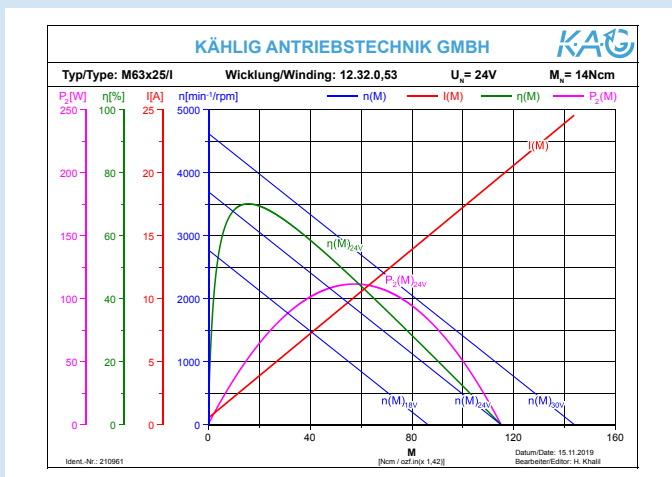
# DC-Motor M63x25/I

## Id.-Nr. 210950 (12V) 210961 (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



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# DC-Motor M63x25/I

## Id.-Nr. 210950 (12V) 210961 (24V)

### Performance

	Sign	Unit	Value 12V	Value 24V	Tolerances
Rated Voltage	$U_N$	V	12	24	
Rated torque <sup>1)</sup>	$M_N$	Ncm	14	14	
Rated speed <sup>1)</sup>	$n_N$	min <sup>-1</sup>	3300	3250	±10%
Rated current <sup>1)</sup>	$I_N$	A	5.95	2.84	±20%
No load speed <sup>1)</sup>	$n_o$	min <sup>-1</sup>	3850	3700	±15%
No load current <sup>1)</sup>	$I_o$	A	0.95	0.5	±50%
Rated power output <sup>1)</sup>	$P_{2N}$	W	48.4	47.6	
Rated power input <sup>1)</sup>	$P_{IN}$	W	71.4	68.2	
Rated efficiency <sup>1)</sup>	$\eta_N$	%	67.8	69.9	
Maximum power output <sup>2)3)</sup>	$P_{2max}$	W	98.8	111.5	
Maximum continuous torque <sup>2)3)</sup>	$M_{max}$	Ncm	14	14	
Maximum continuous current <sup>2)3)</sup>	$I_{max}$	A	5.95	2.84	
Maximum speed <sup>1)3)</sup>	$n_{max}$	min <sup>-1</sup>	8000	8000	
Anhaltmoment <sup>1)</sup>	$M_H$	Ncm	98	115.1	
Stall torque <sup>1)</sup>	$I_H$	A	36	19.7	
Demagnetization current	$I_E$	A	28	13.9	
Connecting resistance	R	Ω	0.33	1.216	
Armature resistance <sup>1)</sup>	$R_A$	Ω	0.25	1.03	±5%
Armature inductance [1 kHz] <sup>1)</sup>	$L_A$	mH	0.47	1.97	
Rise of speed-characteristic <sup>1)</sup>	$k_D$	Ncm/min	- 39.3	- 32.1	
Torque constant <sup>1)</sup>	$k_M$	Ncm/A	2.8	6	
Voltage constant <sup>1)</sup>	$k_E$	V/10 <sup>3</sup> min <sup>-1</sup>	3	6.3	
Friction torque <sup>1)</sup>	$M_R$	Ncm	- 2.7	- 3	
Mechanical time constant <sup>1)</sup>	$T_M$	ms	16.8	16	
Electrical time constant <sup>1)</sup>	$T_e$	ms	1.4	1.62	
Rotor inertia	$J_R$	gcm <sup>2</sup>	596	596	
Maximum case temperature <sup>2)</sup>	$\vartheta_G$	°C	80	80	
Starting voltage <sup>1)</sup>	$U_A$	V	2	2	
Permissible axial shaft loads <sup>3)</sup>	$F_{axial}$	N	110	110	
Permissible radial shaft loads <sup>3)</sup>	$F_{radial}$	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 <sub>N</sub>			≥ 3000 h		
Ambient temperature			-30°C to +40°C		
Bearing			2 ball bearings		
Interference suppression			feasible		

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

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