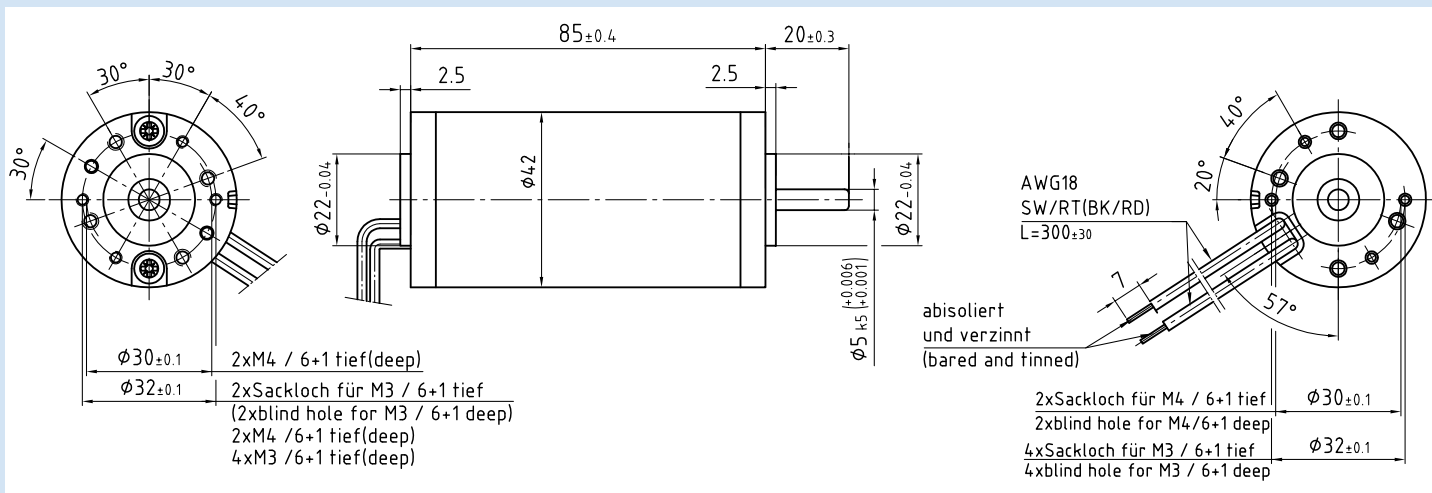


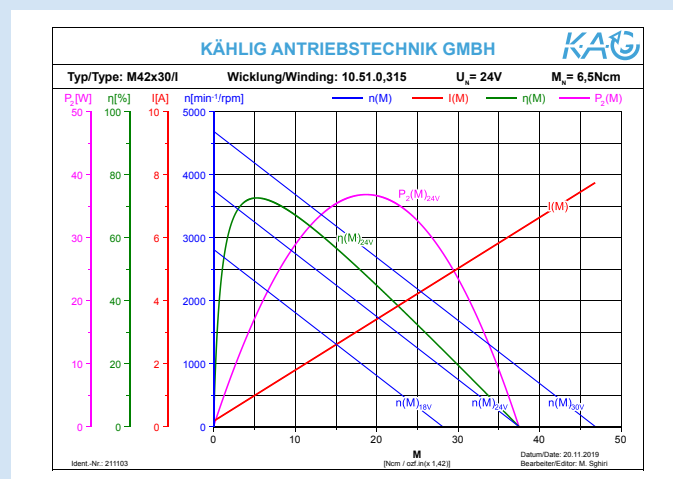
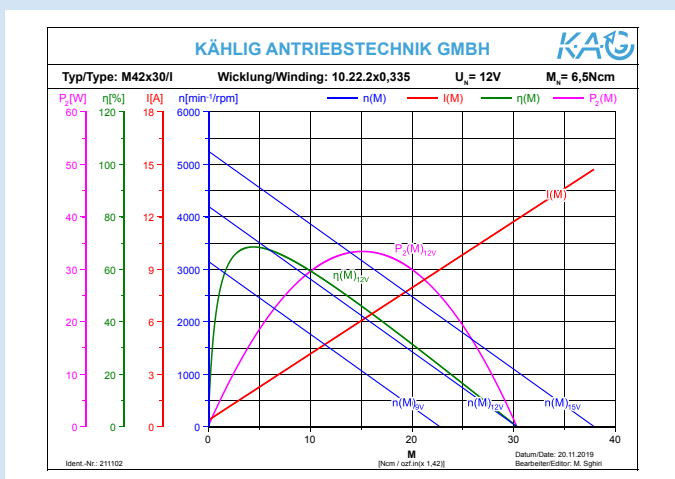
DC-Motor M42x30/I

Id.-Nr. 211102 (12V) 211103 (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: 4. September 2020 – changes reserved

DC-Motor M42x30/I

Id.-Nr. 211102 (12V) 211103 (24V)

Performance

	Sign	Unit	Value 12V	Value 24V	Tolerances
Rated Voltage	U_N	V	12	24	
Rated torque ¹⁾	M_N	Ncm	6,5	6,5	
Rated speed ¹⁾	n_N	min ⁻¹	3300	3100	±10%
Rated current ¹⁾	I_N	A	2,81	1,22	±20%
No load speed ¹⁾	n_0	min ⁻¹	4200	3750	±15%
No load current ¹⁾	I_0	A	0,35	0,17	±50%
Rated power output ¹⁾	P_{2N}	W	22,5	21,1	
Rated power input ¹⁾	P_{1N}	W	33,7	29,3	
Rated efficiency ¹⁾	η_N	%	66,6	72,1	
Maximum power output ^{2/3)}	P_{2max}	W	33,4	36,8	
Maximum continuous torque ^{2/3)}	M_{max}	Ncm	6,5	6,5	
Maximum continuous current ^{2/3)}	I_{max}	A	2,81	1,22	
Maximum speed ^{1/3)}	n_{max}	min ⁻¹	10000	10000	
Stall torque ¹⁾	M_H	Ncm	30,3	37,5	
Stall current ¹⁾	I_H	A	11,8	6,2	
Demagnetization current ¹⁾	I_E	A	15,4	6,6	
Connecting resistance	R	Ω	1,01	3,85	
Armature resistance ¹⁾	R_A	Ω	0,61	3,35	±5%
Armature inductance [1 kHz] ¹⁾	L_A	mH	0,61	3,33	
Rise of speed-characteristic ¹⁾	k_D	Ncm/min	- 138,5	- 100	
Torque constant ¹⁾	k_M	Ncm/A	2,6	6,2	
Voltage constant ¹⁾	k_E	V/10 ³ min ⁻¹	2,8	6,2	
Friction torque ¹⁾	M_R	Ncm	- 0,9	- 1,1	
Mechanical time constant ¹⁾	T_M	ms	8,2	9	
Electrical time constant ¹⁾	T_e	ms	0,6	0,9	
Rotor inertia	J_R	gcm ²	100	100	
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	40	40	
Permissible radial shaft loads ³⁾	F_{radial}	N	100	100	
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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