KENDRION | INDUSTRIAL

WE MAGNETISE THE WORLD

Slim Line

Spring-applied single-surface brake

76 13105C00
76 13111C00

INDUSTRIAL DRIVE SYSTEMS

BINDER

Industrial Drive Systems

Kendrion – the brake experts

As a solution provider, Kendrion develops, produces and markets innovative and high-quality electromagnetic and mechatronic systems and components for customers all over the world.

In the Industrial Drive Systems business unit, electromagnetic brakes and clutches are developed and produced for industrial drive engineering. They are used for the accelerating, braking, positioning, holding and securing of movable drive components and loads. Areas of application for our brakes and clutches are primarily in the areas of robotic and automatic control engineering, machine tool and production machinery as well as medical technology and material handling.

Our main site is located in Villingen in the Black Forest, Germany. Industrial Drive Systems can also rely on additional production sites and subsidiaries in Aerzen (Germany), China, Great Britain and Italy, as well as numerous sales partners all over the world.

Tradition and progress

The long-established BINDER brand laid the foundations for the successful development of Industrial Drive Systems. In the year 1911, Wilhelm Binder founded his company and began at the start of the 1920s with the development and production of electromagnetic components. In 1997, the company was taken over by the Dutch group Schuttersveld N.V., today Kendrion N.V..

The former magneta GmbH & Co. KG belongs to the Kendrion Group since 2010. As the present Kendrion (Aerzen) GmbH, the innovative company continues to develop and produce electromagnetic clutches and brakes along with magnetic particle clutches and brakes at its site in Aerzen.

Kobra greensigned safety brakes

As the first company, we at Kendrion developed safety brakes that contribute to the well-being of the environment in two separate ways. The reduced energy consumption was just as important to us as the ecology in the entire value-creation process. The KOBRA (Kendrion Optimised Brake) spring-applied safety brake is the impressive result, and the pioneer product of the Kendrion greensigned strategy.

Kendrion – We magnetise the world!

www.kendrion.com

About the Slim Line

The Slim Line is comprised of spring-applied single-disc brakes where the spring actuated brake-discs are attached to the shaft. The brake disc can be designed as a motor fan. Being designed as singlesurface brakes, Slim Line brakes are not only extremely flat but are also released with zero residual torque. Electromagnetically operated spring-applied brakes generate the brake torque when voltage is removed.

Versions

76 13105C00
torque 0.25 Nm, (0.5 Nm; 50% ED)
DC, single-phase AC

76 13111C00
torque 3 Nm
DC
high or low version fan

Applications

- Machine tools, e.g. woodworking machinery
- Flat motors
- Building installations
- Saws, e.g. circular saws
- Wheelchairs...

Data sheets – General information

The Operating Instructions must be strictly observed during the set-up of the machine (e.g. motor) and during the start-up, operation and maintenance of the brakes. The state-of-the-art brakes have been designed, built and tested in accordance with the requirements of DIN VDE 0580 concerning electromagnetic devices and components. Additional information on technical specifications given in the data sheets is included in the operating instructions.

Spring-applied single-surface brake
DC or single-phase AC

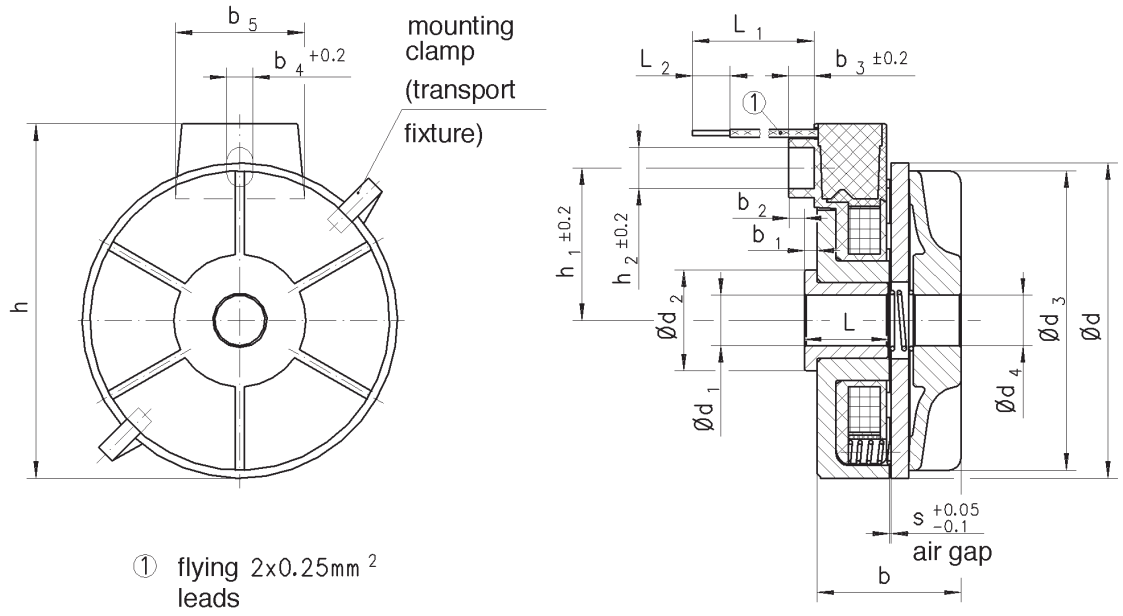
Versions	76 13105C00 DC / single-phase AC
Standard rated voltages	102 V DC 230 V AC, 50 Hz
Protection	IP 00
Thermal class	F
Rated torques	0.25 Nm
Note	Specification subject to change without notice. The „General technical information“ and the „Operating instructions“ 76 13105C00 must be strictly observed.

Technical data

Size	Rated torque	Max. speed	Max. switching power	Max. switching energy (Z = 1)	Rated power		Response times		Moment of inertia friction disc (fan)	Weight
					DC	AC	Coupling time	Disconnection time		
	M_2 [Nm]	n_{max} [rpm]	P_{max} [kJ/h]	W_{max} [kJ]	P_N [W]	P_s [VA]	t_1 [ms]	t_2 [ms]	J [kgcm^2]	m [kg]
05	0.25	3600	22	16	9	22	26	5	0.044	0.16

[1] If operated with bridge rectifier.
[2] If operated with half-wave rectifier with recovery diode.

Dimensions [mm]



Type	d	d_1(G7) [3]	d_2 [3]	d_3	d_4(S6) [3]	b	b_1 [3]	b_2 [3]	b_3 [3]
76 13105C00	50	8	16	47.5	8	23	2	2.5	4
76 13105C05	50	8	16	47.5	8	23	2	6.5	8
76 13105C06	50	6	16	47.5	6	23	2	6.5	8
76 13105C07	50	5	14	47.5	5	23	1.4	7.1	8

Type	b_4	b_5	h	h_1	h_2	L	L_1	L_2	s	s_{max}
76 13105C00	4.1	20.5	56.3	24.2	6.5	13.3	200	6	0.25	0.4[1] / 0.8[2]
76 13105C05	4.1	20.5	56.3	24.2	6.5	13.3	200	6	0.25	0.4[1] / 0.8[2]
76 13105C06	4.1	20.5	56.3	24.2	6.5	13.3	200	6	0.25	0.4[1] / 0.8[2]
76 13105C07	4.1	20.5	56.3	24.2	6.5	13.3	200	6	0.25	0.4[1] / 0.8[2]

[1] Max. air gap up to fan replacement if operated with bridge rectifier.
[2] Max. air gap up to fan replacement if operated with half-wave rectifier with recovery diode
[3] Options.

Spring-applied single-surface brake
DC

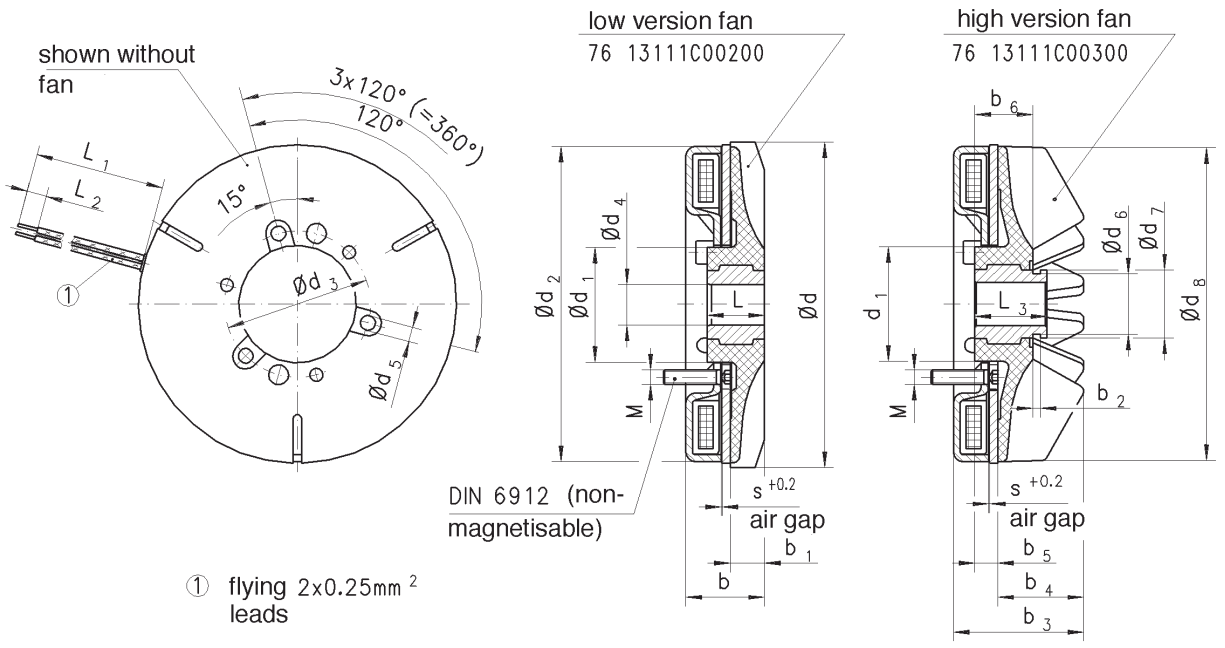
Versions	76 13111C00
Standard rated voltages	102 V DC
Protection	IP 54 (if installed under motor fan hood)
Thermal class	F
Rated torques	3 Nm
Note	Specification subject to change without notice. The „General technical information“ and the „Operating instructions“ 76 13111C00 must be strictly observed.

Technical data

Size	Rated torque	Max. speed	Max. switching power		Max. switching energy (Z = 1)	Rated power	Response times		Moment of inertiafan		Weight
			1)	2)			Coupling time	Disconnection time	1)	2)	
	M_2 [Nm]	n_{max} [rpm]	P_{max} [kJ/h]	P_{max} [kJ/h]	W_{max} [kJ]	P_N [W]	t_1 [ms]	t_2 [ms]	J [kgcm²]	J [kgcm²]	m [kg]
11	3	3000	260	350	13	40	20	30	1.5	1.8	0.7

[1] Low version fan without ring groove for pull-off device (type 76 13111C00200).
[2] High version fan with ring groove for pull-off device (type 76 13111C01300).

Dimensions [mm]



Type	d	d_1	d_2	d_3	d_4(H7)	d_5	d_6	d_7	d_8	b	b_1	b_2
11	113	40	110	51	15[1] / 20[2]	5.2	21	24	110	27.5	12	2.5

Type	b_3	b_4	b_5	b_6	L	L_1	L_2	L_3	L_4	s	s_{max}	M
11	45.5	30	8	20.2	20	400	7	25	380	0.2	0.6	3xM5

[1] Min. bore.
[2] Max. bore.
Shaft ISO fitting f7 with necking for tolerance ring.

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