

# Variable Frequency Drive

## Moving your Control Forward – VFD from Unitronics

0.4-2.2kW Single Phase

0.75-110kW Three Phase



# VFDs

Easy to Program. Simple to Use.

High performance, cost effective VFDs, ideal for both machines & process control.

## Features:

- EMI Filters, Built-In
- Braking units - Built-in
- Heavy-Duty overload capacity, up to 200%
- Coated PCBs: minimize dust penetration damage
- RS485 Modbus RTU fieldbus, Built-in
- Sensorless control: Vector, Torque, volts per Hz
- STO (SIL3)
- Mounting options: Wall, Flange, Rail
- Optional communication and I/O extension
- UL approved, TÜV-SÜD Safety and CE Certified



- Fully integrated • Robust • Broad power & voltage range •

Use as a stand-alone product, or as part of a complete All-in-One package with our controllers.

Program the VFD using the same programming software as our controllers: UniStream®, Vision™ and Samba™



# VFD Specifications

		UMI-B1 EU	UMI-B1 UL	UMI-B5 UL	
Power	Input Voltage	200-240VAC, Single Phase 380-480VAC, 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	Total 2: 1 input 0-10V, 0-20mA, 1 input 0-10V		Total 3: 2 inputs 0-10V, 0-20mA, 1 input 0-10V	
	Digital Inputs	Total 5: 4 inputs 1kHz, 1 input 50kHz		Total 9: 8 inputs 1kHz, 1 input 50kHz	
Output	Analog Outputs	Up to 2: 1 output 0-10V, 0-20mA ≤2.2kW/3HP, (2nd output available from >2.2kW/3HP)	2 outputs 0-10V, 0-20mA		
	Digital Outputs	1 output sink/source		Total 2: 1 output sink/source, 1 output 50kHz	
	Relay Outputs	Up to 2: 1 Programmable Multi-functional output. 2nd output available from >2.2kW/3HP	Total 2 Programmable Multi-functional outputs		
Features	Dynamic Braking Unit	Built-in (≤37kW/50HP)		Built-in (≤30kW/40HP)	
		Optional (>37kW/50HP)		Optional (>30kW/40HP)	
	EMC Filters	Built-In C3 (≥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)°C/14°F – 50°C/122°F (de-rated by 1% for every 1°C/2°F above 40°C/104°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 (≤2.2kW/3HP)		Wall, Flange	
		Wall and Flange (>2.2kW/3HP)			
	Cooling	Air-cooling			
	Safe Torque Off	√	×		
Compliance	CE, TUV-SUD Safety Mark, UL and cUL*		CE, UL and cUL		

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

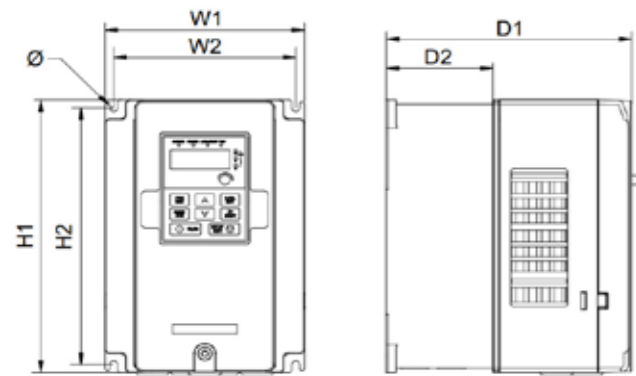
# VFD Models



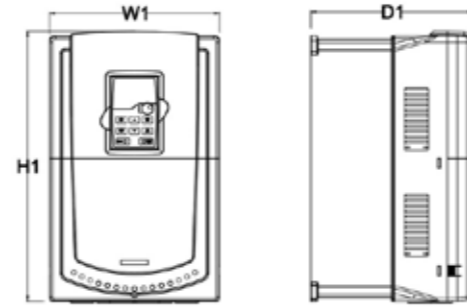
POWER (KW/HP)	Voltage	Part number	Rated Output current (A)	UL & cUL	Safety (TUV SUD)	Permanent Magnet Control	Extended I/Os
0.4\0.5	1Ph 200-240V	UMI-0004BE-B1	2.5	√	STO	-	-
		UMI-0004BU-B1	2.5	√	-	-	-
	3Ph 200-240V	UMI-0004CU-B1	2.5	√	-	-	-
0.75\1	1Ph 200-240V	UMI-0007BE-B1	4.2	√	STO	-	-
		UMI-0007BU-B1	4.2	√	-	-	-
	3Ph 200-240V	UMI-0007CU-B1	4.2	√	-	-	-
		UMI-0007CU-B5	4.5	√	-	√	√
	3Ph 380-480V	UMI-0007EE-B1	2.5	√	STO	-	-
		UMI-0007EU-B1	2.5	√	-	-	-
1.5\2	1Ph 200-240V	UMI-0015BE-B1	7.5	√	STO	-	-
		UMI-0015BU-B1	7.5	√	-	-	-
	3Ph 200-240V	UMI-0015CU-B5	7	√	-	√	√
	3Ph 380-480V	UMI-0015EE-B1	4.2	√	STO	-	-
		UMI-0015EU-B1	4.2	√	-	-	-
		UMI-0015EU-B5	3.7	√	-	√	√
2.2\3	1Ph 200-240V	UMI-0022BE-B1	10	√	STO	-	-
		UMI-0022BU-B1	10	√	-	-	-
	3Ph 200-240V	UMI-0022CU-B5	10	√	-	√	√
	3Ph 380-480V	UMI-0022EE-B1	5.5	√	STO	-	-
		UMI-0022EU-B1	5.5	√	-	-	-
		UMI-0022EU-B5	5	√	-	√	√
4\5	3Ph 200-240V	UMI-0040CU-B5	16	√	-	√	√
	3Ph 380-480V	UMI-0040EE-B1	9.5	√	STO	-	-
		UMI-0040EU-B5	9.5	√	-	√	√
5.5\7.5	3Ph 200-240V	UMI-0055CU-B5	21	√	-	√	√
	3Ph 380-480V	UMI-0055EE-B1	14	√	STO	-	-
		UMI-0055EU-B5	14	√	-	√	√
7.5\10	3Ph 200-240V	UMI-0075CU-B5	30	√	-	√	√
	3Ph 380-480V	UMI-0075EE-B1	18.5	√	STO	-	-
		UMI-0075EU-B5	18.5	-	-	√	√

POWER (KW/HP)	Voltage	Part number	Rated Output current (A)	UL & cUL	Safety (TUV SUD)	Permanent Magnet Control	Extended I/Os
11\15	3Ph 200-240V	UMI-0110CU-B5	42	√	-	√	√
	3Ph 380-480V	UMI-0110EE-B1	25	√	STO	-	-
		UMI-0110EU-B5	25	√	-	-	-
15\20	3Ph 200-240V	UMI-0150CU-B5	55	√	-	√	√
	3Ph 380-440V	UMI-0150EE-B1	32	-	STO	-	-
	3Ph 380-480V	UMI-0150EU-B5	32	√	-	√	√
18.5\25	3Ph 200-240V	UMI-0185CU-B5	70	√	-	√	√
	3Ph 380-440V	UMI-0185EE-B1	38	-	STO	-	-
	3Ph 380-480V	UMI-0185EU-B5	38	√	-	√	√
22\30	3Ph 200-240V	UMI-0220CU-B5	80	√	-	√	√
	3Ph 380-440V	UMI-0220EE-B1	45	-	STO	-	-
	3Ph 380-480V	UMI-0220EU-B5	45	√	-	√	√
30\40	3Ph 200-240V	UMI-0300CU-B5	110	√	-	√	√
	3Ph 380-440V	UMI-0300EE-B1	60	-	STO	-	-
	3Ph 380-480V	UMI-0300EU-B5	60	√	-	√	√
37\50	3Ph 200-240V	UMI-0370CU-B5	130	√	-	√	√
	3Ph 380-440V	UMI-0370EE-B1	75	-	STO	-	-
	3Ph 380-480V	UMI-0370EU-B5	75	√	-	√	√
45\60	3Ph 200-240V	UMI-0450CU-B5	160	√	-	√	√
	3Ph 380-440V	UMI-0450EE-B1	92	-	STO	-	-
	3Ph 380-480V	UMI-0450EU-B5	92	√	-	√	√
55\75	3Ph 200-240V	UMI-0550CU-B5	200	√	-	√	√
	3Ph 380-440V	UMI-0550EE-B1	115	-	STO	-	-
	3Ph 380-480V	UMI-0550EU-B5	115	√	-	√	√
75\100	3Ph 380-440V	UMI-0750EE-B1	150	-	STO	-	-
	3Ph 380-480V	UMI-0750EU-B5	150	√	-	√	√
90\120	3Ph 380-440V	UMI-0900EE-B1	180	-	STO	-	-
	3Ph 380-480V	UMI-0900EU-B5	180	√	-	√	√
110\150	3Ph 380-440V	UMI-1100EE-B1	215	-	STO	-	-
	3Ph 380-480V	UMI-1100EU-B5	215	√	-	√	√

## UMI- B1: Drive Dimensions



## UMI- B5: Drive Dimensions



Model	W1	H1	D1	D2	Weight (kg)	
UMI-0004BE-B1	80	160	123.5	120.3	0.9	
UMI-0007BE-B1						
UMI-0004BU-B1						
UMI-0007BU-B1						
UMI-0015BE-B1		185	140.5	137.3	1.2	
UMI-0022BE-B1						
UMI-0015BU-B1						
UMI-0004CU-B1						
UMI-0007CU-B1						
UMI-0022BU-B1						
UMI-0007EE-B1						1
UMI-0015EE-B1						
UMI-0022EE-B1						
UMI-0007EU-B1						
UMI-0015EU-B1						
UMI-0022EU-B1						
UMI-0040EE-B1	146	256	167	84.5	3.1	
UMI-0055EE-B1						
UMI-0075EE-B1	170	320	196.3	113	5.6	
UMI-0110EE-B1					5.9	
UMI-0150EE-B1						
UMI-0185EE-B1	200	340.6	184.3	104.5	9	
UMI-0220EE-B1						
UMI-0300EE-B1	250	400	202	123.5	15.5	
UMI-0370EE-B1						
UMI-0450EE-B1	282	560	238	138	25	
UMI-0550EE-B1						
UMI-0750EE-B1						
UMI-0900EE-B1	338	554	329	-	45	
UMI-1100EE-B1						

Model	W1	H1	D1	Weight (kg)	
UMI-0007CU-B5	126	196	175	1.2	
UMI-0015EU-B5				2.5	
UMI-0022EU-B5				2.5	
UMI-0015CU-B5	146	263	181	4	
UMI-0022CU-B5					
UMI-0040EU-B5					
UMI-0055EU-B5					
UMI-0040CU-B5	170	332	216	7	
UMI-0055CU-B5					
UMI-0750EU-B5					
UMI-0110EU-B5	230	342	216	8	
UMI-0075CU-B5					
UMI-0150EU-B5					
UMI-0185EU-B5	255	407	245	10	
UMI-0110CU-B5					
UMI-0150CU-B5					
UMI-0220EU-B5					
UMI-0300EU-B5					
UMI-0185CU-B5					270
UMI-0220CU-B5					
UMI-0300CU-B5					
UMI-0370EU-B5					
UMI-0450EU-B5	325	680	365	47	
UMI-0550EU-B5					
UMI-0370CU-B5					
UMI-0450CU-B5					
UMI-0550CU-B5					
UMI-0750EU-B5					
UMI-0900EU-B5	338	554	329	-	45
UMI-1100EU-B5					

## Optional Parts



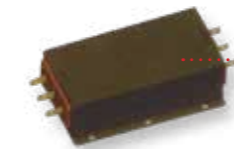
External Keypads



Flange Mounting Plates



Braking Resistors



C3 Input Filters  
C2 Filters

## Product Designation Key

UMI - 0022 E U - B1				
①	②	③	④	⑤

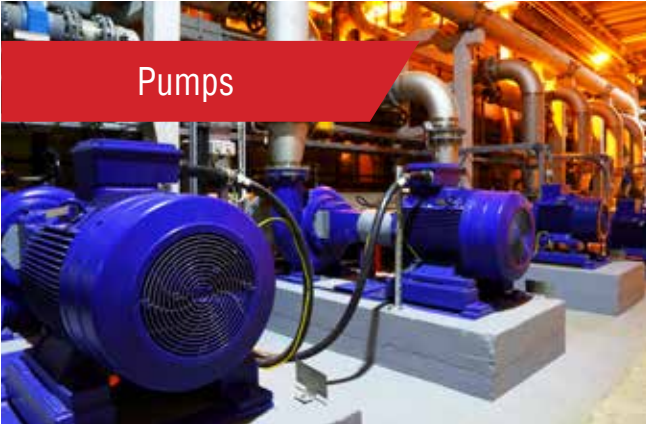
No.	Key	Description
①	Product Line	Unitronics Motion Inverters
②	Power Range	0004:400W/0.5HP 0022:2.2kW/3HP
③	Power Rating	B: 1PH 200V-240V C: 3PH 200V-240V E: 3PH 380V-440V/480V
④	Certification	U - UL Certified* E - TÜV-SÜD Certified
⑤	Product series	B1 / B5

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



# Applications

Pumps



Printing



Filling



Packaging



Food



Conveyors



Fans



Compressors



And More!



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