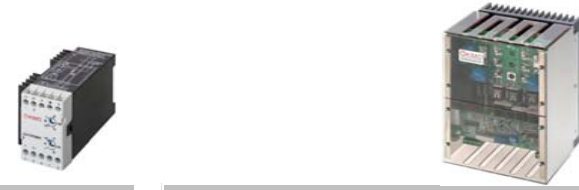


TECHNICAL DATA



Designation	LEKTROMIK B1					LEKTROMIK B4			
	2B1-14	5B1-14	7B1-14	3B1-14/230	4B1-14/230	15B4-26	45B4-26	90B4-26	200B4-26
Rated motor power									
◆ Power for normal braking kW	2,2	5,5	7,5	3	4	15	45	90	200
◆ Power for light duty braking kW						22	55	132	250
Minimum motor power kW	0,25	1,1	1,1	0,55	0,55	1,1	4,0	11	22
Rated voltage V	2AC 400		2AC 230			2AC 220...500			
Control voltage V						2AC 230			
Max. braking currents I _B (10 s) A	11	30	36	30	36	52	150	300	700
Braking duty:									
- Convection +40 °C %	10	3	15	3	15	25	15	12	7
- 10 mm space +40 °C %	15	5	15						
- 10 mm space +50 °C %	7	2	10						
- +50 °C %						15	10	8	5
- Fan (Option) +35 °C %						-	50	50	25
Utilization category: (EN60947-4-2)	11 A: AC-53a: 1-10: 10-36	30 A: AC-53a: 1-10: 3-11	36 A: AC-53a: 1-10: 15-54	30 A: AC-53a: 1-10: 3-11	36 A: AC-53a: 1-10: 15-54	without fan 52 A: AC-53a: 1-10: 25-90	without fan 150 A: AC-53a: 1-10: 15-54	without fan 300 A: AC-53a: 1-10: 12-43	without fan 700 A: AC-53a: 1-10: 7-25
Supply and motor connections	Ferrules		Ferrules		Cable shoe			Bus bars or Cable shoe	
Cable cross-section (flexible with cable shoe) referring to EN60204-1 with suitable overload protection mm ²	1,0...2,5	1,5...2,5	1,5...2,5	1,5...2,5	1,5...2,5	M5; 2,5...10	M5; 2,5...35	M8; 10...120	M8; 10...185
Cooling:									
- Convection	•	•	•	•	•	•	•	•	•
- Fan (Option)						FAN3	FAN3	FAN2	FAN2
Protection:	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP00/IP20 ^{*)}	IP00/IP20 ^{*)}
Weight kg	0,4	0,45	0,65	0,45	0,65	3,5	3,5	12	16
Dimensions:									
Height mm	75	75	75	75	75	226	226	300	300
Width mm	45	45	60	45	60	164	164	260	260
Depth mm	120	120	120	120	120	150	150	250	250
Clearance for:									
cooling upper mm						80	80	100	100
lower mm						80	80	100	100
left, right mm						10	10	-	-
Order no	8031.312	8031.315	8031.317	8031.213	8031.214	8035.322-100	8035.326-100	8035.329-100	8035.333-100

*) IP20 with Option

Available types	LEKTROMIK	Rated supply voltage	Rated unit power [kW]									
			2,2	3	4	5,5	7,5	15	45	90	200	
B1		2AC 400 V	•			•	•					
		2AC 230 V		○	○							
B4		2AC 220...500 V						•	•	•	•	

• Standard ○ on request Higher powers on request

RANGE OF APPLICATION

LEKTROMIK	Supply voltage	Rated motor power [kW] / Rated braking current [A]									
		7,5	15	18	22	45	55	90	110	200	250
B4	2AC 220...240 V	15B4 52 A			45B4 150 A	90B4 300 A			200B4 700 A		
	2AC 380...440 V		15B4 52 A		45B4 150 A		90B4 300 A		200B4 700 A		
	2AC 460...500 V			15B4 52 A		45B4 150 A		90B4 300 A		200B4 700 A	

Options	Designation	Electrical data	Order no
	OPTION B4IP20	90/200 kW IP20 protection	Please inquire
	OPTION 4.7MF	Capacitor 4.7 μF	0523.109
	FAN2 / 230	Fan module 2AC 230 V	6019.220
	FAN3 / 230	Fan module 2AC 230 V	6019.320

Optimum drive solutions from 0.25 up to 2000 kW and from 110 up to 690 V

Technical data subject to change without notice



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INJECTION BRAKING UNITS

Soft Braking
for
Electric
Motors

Maintenance-Free Braking

STATE-OF-THE-ART ELECTRONIC DEVICES FOR THE MAINTENANCE-FREE BRAKING OF THREE PHASE INDUCTION MOTORS

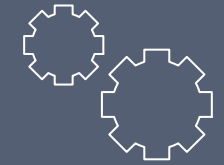


Why Electronic Braking?

Three-phase induction motors are the most commonly used of all the electric motors. Since frequency inverters have been available at a favorable price, three-phase motors are also being increasingly used for variable-speed applications instead of DC drives. Many machines and pieces of equipment have relatively high moments of inertia. When the machine or piece of equipment is powered down, it continues to run for a correspondingly long time.

Mechanical friction brakes are usually integrated in the motor in the form of a braking motor. However, as soon as braking energy and the braking frequency exceed a certain limit, it is hazardous to both man and the machine.

KIMO Industrie-Elektronik GmbH, Germany have developed a technology to use the existing drive motor as electrical brakes without the use of any mechanical parts.



BENEFITS

- One time investment
- Easy integration with system
 - Requires no maintenance
- Fast braking for better safety
- No wear and tear of machines
 - Waiting time to change or service eliminated

SALIENT FEATURES

- Fast braking 0.4 - 2 s depending on power
- Easily retrofitted without any mechanical modification
- Can be used without braking contactors
- Simple connection with standard contactors
- Integrated automatic electronic detection of zero-speed
- Braking current and braking time separately adjustable
- Reduce free running time

A permanent solution for all braking needs

MAINTENANCE-FREE BRAKING WITH WIDE RANGE OF APPLICATION

HOW DOES IT WORK ?

AC motors work by using a rotating magnetic field created by the alternating current in the stator windings which induces magnetic field in the rotor windings making it to spin to balance out the poles and as the rotor's magnetic field attempts to stay in sync with the stator's magnetic field by mutual attraction, it rotates. A DC current is injected to the electric motor which creates a stationary magnetic field which will now try to hold the rotor in one position. This slows and eventually halts the rotor completely. As long as the DC voltage is applied to the stator, the rotor will be held in position and resistant to any attempt to spin it.

APPLICATION

The emphasis of electrical braking is to have a cost-effective design for rugged industrial use and to have an essential advantage of the braking devices.



Space saving in the electrical enclosure using a new type of operation without braking contactor and to have improved braking torque for high power drives.

Some of the major applications are listed below.

- Woodworking machines
- Grinding machines
- Conveyor belts
- Vibrators
- Centrifuges, mills, compactors
- Roller-table drives
- Cranes

Overview of typical applications of electronic braking devices

Machine type	Danger	Accident prevention measures	Productivity	Typical starting times	
			Function	without brake	with brake
Meat saws for abattoirs	Human / Injury	In preparation		8 s	1 s
Circulating fans in steam furnaces/ovens	Human / Injury (Burn)	In preparation		3 s	0,6 s
Centrifuges			Important	30 min	4 min
Crane traversing drives			Necessary	20 s	5 s
Saws and milling tools in the woodworking industry		Braking ≤ 10 s		20 s	2-6 s
Roller operations in the steel industry			Necessary	10 s	2 s



MADE IN GERMANY

The product is completely manufactured in Germany, taking into consideration the highest industrial standards and precision.

The product guarantees high reliability and long life.



E- SOLUTIONS

The product is used for squirrel-cage induction motors and asynchronous motors. For further enquiry on usage and applicability please contact us at e-info@kimo.de

or visit us at www.kimo.de.

