

# Variable Frequency Drive

**NEW!**

## Moving your Control Forward – VFD from Unitronics

0.4-2.2kW Single Phase

0.75-110kW Three Phase



# Total Solution



## VFD: Easy to Program. Simple to Use

- EMC built-in filters
- Variety of mounting options
- Temperature - extended operating range
- Modbus RTU fieldbus
- UL, TÜV-SÜD safety and CE certified
- Braking units - built-in
- Sensorless Vector and Torque control
- Heavy-duty overload capacity
- STO (Safe Torque Off)

## One Complete Solution for Control and Automation

**UNISTREAM<sup>®</sup> VISION<sup>™</sup> SAMBA<sup>™</sup>**

Complete  
Range of  
PLC+HMI

Full Range  
of VFDs

All-in-One  
Software  
for PLC,  
HMI & VFD

Outstanding  
Tech Support

# Specifications

		UMI-B1 EU	UMI-B1 UL	UMI-B5 UL
Power	Input Voltage	200-240VAC, Single Phase 380-440VAC, Three Phase	200-240VAC, Single Phase 200-240VAC, Three Phase 380-480VAC, Three Phase	200-240VAC, Three Phase 380-480VAC, Three Phase
	Input Frequency	50/60Hz		
	Supported Motors	Asynchronous Induction Motors, Three Phase Input		Asynchronous Induction Motors, Three Phase Input  Permanent Magnet Synchronous Motors, Three Phase Input
	Output Frequency	0-400Hz		
	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 RS-485		
Input	Analog Inputs	<b>Total 2:</b> 1 input 0-10V, 0-20mA, 1 input 0-10V		<b>Total 3:</b> 2 inputs 0-10V, 0-20mA, 1 input 0-10V
	Digital Inputs	<b>Total 5:</b> 4 inputs 1kHz, 1 input 50kHz		<b>Total 9:</b> 8 inputs 1kHz, 1 input 50kHz
Output	Analog Outputs	<b>Up to 2:</b> 1 output 0-10V, 0-20mA $\leq$ 2.2kW/3HP, (2nd output available from >2.2kW/3HP)	2 outputs 0-10V, 0-20mA	
	Digital Outputs	1 output sink/source		<b>Total 2:</b> 1 output sink/source, 1 output 50kHz
	Relay Outputs	<b>Up to 2:</b> 1 Programmable Multi-functional output. <b>2nd</b> output available from >2.2kW/3HP	<b>Total 2</b> Programmable Multi-functional outputs	
Features	Dynamic Braking Unit	Built-in ( $\leq$ 37kW/50HP)		Built-in ( $\leq$ 30kW/40HP)
		Optional (>37kW/50HP)		Optional (>30kW/40HP)
	EMC Filters	Built-In C3 ( $\geq$ 4kW/5HP), Comply with IEC/EN 61800-3		Built-In C3, Comply with IEC/EN 61800-3
		Optional C3 (<4kW/5HP), Comply with IEC/EN 61800-3		
		Optional C2, Comply with IEC/EN 61800-3		
General	Operating Temperature	(-10) $^{\circ}$ C/14 $^{\circ}$ F – 50 $^{\circ}$ C/122 $^{\circ}$ F (de-rated by 1% for every 1 $^{\circ}$ C/2 $^{\circ}$ F above 40 $^{\circ}$ C/104 $^{\circ}$ F)		
	Altitude	2000m/6600 ft (de-rated by 1% for every additional 100m/330ft above 1000m/3300ft)		
	Enclosure Rating	IP20		
	Mounting Options	Wall and Rail ( $\leq$ 2.2kW/3HP)		Wall, Flange
		Wall and Flange (>2.2kW/3HP)		
	Cooling	Air-cooling		
	Safe Torque Off	√	×	
Compliance	CE, TÜV-SÜD Safety Mark	CE, UL and cUL		

# Product Offering

## UMI-B1 Series - STO



Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)			Safety Class
		kW	HP						
UMI-0004BE-B1	Single phase 200-240V	0.4	0.5	6.5	2.5	80	160	124	Class PLd SIL2 CAT.3
UMI-0007BE-B1		0.75	1	9.3	4.2	80	160	124	
UMI-0015BE-B1		1.5	2	15.7	7.5	80	185	141	
UMI-0022BE-B1		2.2	3	24	10	80	185	141	
UMI-0007EE-B1	Three phase 380-440V	0.75	1	3.4	2.5	80	185	141	Class PLd SIL2 CAT.3
UMI-0015EE-B1		1.5	2	5	4.2	80	185	141	
UMI-0022EE-B1		2.2	3	5.8	5.5	80	185	141	
UMI-0040EE-B1		4	5	13.5	9.5	146	256	167	Class PLe SIL3 CAT.3
UMI-0055EE-B1		5.5	7.5	19.5	14	146	256	167	
UMI-0075EE-B1		7.5	10	25	18.5	170	320	197	
UMI-0110EE-B1		11	15	32	25	170	320	197	
UMI-0150EE-B1		15	20	40	32	170	320	197	
UMI-0185EE-B1		18.5	25	47	38	200	341	185	
UMI-0220EE-B1		22	30	51	45	200	341	185	
UMI-0300EE-B1		30	40	70	60	250	400	202	
UMI-0370EE-B1		37	50	80	75	250	400	202	
UMI-0450EE-B1		45	60	98	92	282	560	238	
UMI-0550EE-B1		55	75	128	115	282	560	238	
UMI-0750EE-B1		75	100	139	150	282	560	238	
UMI-0900EE-B1		90	120	168	180	338	554	330	
UMI-1100EE-B1		110	150	201	215	338	554	330	

## Optional Parts



External Keypads



Flange Mounting Plates



Braking Resistors



C3 Input Filters  
C2 Filters



Dam-board for side heat releasing holes

## Product Designation

UMI - 0022	E	U	- B1
①	②	③	④ ⑤

No.	Key	Description
①	Product Line	Unitronics Motion Inverters
②	Power Range	0004:400W/0.5HP 0022:2.2kW/3HP
③	Power Rating	B: 1PH 200V-240V C: 3PH 200V-240V E: 3PH 380V-440V/480V
④	Certification	U - UL Certified E - TÜV-SÜD Certified
⑤	Product series	B1 / B5

## UMI-B1 Series - UL



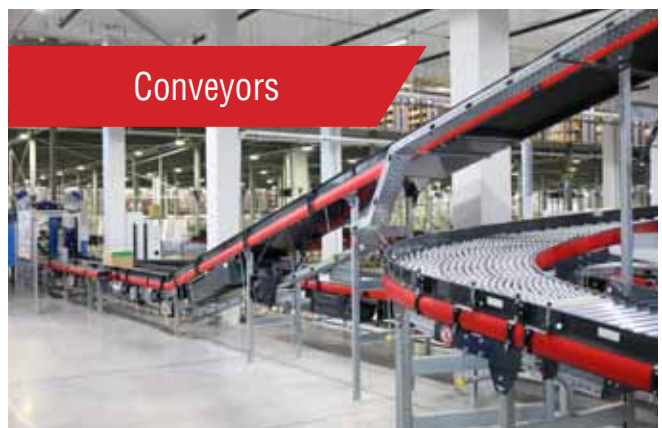
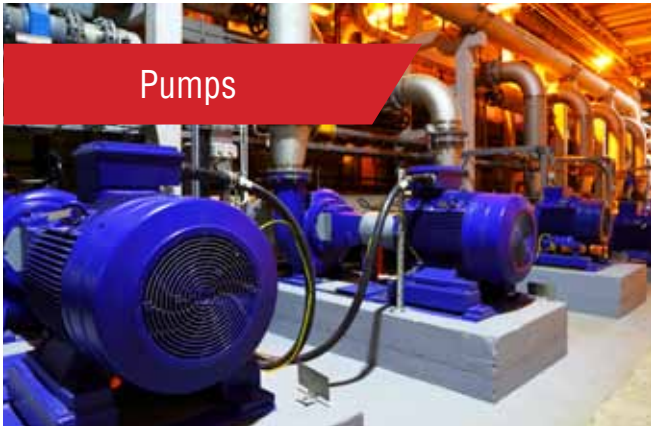
Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)		
		kW	HP					
UMI-0004BU-B1	Single phase 200-240V	0.4	0.5	6.5	2.5	80	160	124
UMI-0007BU-B1		0.75	1	9.3	4.2	80	160	124
UMI-0015BU-B1		1.5	2	15.7	7.5	80	185	141
UMI-0022BU-B1		2.2	3	20	10	80	185	141
UMI-0004CU-B1	Three phase 200-240V	0.4	0.5	3.7	2.5	80	185	141
UMI-0007CU-B1		0.75	1	5	4.2	80	185	141
UMI-0007EU-B1	Three phase 380-480V	0.75	1	3.4	2.5	80	185	141
UMI-0015EU-B1		1.5	2	5	4.2	80	185	141
UMI-0022EU-B1		2.2	3	5.8	5.5	80	185	141

## UMI-B5 Series - UL



Article Number	Input Voltage	Rated Output Power		Rated Input Current (A)	Rated Output Current (A)	Dimensions (W x H x D mm)		
		kW	HP					
UMI-0007CU-B5	Three phase 200-240V	0.75	1	5	4.5	126	193	175
UMI-0015CU-B5		1.5	2	7.7	7	146	263	181
UMI-0022CU-B5		2.2	3	11	10	146	263	181
UMI-0040CU-B5		4	5	17	16	170	332	216
UMI-0055CU-B5		5.5	7.5	21	20	170	332	216
UMI-0075CU-B5		7.5	10	31	30	230	342	216
UMI-0110CU-B5		11	15	43	42	255	407	384
UMI-0150CU-B5		15	20	56	55	255	407	384
UMI-0185CU-B5		18.5	25	71	70	270	555	325
UMI-0220CU-B5		22	30	81	80	270	555	325
UMI-0300CU-B5		30	40	112	110	270	555	325
UMI-0370CU-B5		37	50	132	130	325	680	365
UMI-0450CU-B5		45	60	163	160	325	680	365
UMI-0550CU-B5		55	75	200	200	325	680	365
UMI-0015EU-B5		Three phase 380-480V	1.5	2	5	3.7	126	193
UMI-0022EU-B5	2.2		3	5.8	5	126	193	175
UMI-0040EU-B5	4		5	13.5	9.5	146	263	181
UMI-0055EU-B5	5.5		7.5	19.5	14	146	263	181
UMI-0075EU-B5	7.5		10	25	18.5	170	332	216
UMI-0110EU-B5	11		15	32	25	170	332	216
UMI-0150EU-B5	15		20	40	32	230	342	216
UMI-0185EU-B5	18.5		25	47	38	230	342	216
UMI-0220EU-B5	22		30	56	45	255	407	384
UMI-0300EU-B5	30		40	70	60	255	407	384
UMI-0370EU-B5	37		50	80	75	270	555	325
UMI-0450EU-B5	45		60	94	92	270	555	325
UMI-0550EU-B5	55		75	128	115	270	555	325
UMI-0750EU-B5	75		100	160	150	325	680	365
UMI-0900EU-B5	90		120	190	180	325	680	365
UMI-1100EU-B5	110	150	225	215	325	680	365	

# Applications



And More!



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