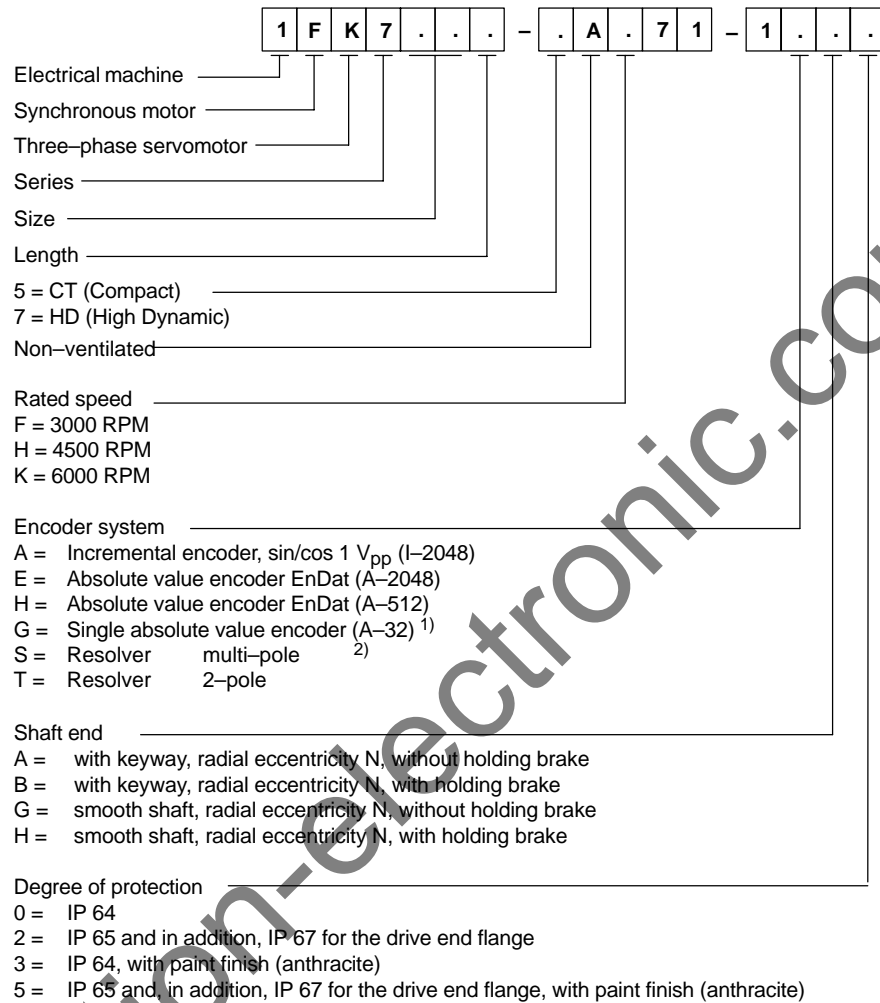


### Explanation of the order designation



<sup>1)</sup> Not for shaft heights 28 and 36

<sup>2)</sup> The encoder pole number corresponds to that of the motor

2.2 Speed–torque diagrams 1FK7 HD

Table 2-14 1FK7044 HD

Technical data	Code	Units	–7AF71	–7AH71
<b>Engineering data</b>				
Rated speed	$n_N$	RPM	3000	4500
Pole number	2p		6	6
Rated torque (100 K)	$M_N$ (100 K)	Nm	3.5	3.0
Rated current	$I_N$	A	4.0	4.9
Standstill torque (60K)	$M_0$ (60 K)	Nm	3.0	3.0
Standstill torque (100K)	$M_0$ (100 K)	Nm	4.0	4.0
Standstill current (60K)	$I_0$ (60 K)	A	3.4	4.6
Standstill current (100K)	$I_0$ (100 K)	A	4.5	6.3
Moment of inertia (with brake)	$J_{mot}$	$10^{-4}$ kgm <sup>2</sup>	1.41	1.41
Moment of inertia (without brake)	$J_{mot}$	$10^{-4}$ kgm <sup>2</sup>	1.28	1.28
<b>Optimum operating point</b>				
Optimum speed	$n_{opt}$	RPM	3000	4500
Optimum power	$P_{opt}$	kW	1.1	1.41
<b>Limiting data</b>				
Max. perm. speed (mechan.)	$n_{max}$	RPM	8000	8000
Max. torque	$M_{max}$	Nm	12	12
Peak current	$I_{max}$	A	14.8	20
<b>Physical constants</b>				
Torque constant	$k_T$	Nm/A	0.86	0.63
Voltage constant	$k_E$	V/1000 RPM	57	42
Winding resistance at 20°C	$R_{phase}$	Ohm	1.5	0.81
Rotating field inductance	$L_D$	mH	20	11
Electrical time constant	$T_{el}$	ms	13.3	13.5
Shaft torsional stiffness	$c_t$	Nm/rad	9500	9500
Mechanical time constant	$T_{mech}$	ms	0.78	0.78
Thermal time constant	$T_{th}$	min	45	45
Weight with brake	m	kg	8.3	8.3
Weight without brake	m	kg	7.7	7.7

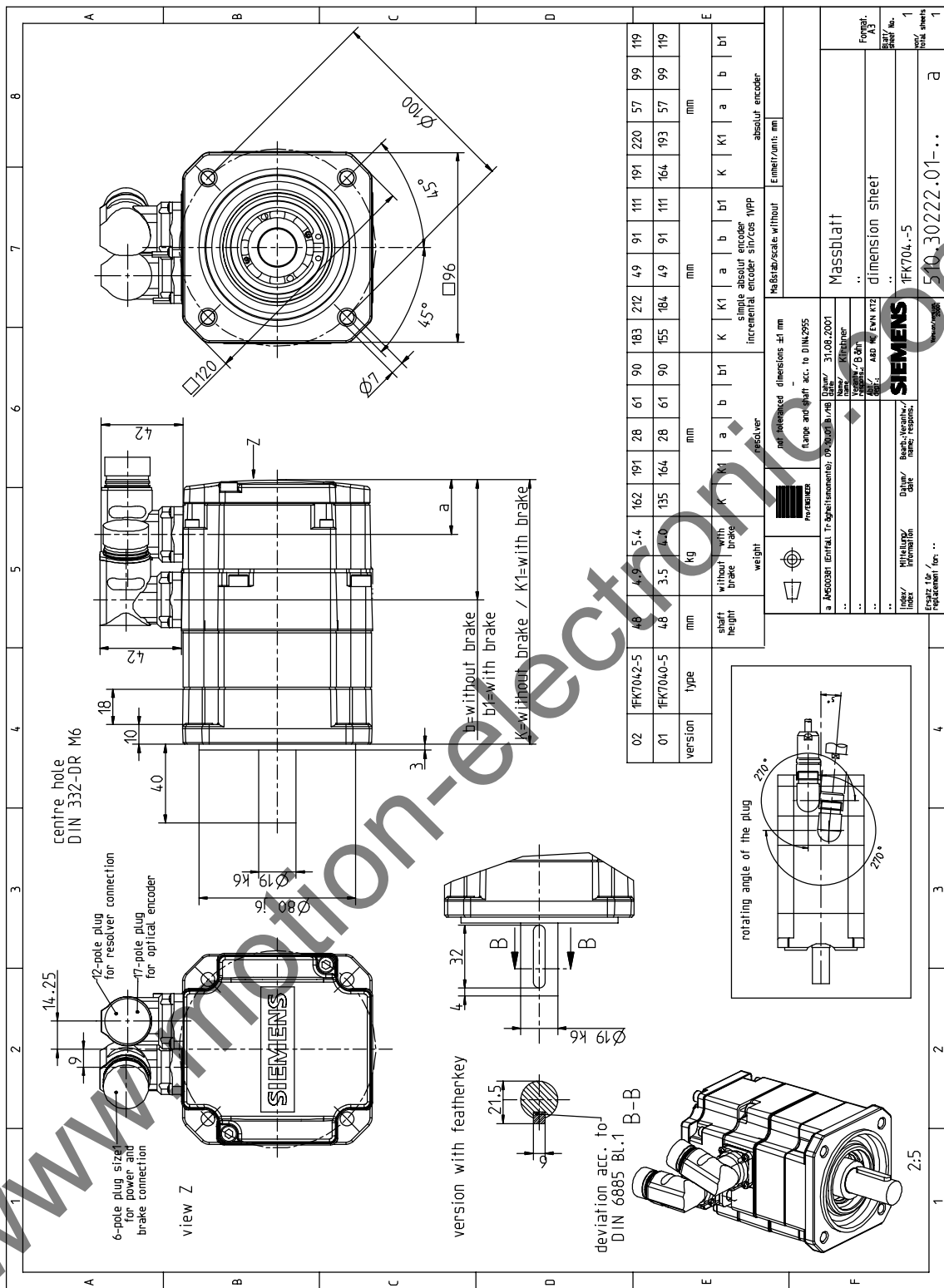


Fig. 4-3 1FK704□-5, non-ventilated with angled connector, Size 1