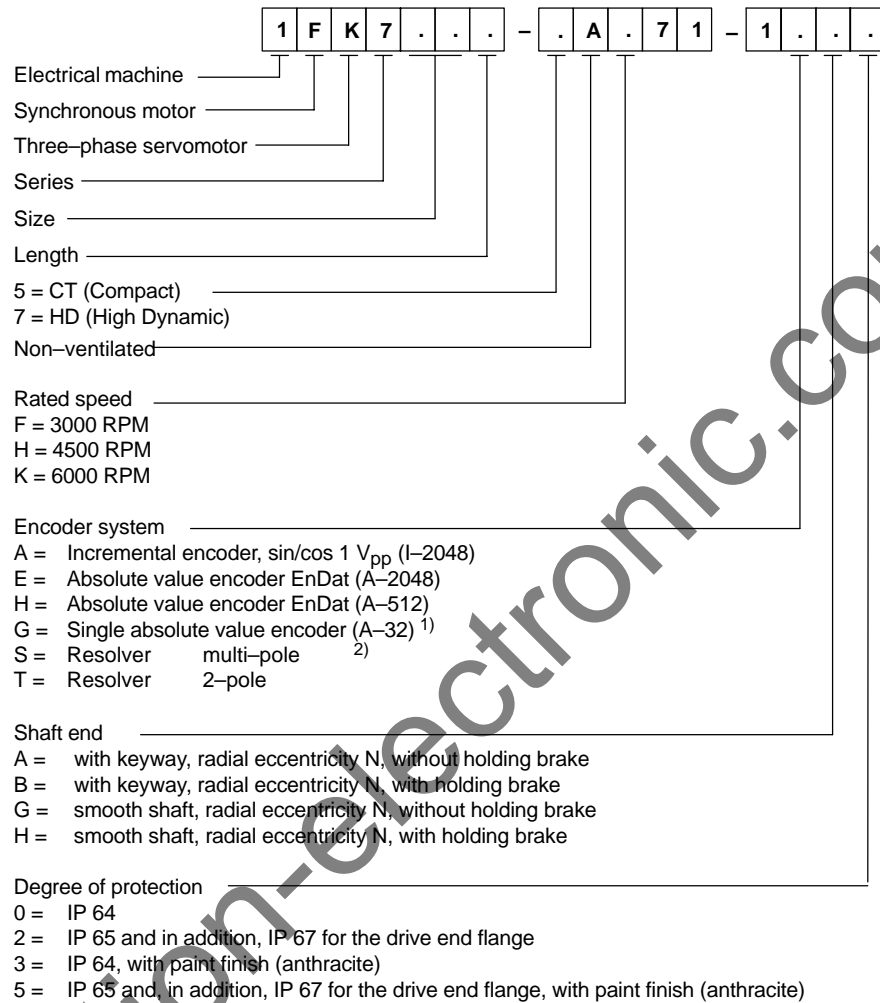


Explanation of the order designation



¹⁾ Not for shaft heights 28 and 36

²⁾ The encoder pole number corresponds to that of the motor

2.2 Speed–torque diagrams 1FK7 HD

Table 2-16 1FK7064 HD

Technical data	Code	Units	–7AF71	–7AH71
Engineering data				
Rated speed	n_N	RPM	3000	4500
Pole number	2p		6	6
Rated torque (100 K)	M_N (100 K)	Nm	8.0	5.0
Rated current	I_N	A	7.5	7.0
Standstill torque (60K)	M_0 (60 K)	Nm	9.0	9.0
Standstill torque (100K)	M_0 (100 K)	Nm	12	12
Standstill current (60K)	I_0 (60 K)	A	8.5	12
Standstill current (100K)	I_0 (100 K)	A	11	15
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm ²	6.84	6.84
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm ²	6.5	6.5
Optimum operating point				
Optimum speed	n_{opt}	RPM	3000	3500
Optimum power	P_{opt}	kW	2.51	2.75
Limiting data				
Max. perm. speed (mechan.)	n_{max}	RPM	6000	6000
Max. torque	M_{max}	Nm	32	32
Peak current	I_{max}	A	31	42
Physical constants				
Torque constant	k_T	Nm/A	1.03	0.77
Voltage constant	k_E	V/1000 RPM	68	51
Winding resistance at 20°C	R_{phase}	Ohm	0.35	0.18
Rotating field inductance	L_D	mH	10.7	5.6
Electrical time constant	T_{el}	ms	30.5	31.1
Shaft torsional stiffness	c_t	Nm/rad	30000	30000
Mechanical time constant	T_{mech}	ms	0.64	0.59
Thermal time constant	T_{th}	min	35	35
Weight with brake	m	kg	16.8	16.8
Weight without brake	m	kg	15.5	15.5

2.2 Speed-torque diagrams 1FK7 HD

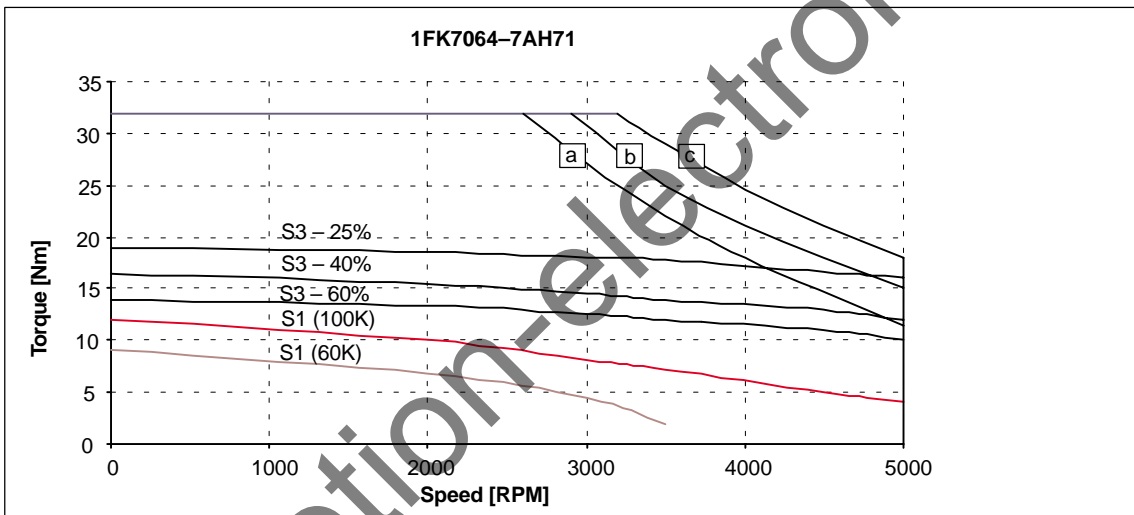
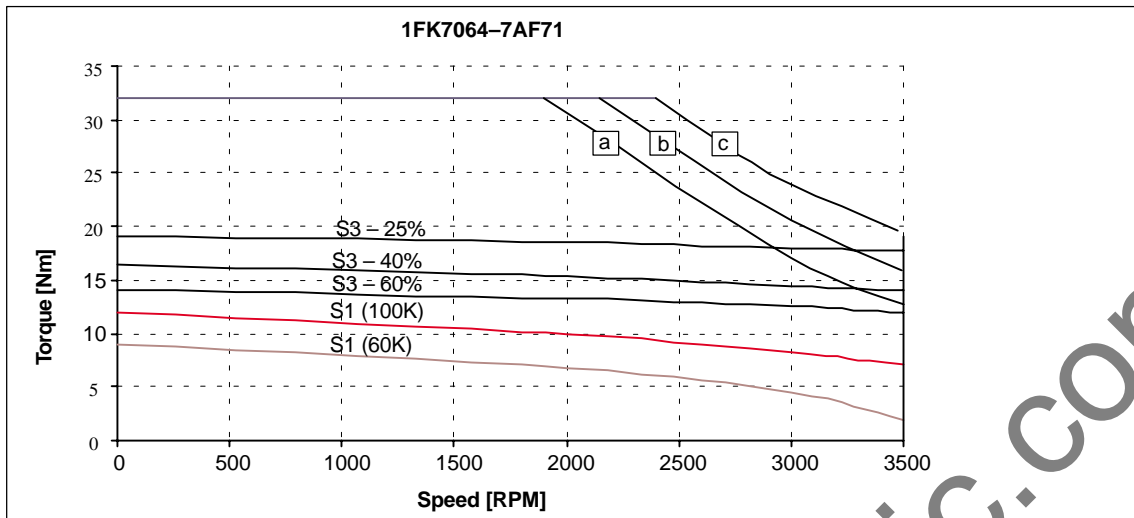


Fig. 2-16 Speed-torque diagram 1FK7064 HD

- [a] MASTERDRIVES MC, $V_{DC \text{ link}}=540V \text{ (DC)}$, $V_{mot}=340V_{rms}$
 [b] SIMODRIVE 611 (UE), $V_{DC \text{ link}}=540V \text{ (DC)}$ and MASTERDRIVES MC (AFE), $V_{DC \text{ link}}=600V \text{ (DC)}$, $V_{mot}=380V_{rms}$
 [c] SIMODRIVE 611 (IR), $V_{DC \text{ link}}=600V \text{ (DC)}$, $V_{mot}=425V_{rms}$

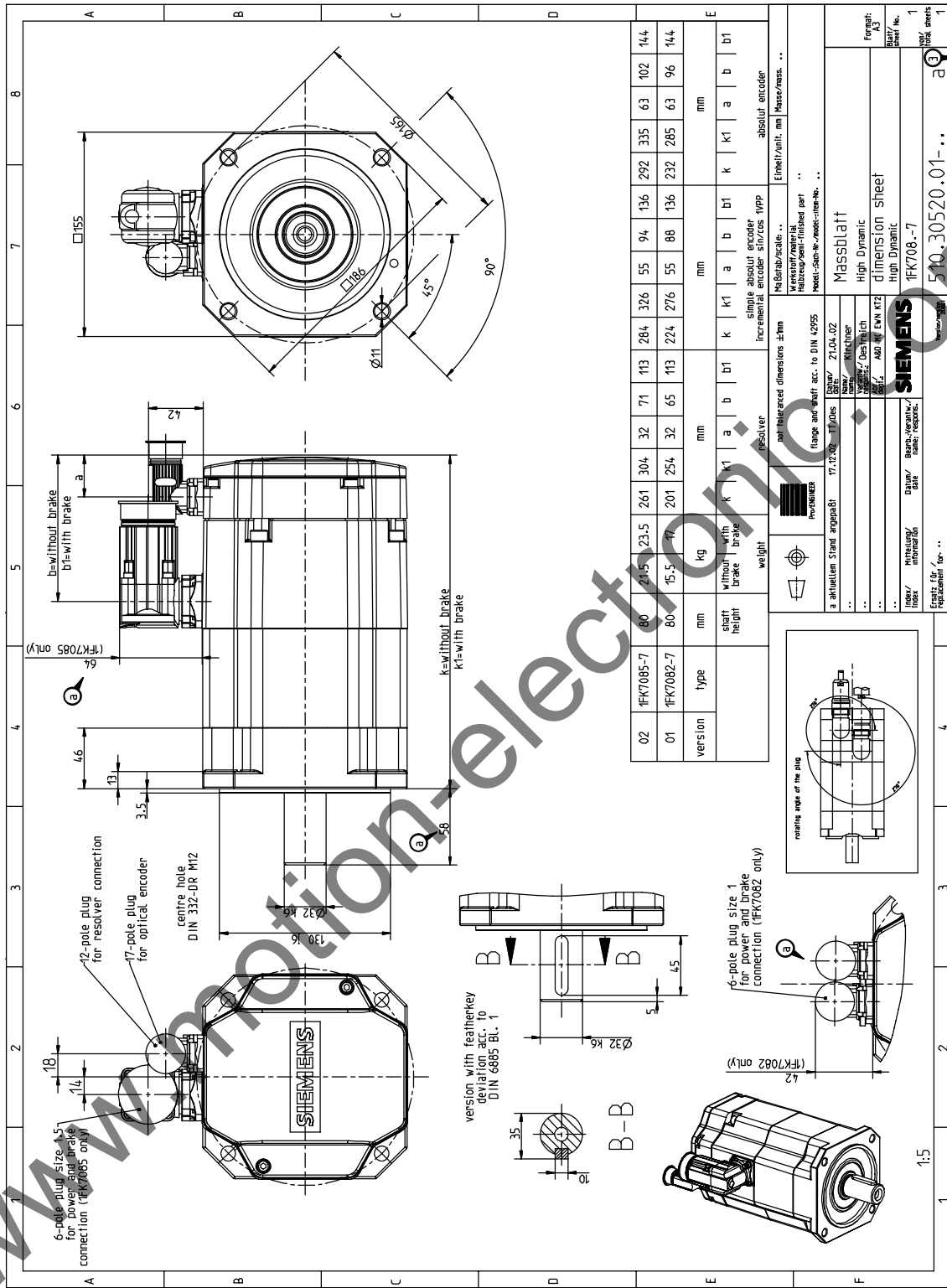


Fig. 4-11 1FK708□-7