

B7 SERIES VFDS

ETHERNET CONNECTIVITY, FUNCTIONAL SAFETY & CLOSED-LOOP PRECISION

High-performance drives. Simple setup. Smarter motion.

KEY FEATURES:

ETHERNET CONNECTIVITY:

Integrate seamlessly into modern industrial networks via optional communication card.

BUILT-IN STO

B7 is Functional Safety certified.

BROAD POWER & VOLTAGE RANGE

200-240 V: 0.75 kW–55 kW / 1–75 hp
380-480 V: 1.5 kW–500 kW / 2–670 hp
520-600 V: 0.75 kW–110 kW / 1–150 hp

CLOSED-LOOP CONTROL – POSITION, SPEED, AND TORQUE

Supports both constant and variable torque loads.

STANDARDS

UL & cUL, CE, and Functional Safety certified.

BUILT-IN BRAKE UNIT

For VFDS of 220 V (≤ 15 kW / 20 hp), 460 V (≤ 30 kW / 40 hp), and 575 V (≤ 18.5 kW / 25 hp).

LCD KEYBOARD

Line text + graphic screen and 'Wizard Mode' makes parameter setup easy.

EXPANDABLE ARCHITECTURE

Add expansion cards to fit your needs (communication, PG encoder, I/O).

SUPPORTS MULTIPLE MOTOR TYPES

Including Asynchronous Induction Motors and PM Synchronous Motors.

PRODUCT DESIGNATION KEY

UMI - 0022 E U - B7

1 2 3 4 5

Example: UMI-0022EU-B7

No.	Key	Description
1	Product Line	Unitronics Motion Inverters
2	Power Range	0007:750 W / 1 hp 0022:2.2 kW / 3 hp
3	Power Rating	C: 3 Ph 200V - 240 V E: 3 Ph 380 V - 480 V F: 3 Ph 520 - 600 V
4	Certification	U: CE, UL and cUL certified
5	Product series	B7

SIMPLIFIED INTEGRATION. REDUCED ENGINEERING TIME.

B7 inverters are engineered for **quick setup**, **smooth commissioning**, and reduced energy consumption. With **automatic integration and ready-made motion code**, you can go from unboxing to production faster—with fewer errors and less overhead. Use them independently or as part of your Unitronics All-in-One automation solution.



UMI-B7 SERIES

Product Specifications

Power	Input Voltage	3 Ph, 200 - 240 V 3 Ph, 380 - 480 V 3 Ph, 520 - 600 V
	Input Frequency	50 / 60 Hz (47 - 63 Hz)
	Supported Motors	Asynchronous Induction Motors, Permanent Magnet Synchronous
	Output Frequency	0 - 400 Hz
	Overload Capacity	150%, 60 seconds, 180%, 10 seconds, 200%, 1 second
Control	Control Method	SVPWM (Space Vector PWM) VC (Closed loop vector control) SVC (Sensorless Vector Control)
	Control Setting	MODBUS, Analog, Digital, PID, Pulse, variety of communication cards
	Communication	Build in MODBUS RTU RS485 + optional communication cards
	Keypad	Removable: All power range
Input	Analog Inputs	Total 2: AI1: 0 - 10 V / 0 - 20 mA, AI2: (-10) - 10 V
	Digital Inputs	4 regular inputs; max.frequency: 1 kHz; internal impedance: 3.3 kOhm 2 high-speed inputs; max frequency:50 kHz
Output	Analog Outputs	1 output, A O1: 0 - 10 V / 0 - 20 mA
	Digital Outputs	Total 2: 1 output sink / source, 1 output 50 kHz
	Relay Outputs	Total 2 Programmable Multi - functional outputs
Features	Dynamic Braking Unit (DBU)	Built-in for VFDs of 220 V (15 kW / 20 hp), 480 V (30 kW / 40 hp), and 575 V (18.5 kW / 25 hp) Optional DBU Units for VFDs of 220 V (18.5-55 kW / 25-75 hp), 480 V (37-500 kW / 50- 670 hp), 575 V (22-110 kW / 30-150 hp)
	EMC Filters	For 230 / 480 VFDs Built-In C3, Comply with IEC / 61800-3
	Expansion Cards	Max number of Expansion Cards: 2 for drives 5.5 kW and 3 for drives 7.5 kW
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)
	Ingress Protection Rating	IP20
	Mounting Options	Wall, floor, flange mounting
	Cooling	Air-cooling
	Safe Torque Off	Integrated STO (SIL2)
	Compliance	CE, UL and cUL

TRUSTED. RECOGNIZED. AWARDED.

Voted best by engineers.

Unitronics has received top 14 industry awards – voted the best by engineers.

From automation innovation to interface design, our solutions are recognized where it matters most: by the people who use them.



ONE
— INTEGRATED —
SOLUTION
for Control & Automation

UNISTREAM®

VISION

SAMBA

JAZZ



UMI-B7 SERIES

Power Rated Specifications

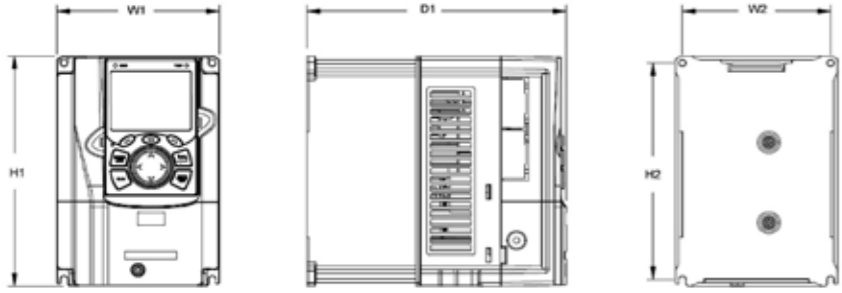
Article Number	Rated Output Power (kW / hp)	Rated Output Current (A)	Rated Power Frequency (Hz)	Rated Power Voltage (V)		
UMI-0007CU-B7	0.75 / 1	4.5	50 Hz / 60 Hz, Allowed range: 47 – 63 Hz	3 Ph 200 – 240 V		
UMI-0015CU-B7	1.5 / 2	7				
UMI-0022CU-B7	2.2 / 3	10				
UMI-0040CU-B7	4 / 5	16				
UMI-0055CU-B7	5.5 / 7.5	20				
UMI-0075CU-B7	7.5 / 10	30				
UMI-0110CU-B7	11 / 15	42				
UMI-0150CU-B7	15 / 20	55				
UMI-0185CU-B7	18.5 / 25	70				
UMI-0220CU-B7	22 / 30	80				
UMI-0300CU-B7	30 / 40	110				
UMI-0370CU-B7	37 / 50	130				
UMI-0450CU-B7	45 / 60	160				
UMI-0550CU-B7	55 / 75	200				
UMI-0015EU-B7	1.5 / 2	3.7			50 Hz / 60 Hz, Allowed range: 47–63 Hz	3 Ph 380–480 V
UMI-0022EU-B7	2.2 / 3	5				
UMI-0040EU-B7	4 / 5	9.5				
UMI-0055EU-B7	5.5 / 7.5	14				
UMI-0075EU-B7	7.5 / 10	18.5				
UMI-0110EU-B7	11 / 15	25				
UMI-0150EU-B7	15 / 20	32				
UMI-0185EU-B7	18.5 / 25	38				
UMI-0220EU-B7	22 / 30	45				
UMI-0300EU-B7	30 / 40	60				
UMI-0370EU-B7	37 / 50	75				
UMI-0450EU-B7	45 / 60	92				
UMI-0550EU-B7	55 / 75	115				
UMI-0750EU-B7	75 / 100	150				
UMI-0900EU-B7	90 / 120	180				
UMI-1100EU-B7	110 / 150	215				
UMI-1320EU-B7	132 / 175	260				
UMI-1600EU-B7	160 / 215	305				
UMI-1850EU-B7	185 / 250	340				
UMI-2000EU-B7	200 / 300	380				
UMI-2200EU-B7	220 / 300	425				
UMI-2500EU-B7	250 / 335	480				
UMI-2800EU-B7	280 / 375	530				
UMI-3150EU-B7	315 / 420	600				
UMI-3500EU-B7	350 / 470	650				
UMI-4000EU-B7	400 / 535	720				
UMI-5000EU-B7	500 / 670	860				

Article Number	Rated Output Power (kW / hp)	Rated Output Current (A)	Rated Power Frequency (Hz)	Rated Power Voltage (V)
UMI-0007FU-B7	0.75 / 1	2.1	50 Hz / 60 Hz, Allowed range: 47–63 Hz	3 Ph 520–600 V
UMI-0015FU-B7	1.5 / 2	3.2		
UMI-0022FU-B7	2.2 / 3	4.5		
UMI-0040FU-B7	4 / 5	6.5		
UMI-0055FU-B7	5.5 / 7.5	9		
UMI-0075FU-B7	7.5 / 10	12		
UMI-0110FU-B7	11 / 15	16		
UMI-0150FU-B7	15 / 20	21		
UMI-0185FU-B7	18.5 / 25	27		
UMI-0220FU-B7	22 / 30	35		
UMI-0300FU-B7	30 / 40	45		
UMI-0370FU-B7	37 / 50	52		
UMI-0450FU-B7	45 / 60	62		
UMI-0550FU-B7	55 / 75	86		
UMI-0750FU-B7	75 / 100	98		
UMI-0900FU-B7	90 / 125	120		
UMI-1100FU-B7	110 / 150	150		



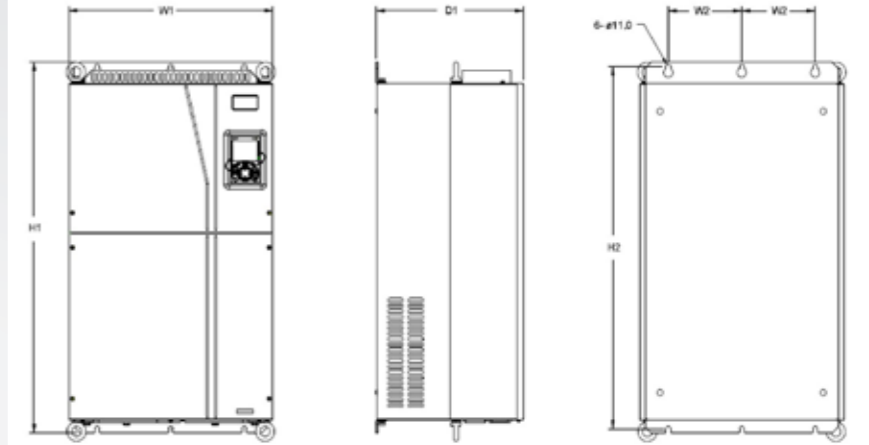
UMI- B7 SERIES

DRIVE DIMENSIONS

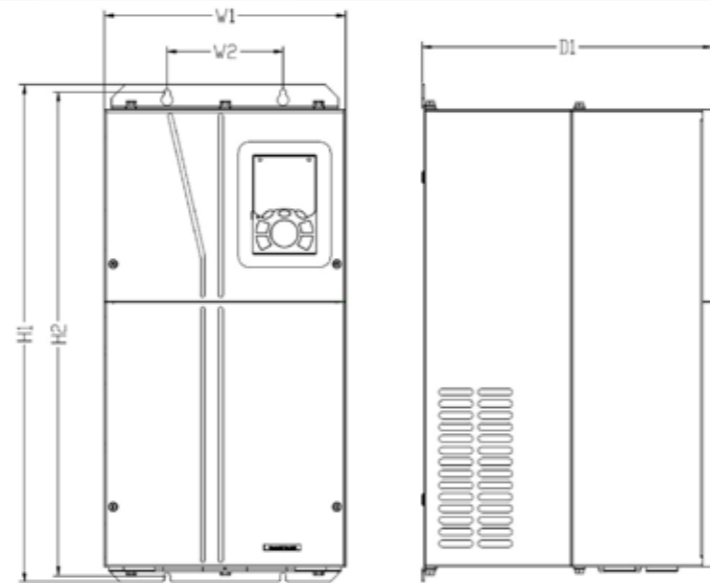


◀ **Wall installation:**
 220 V 0.75 - 15 kW / 1- 20 hp
 480 V 1.5 - 30 kW / 2 - 40 hp

Wall installation: ▶
 460 V 132 - 200 kW / 175 - 270 hp



Wall installation: ▶
 220 V 18.5 - 55 kW / 25 - 75 hp
 460 V 37 - 55 kW / 50 - 75 hp



UMI- B7 SERIES: DRIVE DIMENSIONS

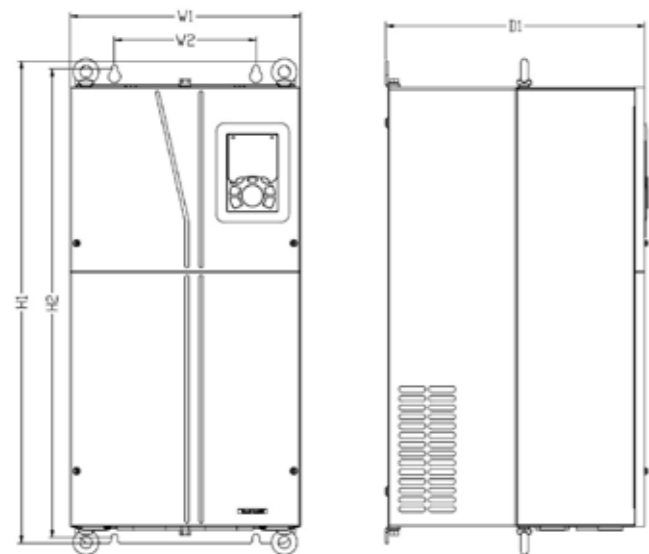
Wall installation dimensions of 220 V 0.75-55 kW (unit:mm)

Power Rating	W1	W2	H1	H2	D1	Installation Hole
0.75 kW / 1 hp	126	115	186	175	185	Ø5
1.5 - 2.2 kW / 2 - 3 hp	146	131	256	243.5	192	Ø5
4 - 5.5 kW / 5 - 7.5 hp	170	151	320	303.5	219	Ø6
7.5 kW / 10 hp	230	210	330	311	217	Ø6
11 - 15 kW / 15 - 20 hp	255	237	400	384	242	Ø7
18.5 - 30 kW / 25 - 40 hp	270	130	557	540	325	Ø7
37 - 55 kW / 50 - 75 hp	325	200	682	661	365	Ø9.5

Wall installation dimensions of 460V VFDs (unit:mm)

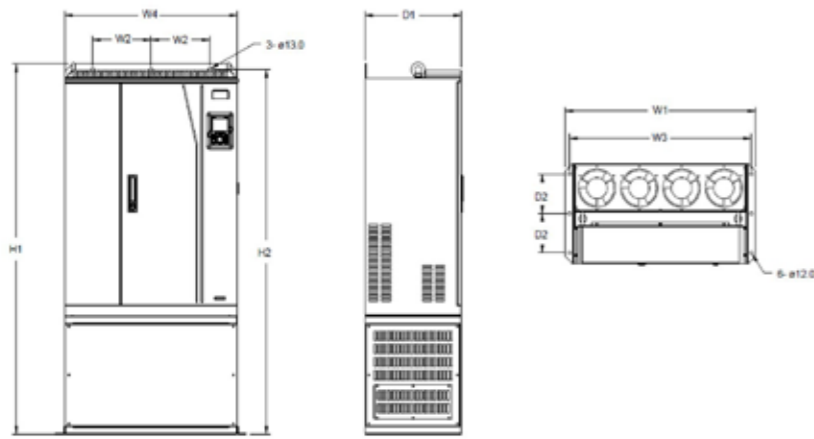
Power Rating	W1	W2	H1	H2	D1	Installation Hole
1.5 - 2.2 kW / 2 - 3 hp	126	115	186	175	185	Ø5
4 - 5.5 kW / 5 - 7.5 hp	146	131	256	243.5	192	Ø5
7.5 - 11 kW / 10 - 15 hp	170	151	320	303.5	219	Ø6
15 - 18.5 kW / 20 - 25 hp	230	210	330	311	217	Ø6
22 - 30 kW / 30 - 40 hp	255	237	400	384	242	Ø7
37 - 55 kW / 50 - 75 hp	270	130	557	540	325	Ø7
75 - 110 kW / 100 - 150 hp	325	200	682	661	365	Ø9.5
132 - 200 kW / 175 - 270 hp	500	180	872	850	360	Ø11

◀ **Wall installation:**
 480 V 75 - 110 kW /
 100 - 150 hp



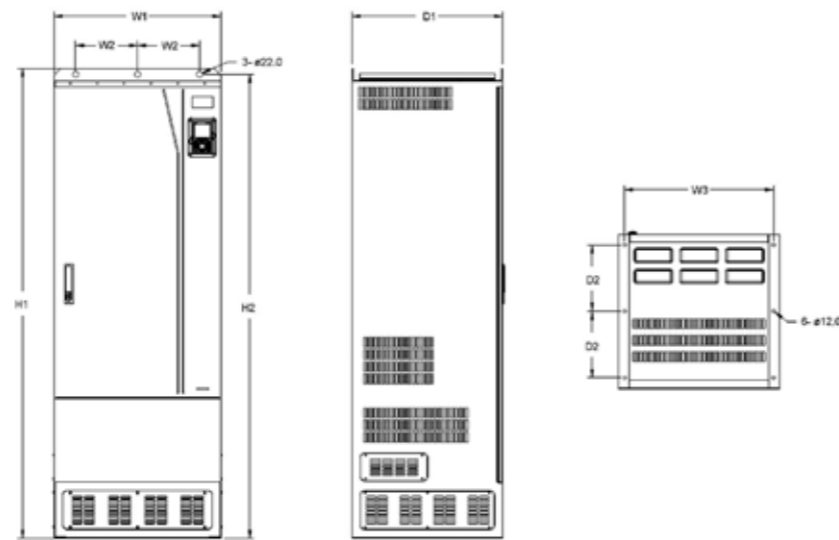
UMI-B7 SERIES

DRIVE DIMENSIONS



◀ **Floor installation:**
480 V 220 - 315 kW / 300 - 420 hp

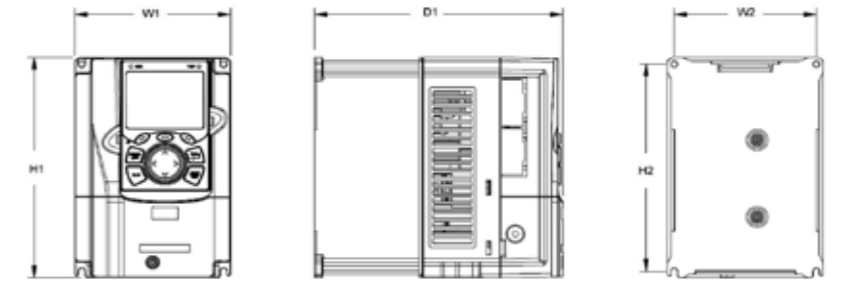
Floor installation:
480 V 350 - 500 kW /
470 - 670 hp ▶



Floor installation dimensions of 480 V 350 - 500 kW / 470 - 670 hp (unit:mm)

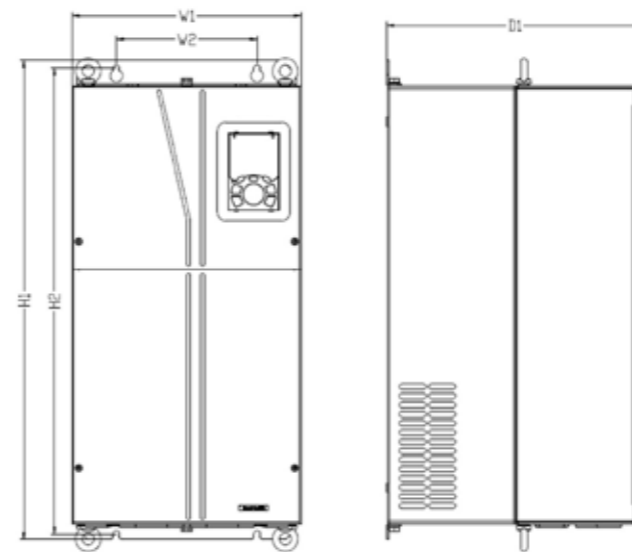
Power Rating	W1	W2	W3	W4	H1	H2	D1	D2	Installation hole
220 - 315 kW / 300 hp - 420 hp	750	230	714	680	1410	1390	380	150	Ø13/12
350 - 500 kW / 470 - 670 hp	620	230	572	-	1700	1678	560	240	Ø22/12

Wall installation:
575 V 0.75 - 18.5 kW / 1 - 25 hp ▶



Wall installation dimensions of 575 V 0.75 - 18.5 kW / 1-25 hp (unit:mm)

Power Rating	W1	W2	H1	H2	D1	Installation hole
0.75 - 2.2 kW / 1 - 3 hp	146	131	256	243.5	192	Ø5
4 - 7.5 kW / 5 - 10 hp	170	151	320	303.5	219	Ø6
11 - 18.5 kW / 15 - 25 hp	230	210	330	311	217	Ø6



◀ **Wall installation:**
575 V 22 - 110 kW / 30 - 150 hp

Wall installation dimensions of 575 V 22 - 110 kW / 30 - 150 hp (unit:mm)

Power Rating	W1	W2	H1	H2	D1	Installation Hole
22 - 37 kW / 30 - 50 hp	270	130	557	540	325	Ø7
45 - 110 kW / 60 - 150 hp	325	200	682	661	365	Ø9.5

UMI-B7 ACCESSORIES

Keypad

Article Number	Keypad Type
UMI-S0083	B7 LCD Keypad
UMI-S0082	B7 Keypad mounting bracket

All keypad models support standard Ethernet RJ45 cable.

Extension Cards

Article Number	Description
UMI-S0006	CANopen communication card
UMI-S0008	EtherCAT communication card
UMI-S0007	EthernetIP communication card
UMI-S0009	Modbus TCP communication card
UMI-S0015	PROFINET communication card
UMI-S0170	I/O card
UMI-S0011	Multifunction incremental PG card
UMI-S0013	Resolver PG card
UMI-S0014	Sin/Cos PG card
UMI-S0010	24 V incremental PG card

Braking Resistors 10% ED 3 Ph 220 V

Article Number	Power Rating		Resistance / Breaking Power	Input Voltage
	kW	hp		
UMI-S0400	0.75	1	150 Ω / 390 W	3 Ph, 220 V
UMI-S0401	1.5	2	85 Ω / 260 W	3 Ph, 220 V
UMI-S0402	2.2	3	65 Ω / 390 W	3 Ph, 220 V
UMI-S0403	4	5	36 Ω / 600 W	3 Ph, 220 V
UMI-S0404	5.5	7.5	26 Ω / 1000 W	3 Ph, 220 V
UMI-S0405	7.5	10	20 Ω / 1500 W	3 Ph, 220 V
UMI-S0406	11 - 15	15 - 20	8.2 Ω / 3000 W	3 Ph, 220 V

For 18.5 kW / 20 hp external DBU (Dynamic Braking Unit) is required.

Braking Resistors 10% ED 3 Ph 400 V

Article Number	Power Rating		Resistance / Breaking Power	Input Voltage
	kW	hp		
UMI-S0407	1.5	2	250 Ω / 260 W	3 Ph, 400 \ 480 V
UMI-S0400	2.2	3	150 Ω / 390 W	3 Ph, 400 \ 480 V
UMI-S0408	4	5	100 Ω / 600 W	3 Ph, 400 \ 480 V
UMI-S0409	5.5	7.5	85 Ω / 1000 W	3 Ph, 400 \ 480 V
UMI-S0410	7.5	10	65 Ω / 1500 W	3 Ph, 400 \ 480 V
UMI-S0411	11	15	40 Ω / 1560 W	3 Ph, 400 \ 480 V
UMI-S0412	15 - 18.5	20 - 25	27 Ω / 3000 W	3 Ph, 400 \ 480 V
UMI-S0413	22 - 30	30 - 40	20 Ω / 6000 W	3 Ph, 400 \ 480 V

For 37 kW / 20 hp external DBU (Dynamic Braking Unit) is required.

Input / Output C2 Filters with Drive Reference

Article Number	Description	Input Filter C2 Article Number	Output Filter C2 Article Number
UMI-0007CU-B7	0.75 kW / 1 hp, 230 V, 3 Ph	UMI-S0022	UMI-S0032
UMI-0015CU-B7	1.5 kW / 2 hp, 230 V, 3 Ph	UMI-S0023	UMI-S0033
UMI-0015EU-B7	1.5 kW / 2 hp, 480 V, 3 Ph	UMI-S0022	UMI-S0032
UMI-0022CU-B7	2.2 kW / 3 hp, 230 V, 3 Ph	UMI-S0023	UMI-S0033
UMI-0022EU-B7	2.2 kW / 3 hp, 480 V, 3 Ph	UMI-S0022	UMI-S0032
UMI-0040CU-B7	4 kW / 5hp, 230 V, 3 Ph	UMI-S0024	UMI-S0036
UMI-0040EU-B7	4 kW / 5hp, 480 V, 3 Ph	UMI-S0023	UMI-S0033
UMI-0055CU-B7	5.5 kW / 7.5 hp, 230 V, 3 Ph	UMI-S0024	UMI-S0036
UMI-0055EU-B7	5.5 kW / 7.5 hp, 480 V, 3 Ph	UMI-S0023	UMI-S0033
UMI-0075CU-B7	7.5 kW / 10 hp, 230 V, 3 Ph	UMI-S0025	UMI-S0037
UMI-0075EU-B7	7.5 kW / 10 hp, 480 V, 3 Ph	UMI-S0024	UMI-S0036
UMI-0110CU-B7	11 kW / 15 hp, 230 V, 3 Ph	UMI-S0026	UMI-S0038
UMI-0110EU-B7	11 kW / 15 hp, 480 V, 3 Ph	UMI-S0024	UMI-S0036
UMI-0150CU-B7	15 kW / 20 hp, 230 V, 3 Ph	UMI-S0026	UMI-S0038
UMI-0150EU-B7	15 kW / 20 hp, 480 V, 3 Ph	UMI-S0024	UMI-S0037
UMI-0185CU-B7	18.5 kW / 25 hp, 230 V, 3 Ph	UMI-S0027	UMI-S0039
UMI-0185EU-B7	18.5 kW / 25 hp, 480 V, 3 Ph	UMI-S0025	UMI-S0037
UMI-0220CU-B7	22 kW / 30 hp, 230 V, 3 Ph	UMI-S0027	UMI-S0039
UMI-0220EU-B7	22 kW / 30 hp, 480 V, 3 Ph	UMI-S0026	UMI-S0038
UMI-0300CU-B7	30 kW / 40 hp, 230 V, 3 Ph	UMI-S0028	UMI-S0040
UMI-0300EU-B7	30 kW / 40 hp, 480 V, 3 Ph	UMI-S0026	UMI-S0038
UMI-0370CU-B7	37 kW / 50 hp, 230 V, 3 Ph	UMI-S0028	UMI-S0040
UMI-0370EU-B7	37 kW / 50 hp, 480 V, 3 Ph	UMI-S0027	UMI-S0039
UMI-0450CU-B7	45 kW / 60 hp, 230 V, 3 Ph	UMI-S0042	UMI-S0044
UMI-0450EU-B7	45 kW / 60 hp, 480 V, 3 Ph	UMI-S0027	UMI-S0039
UMI-0550CU-B7	55 kW / 75 hp, 230 V, 3 Ph	UMI-S0043	UMI-S0045
UMI-0550EU-B7	55 kW / 75 hp, 480 V, 3 Ph	UMI-S0028	UMI-S0040
UMI-0750EU-B7	75 kW / 100 hp, 480 V, 3 Ph	UMI-S0028	UMI-S0040
UMI-0900EU-B7	90 kW / 125 hp, 480 V, 3 Ph	UMI-S0029	UMI-S0041
UMI-1100EU-B7	110 kW / 150 hp, 480 V, 3 Ph	UMI-S0029	UMI-S0041
UMI-1320EU-B7	132 kW / 175 hp, 480 V, 3 Ph	UMI-S0029	UMI-S0041
UMI-1600EU-B7	160 kW / 215 hp, 480 V, 3 Ph	UMI-S0250	UMI-S0300
UMI-1850EU-B7	185 kW / 250 hp, 480 V, 3 Ph	UMI-S0250	UMI-S0300
UMI-2000EU-B7	200 kW / 270 hp, 480 V, 3 Ph	UMI-S0250	UMI-S0300
UMI-2200EU-B7	220 kW / 300 hp, 480 V, 3 Ph	UMI-S0251	UMI-S0306
UMI-2500EU-B7	250 kW / 335 hp, 480 V, 3 Ph	UMI-S0251	UMI-S0306
UMI-2800EU-B7	280 kW / 375 hp, 480 V, 3 Ph	UMI-S0251	UMI-S0306
UMI-3150EU-B7	315 kW / 420 hp, 480 V, 3 Ph	UMI-S0252	UMI-S0301
UMI-3500EU-B7	350 kW / 470 hp, 480 V, 3 Ph	UMI-S0252	UMI-S0301
UMI-4000EU-B7	400 kW / 535 hp, 480 V, 3 Ph	UMI-S0252	UMI-S0301
UMI-5000EU-B7	500 kW / 670 hp, 480 V, 3 Ph	UMI-S0253	UMI-S0302

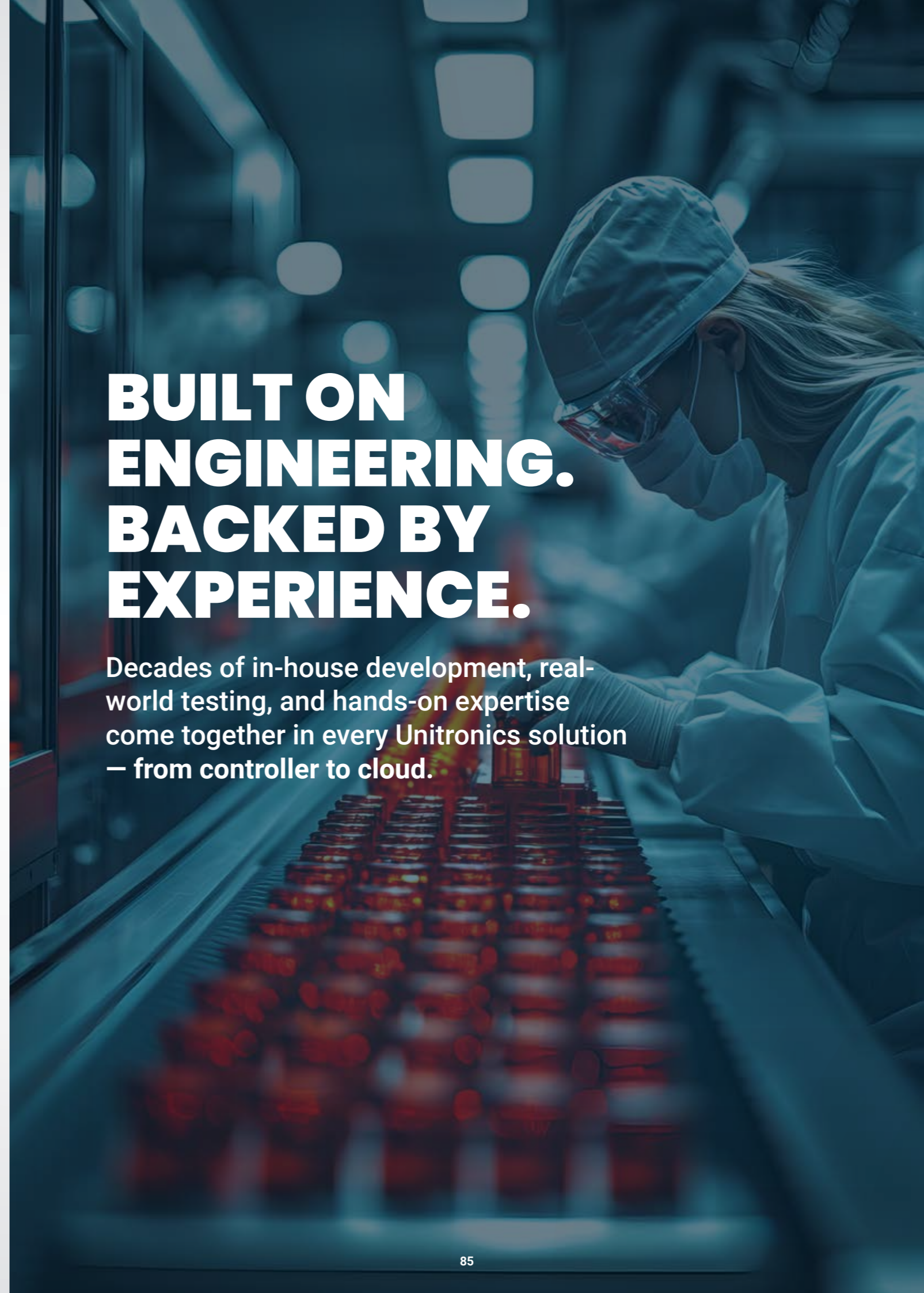
NEMA1 Enclosure

Article Number	Applied to VFD Power Range
UMI-S0500	480 V, 1.5 - 2.2 kW / 2 - 3 hp 230 V, 0.75 kW / 1 hp
UMI-S0501	480 V, 4 - 5.5k W / 5 - 7.5 hp 230 V, 1.5 - 2.2 kW / 2 - 3 hp
UMI-S0502	480 V, 7.5 - 11 kW / 10 - 15 hp 230 V, 4 - 5.5 kW / 5 - 7.5 hp
UMI-S0503	480 V, 15 - 18.5 kW / 20 - 25 hp 230 V, 7.5 kW / 10 hp
UMI-S0504	480 V, 22 - 30 kW / 30 - 40 hp 230 V, 11 - 15 kW / 15 - 20 hp
UMI-S0505	480 V, 37 - 55 kW / 50 - 75 hp 230 V, 18.5 - 30 kW / 25 - 40 hp
UMI-S0506	480 V, 75 - 110 kW / 100 - 150 hp 230 V, 37 - 55 kW / 50 - 75 hp
UMI-S0507	480 V, 132 - 200 kW / 175 - 270 hp

Flange Mounting Plate for B7

Power Rating		Article Number
kW	hp	
1.5 - 2.2	2 - 3	UMI-S0075
4 - 5.5	5 - 7.5	UMI-S0076
7.5 - 11	10 - 15	UMI-S0077
15 - 18.5	20 - 25	UMI-S0078
22 - 30	30 - 40	UMI-S0079

Drives 37 - 200 kW / 50 - 268 hp, no flange is needed.



**BUILT ON
ENGINEERING.
BACKED BY
EXPERIENCE.**

Decades of in-house development, real-world testing, and hands-on expertise come together in every Unitronics solution – from controller to cloud.