

VARIABLE FREQUENCY

DRIVES RELIABLE, HIGH-PERFORMANCE DRIVES FOR MACHINES AND PROCESS CONTROL.

- Simple to use • Robust • Broad power & Voltage range •

B1 SERIES

KEY FEATURES

Power range from 0.4 kW (0.5 hp) up to 110 kW (150 hp)

Built-in Sensorless Control: Vector, Torque, Volts per Hz

Built-in EMI filters and braking units

RS485: Modbus RTU Fieldbus

Wide voltage support: 220V – 480V

Safe Torque Off (STO)

Heavy-Duty overload capacity, up to 200%

Certified: UL, cUL, TÜV-SÜD Safety, and CE

Coated PCBs – added protection from dust and humidity

Multiple mounting options: wall, flange, and DIN rail

FLEXIBLE INTEGRATION

Use B1 Series drives as **stand-alone inverters**—or optimize your application by combining them with Unitronics' All-in-One controllers and our **free, ready-made motion control code**.

PRODUCT DESIGNATION KEY

UMI - 0022 E U - B1	No.	Key	Description
1 2 3 4 5	1	Product Line	Unitronics Motion Inverters
Example: UMI-0022EU-B1	2	Power Range	0004: 400W / 0.5hp 0022: 2.2kW / 3hp
	3	Power Rating	A: 1 ph 110 V – 120 V B: 1 ph 200 V – 240 V E: 3 ph 380 V – 440 V / 480 V
	4	Certification	U – UL Certified, E – TUV-SUD Certified*
	5	Product series	B1

* 0.4-11kw Drives are UL and cUL certified and support 480

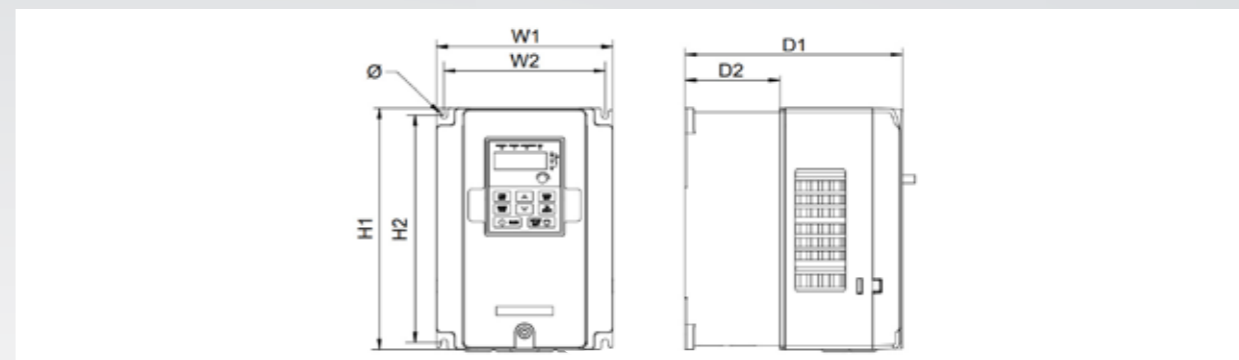
UMI-B1 SERIES: PRODUCT SPECIFICATIONS

		UMI-B1 (BE / EE)	UMI-B1 AU
Power	Input Voltage	1 Ph 200 - 240 V 3 Ph 200 - 240 V 3 Ph 380 - 440 V 3 Ph 380 - 480 V	1 Ph 110 - 120 V
	Output Voltage	3 Ph 0 - 240 V 3 Ph 0 - 440 V 3 Ph 0 - 480 V	3 Ph 0 - 240 V
	Input Frequency	50 Hz or 60 Hz; allowed range: 47 – 63 Hz	
	Supported Motors	Three Phase, Asynchronous Induction Motors	
	Output Frequency	0 - 400 Hz	
	Overload Capacity		150%, 60 seconds
		180%, 10 seconds	
		200%, 1 second	
Control	Control Method	SVPWM (Space Vector PWM) SVC (Sensorless Vector Control)	
	Control Setting	MODBUS, Analog, Digital, PID, Pulse	
	Communication	MODBUS RTU RS485	
	Keypad	Film Keypad: <4 kW (5 hp) Removable: ≥4 kW (5 hp)	Film Keypad
Input	Analog Inputs	Total 2: 1 (AI2) 0 - 10 V / 0 - 20 mA and 1 (AI3) -10 - 10V	
	Digital Inputs	Total 5: 4 inputs 1 kHz 1 input 50 kHz	
Output	Analog Outputs	Up to 2: 1 output 0 - 10 V / 0 - 20 mA ≤2.2 kW / 3 hp. (2nd output available from >2.2 kW / 3 hp)	2 : 0 - 10 V / 0 - 20 mA
	Digital Outputs	1 output sink / source + 1 Relay output 2 Relay outputs for >2.2 kW / 3 hp	1 output sink / source + 2 Relay output
Features	Dynamic Braking Unit (DBU)	Built-in (≤37 kW / 50 hp)	Build-in
		Optional DBU (>37 kW / 50 hp)	
	EMC	Built-in C3 (≥4 kW / 5 hp), complies with IEC / EN 61800 - 3 Optional C3 (<4 kW / 5 hp), complies with IEC / EN 61800 - 3 Optional C2, complies with IEC / EN 61800 - 3	Optional external Filter: meet the degree requirement of IEC61800-3 C2, IEC61800 - 3 C3
General	Operating Temperature	(-10)°C / 14°F - 50°C / 122°F (de-rated by 1% for every 1°C / 2°F above 40°C / 104°F)	
	Altitude	2000 m / 6600 ft (de-rated by 1% for every additional 100 m / 330 ft above 1000 m / 3300 ft)	
	Ingress Protection Rating	IP20	
	Mounting Options	Wall and Rail (≤2.2 kW / 3 hp)	Wall and Rail
		Wall and Flange (>2.2 kW / 3 hp)	
	Cooling	Air-cooling	
	Safe Torque Off	√	–
	Compliance	CE, TÜV-SUD Safety Mark UL and cUL (≤11 kW only / 15 hp only)	CE, UL, cUL



UMI-B1 SERIES MODELS

POWER (kW / hp)	Input / Output Voltage	Article Number	Rated Output Current (A)	Safety (TUV SUD)	UL & cUL
0.4 / 0.5	1 Ph 110 - 120 V / 3 Ph 0 - 240V	UMI-0004AU-B1	2.5	–	✓
	1 Ph 200 - 240V / 3 Ph 0 - 240V	UMI-0004BE-B1	2.5	STO	✓
	3 Ph 200 - 240V / 3 Ph 0 - 240V	UMI-0004CE-B1	2.5	STO	✓
0.75 / 1	1 Ph 110-120V / 3 Ph 0-240V	UMI-0007AU-B1	4.2	–	✓
	1Ph 200 - 240V / 3 Ph 0 - 240V	UMI-0007BE-B1	4.2	STO	✓
	3 Ph 200 - 240V / 3 Ph 0 - 240V	UMI-0007CE-B1	4.2	STO	✓
	3 Ph 380 - 480V / 3 Ph 0 - 480V	UMI-0007EE-B1	2.5	STO	✓
1.1 / 1.5	1 Ph 110 - 120V / 3 Ph 0 - 240V	UMI-0011AU-B1	5.8	–	✓
1.5 / 2	1 Ph 200-240V / 3 Ph 0-240V	UMI-0015BE-B1	7.5	STO	✓
	3 Ph 200-240V / 3 Ph 0-240V	UMI-0015CE-B1	7.5	STO	✓
	3 Ph 380-480V / 3 Ph 0-480V	UMI-0015EE-B1	4.2	STO	✓
2.2 / 3	1 Ph 200-240V / 3 Ph 0-240V	UMI-0022BE-B1	10	STO	✓
	3 Ph 200-240V / 3 Ph 0-240V	UMI-0022CE-B1	10	STO	✓
		UMI-0022EE-B1	5.5	STO	✓
4 / 5	3 Ph 380 - 480V / 0 - 480V	UMI-0040EE-B1	9.5	STO	✓
5.5 / 7.5		UMI-0055EE-B1	14	STO	✓
7.5 / 10		UMI-0075EE-B1	18.5	STO	✓
11 / 15		UMI-0110EE-B1	25	STO	✓
15 / 20	3 Ph 380 - 440V / 0 - 440V	UMI-0150EE-B1	32	STO	–
18.5 / 25		UMI-0185EE-B1	38	STO	–
22 / 30		UMI-0220EE-B1	45	STO	–
30 / 40		UMI-0300EE-B1	60	STO	–
37 / 50		UMI-0370EE-B1	75	STO	–
45 / 60		UMI-0450EE-B1	92	STO	–
55 / 75		UMI-0550EE-B1	115	STO	–
75 / 100		UMI-0750EE-B1	150	STO	–
90 / 120		UMI-0900EE-B1	180	STO	–
110 / 150		UMI-1100EE-B1	215	STO	–



Article Number	W1	H1	D1	D2	Weight (kg)					
UMI-0004BE-B1	80	160	123.5	120.3	0.9					
UMI-0007BE-B1										
UMI-0004BU-B1										
UMI-0007AU-B1	80	185	140.5	137.3	1.2					
UMI-0011AU-B1										
UMI-0015BE-B1										
UMI-0004CE-B1										
UMI-0007CE-B1										
UMI-0022BE-B1										
UMI-0015BU-B1										
UMI-0004CU-B1										
UMI-0007CU-B1										
UMI-0022BU-B1										
UMI-0007EE-B1						146	256	167	84.5	3.1
UMI-0015EE-B1										
UMI-0022EE-B1										
UMI-0007EU-B1										
UMI-0015EU-B1										
UMI-0022EU-B1										
UMI-0040EE-B1	170	320	196.3	113	5.6					
UMI-0022CE-B1										
UMI-0015CE-B1										
UMI-0055EE-B1	200	340.6	184.3	104.5	9					
UMI-0075EE-B1										
UMI-0220EE-B1										
UMI-0300EE-B1	250	400	202	123.5	15.5					
UMI-0370EE-B1										
UMI-0450EE-B1										
UMI-0550EE-B1	282	560	238	138	25					
UMI-0750EE-B1										
UMI-0900EE-B1										
UMI-1100EE-B1	338	554	329	–	45					

UMI-B1 ACCESSORIES

Keypads

UMI Series	Keypad Type	Parameters Copy	Article Number
B1	LED Keypad	–	UMI-S0001
	LED Keypad	✓	UMI-S0005
	Keypad Bracket	–	UMI-S0081

All keypad models support standard Ethernet RJ45 cable.

UMI-B1

Additional external keypads are optional for the B1 product family.

Models having rated power above:

- 2.2 kW (3 hp), 3 ph, 480 V
- 1.5 kW (2 hp), 3 ph 220 V

Provided with detachable keypads.

Filters

Inputs filter: Control the electromagnetic interference generated from the VFD

Output filter: Control the interference from the output side of the VFD

C3 Filters

UMI Series	Power Rating		Input Voltage	Article Number
	kW	hp		
B1	0.4 - 2.2	0.5 - 3	1 Ph 220 V	UMI-S0030
	0.75 - 2.2	1 - 3	3 Ph 220 V / 480 V	UMI-S0031

C2 Filters

UMI Series	Power Rating		Input Voltage	Input Filter Article Number	Output Filter Article Number
	kW	hp			
B1	0.4 - 0.75	0.5 - 1	1 Ph 220 V	UMI-S0020	UMI-S0032
	1.5 - 2.2	2 - 3	1 Ph 220 V	UMI-S0021	UMI-S0033
	0.75 - 2.2	1 - 3	3 Ph 220 / 400 / 480 V	UMI-S0022	UMI-S0032
	4 - 5.5	5 - 7.5	3 Ph 220 / 400 / 480 V	UMI-S0023	UMI-S0033
	7.5 - 11	10 - 15	3 Ph 220 / 400 / 480 V	UMI-S0024	UMI-S0036
	15 - 18.5	20 - 25	3 Ph 220 / 400 / 460 V	UMI-S0025	UMI-S0037
	22 - 110	30 - 150	3 Ph 220 / 400 / 460 V	Contact Us	Contact Us

Braking Resistors

Power Rating		Braking Power	Input Voltage	Article Number
kW	hp			
0.4	0.5	250 W	1 / 3 Ph 220 V	UMI-S0051
0.75	1			
1.5	2	500 W	1 / 3 Ph 220 V	UMI-S0052
2.2	3	600 W	1 / 3 Ph 220 V	UMI-S0053
0.75	1	100 W	3 Ph 480 V	UMI-S0054
1.5	2	260 W	3 Ph 480 V	UMI-S0055
2.2	3	390 W	3 Ph 480 V	UMI-S0056
4	5	600 W	3 Ph 480 V	UMI-S0053
5.5	7.5	1000 W	3 Ph 480 V	UMI-S0058
7.5	10	1500 W	3 Ph 480 V	UMI-S0059
11	15	1560 W	3 Ph 480 V	UMI-S0060
15 - 18.5	20 - 25	3 kW	3 Ph 480 V	UMI-S0061
22 - 110	30 - 150	4.5 kW	3 Ph 480 V	Contact Us

Flange Mounting Plate

Power Rating		Article Number
kW	hp	
1.5 - 2.2	2 - 3	UMI-S0070
4 - 5.5	5 - 7.5	UMI-S0071
7.5 - 11	10 - 15	UMI-S0072
15 - 18.5	15 - 25	UMI-S0073
22 - 30	30 - 40	UMI-S0074