



One Integrated Solution for
Control & Automation

AC Servo: Drives & Motors



Complete
range of
Servo, PLCs,
HMI & VFDs

Industry 4.0

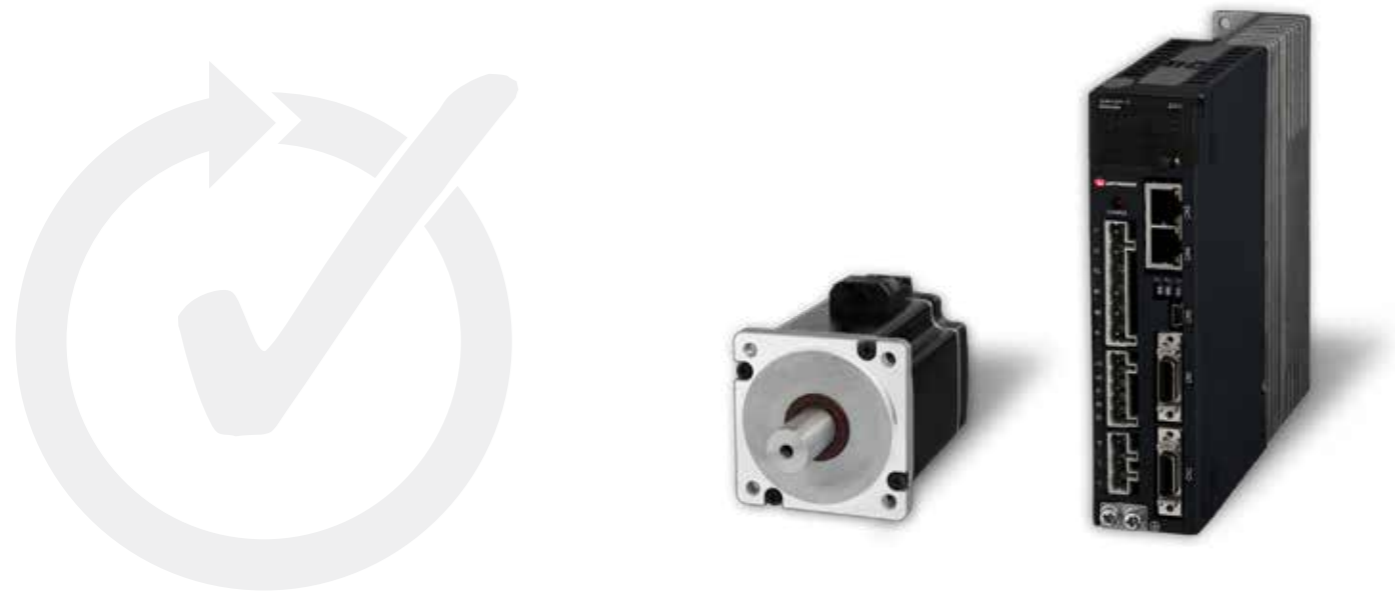
All-in-One
software
for Servo,
PLC,
HMI & VFD

Outstanding
Tech Support

Motion Control with Unitronics - Simple to set up. Painless to program. Servo made Simple: we do the work for you.

- **One Software:** Why struggle with multiple software tools to build your application? Unitronics provides one integrated software environment that controls it all: PLC, HMI, Servo, VFD, and I/O
- **Automatic** communication setup: absolutely seamless
- **Minimal room for error:** UniLogic software analyzes mechanical properties and recommends safe values for your application
- **Diagnostics:** View servo run-time performance via UniLogic's built-in powerful, high-speed scope
- **Tune** your system: using only one **single parameter**
- **No coding needed!** Use Ready-Made Motion code to test your completed system
- **Embedded Diagnostic tools: no PC needed.** Tap a panel - even mobile - to:
 - Set motion parameters
 - Monitor Axis behavior and I/Os
 - Execute movements, such as Point-to-Point, Jog, and Homing
- **Ready-Made Motion code: simply open and edit as needed**

No motion programming knowledge needed!



UniLOGIC® Studio Makes Motion Control Simple

Eliminate the complicated operations associated with Motion Control!

Powerful, award-winning software that enables you to do it all in one project!

- Configure all hardware: PLC, HMI, Servo drives, motors, actuators
- Build PLC, HMI, and Motion applications
- Set up and implement all communications—including Industry 4.0

Motion Control programming:
drag & drop function blocks

Add Axes, drag & drop actuators;
UniLogic automatically converts units

Test & view performance
via built-in powerful, high-speed scope

Analyzes mechanical properties, and recommends safe values

UniLogic automatically defines the correct configuration & sets up communications



Servo Drives & Motors

Complete Control Solution - with Servo made Simple

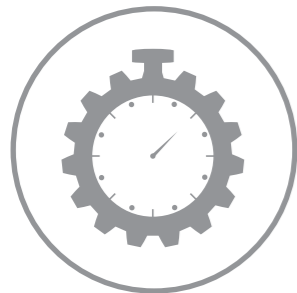
Everything you need for your Motion Control:

Hardware

- Drives: 1 and 3-phase, robotic cables available
- Wide servo power range – 50W to 5,000W (0.06-6.7 HP)
- Motors: to suit any machine size; robust, built-in high-resolution serial encoders (absolute: 23-bit , incremental: 20-bit), IP65
- Built-in communications: **EtherCAT** or **CANopen**

Software

- Servo drives and Motors: simple setup
- Ready-made code: implement Motion in 2 clicks
- Motion Control programming: drag & drop function blocks
- Control up to 8 Axes
- One-parameter tuning
- Built-in Diagnostic tools
- One intuitive software environment, at no extra charge



FAST SETUP



EASY INTEGRATION



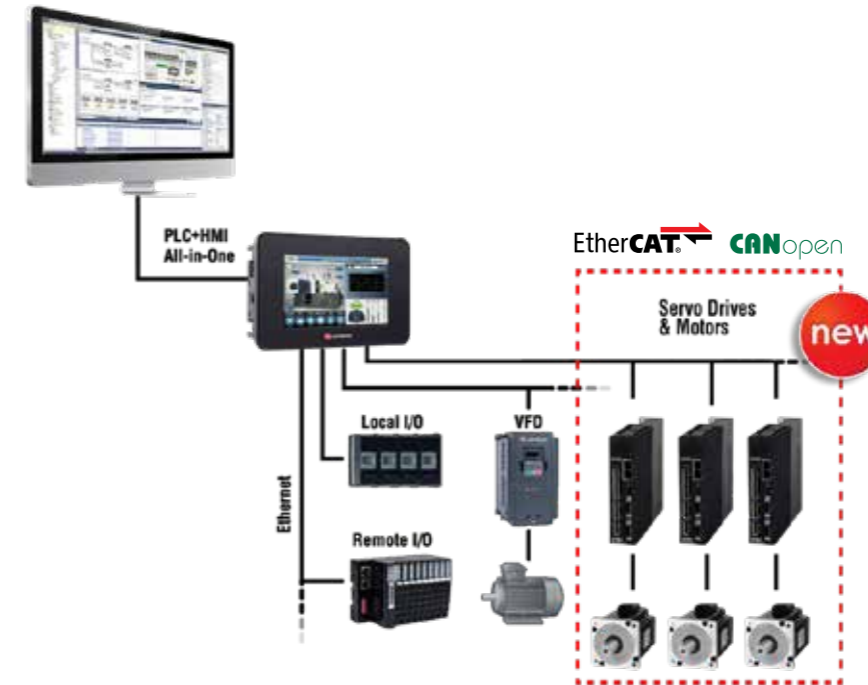
POWERFUL SOLUTION

One Integrated Solution for Control & Automation

PLC, HMI, Servo, VFD & I/Os

Unitronics' complete Motion Control solution

All the elements you need for precise motion control



UNILOGIC®

All-in-One Software Studio

- PLC programming
- HMI design
- Servo configuration, tuning & operation
- VFD configuration, tuning & operation

Unitronics' integrated solution for control and automation offers the best of two worlds:

broad choice and flexibility in choosing solution components, together with the simplicity and time-saving benefits of All-in-One programming software.



Product Offering



Servo drive	Voltage	Power (kW / HP)	Motor	Frame Size (MM)	Rated current (A)	Rated torque (NM / lb-in)	Peak current (A)	Peak torque (NM / lb-in)	Rated speed (RPM)	Max speed (RPM)	Encoder type (Incremental \ Absolute)					
UMD-0000B-■3	1-Phase 220V	0.05 / 0.06	UMM-0000BA -B4	40	0.9	0.159 / 1.4	3.3	0.557 / 4.92	3000	6000	Abs 23bit					
UMD-0001B-■3		0.1 / 0.13	UMM-0001BA -B4		3.3	0.318 / 2.81	4	1.11 / 9.82			Abs 23bit					
UMD-0002B-■3		0.2 / 0.26	UMM-0002BA -B4	60	1.5	0.637 / 5.63	4.7	1.91 / 16.9			Inc 20bit					
UMD-0004B-■3			UMM-0002BN -B4								Abs 23bit					
		0.4 / 0.53	UMM-0004BA -B4	60	2.9	1.27 / 11.23	9.2	3.82 / 33.8			Inc 20bit					
			UMM-0004BN -B4								Abs 23bit					
UMD-0007C-■3	1-Phase 220V and 3-Phase 220V	0.75 / 1	UMM-0007CA -B4	80	5.1	2.39 / 21.15	16.1	7.16 / 63.36			2000	3000	Inc 20bit			
UMD-0010C-■3		1 / 1.34	UMM-0007CN -B4		80	6.9	3.18 / 28.14	19.5					8.8 / 77.88	Abs 23bit		
UMD-0015C-■3		1.5 / 2.01	UMM-0010CA -B4											UMM-0010CN -B4	Inc 20bit	
			UMM-0015CA -B2	130	8.2	7.16 / 63.36	24.6	21.5 / 190.27					Abs 23bit			
			UMM-0015CN -B2										Inc 20bit			
UMD-0020C-■3	3-Phase 220V	2 / 2.68	UMM-0020CA -B2	180	11.3	9.55 / 84.51	33.9	28.7 / 253.99					Abs 23bit			
UMD-0030C-■3		3 / 4.02	UMM-0020CN -B2						180	18			14.3 / 126.55	54	36.5 / 323.02	Inc 20bit
UMD-0050C-■3		5 / 6.7	UMM-0030CA -B3													UMM-0030CN -B3
			UMM-0050CA -B3	180	28	23.9 / 211.51	84	54.3 / 480.55	Inc 20bit							
			UMM-0050CN -B2						Abs 23bit							
UMD-0010E-■3	3-Phase 400V	1 / 1.34	UMM-0010EA -B2	130	3	4.78 / 42.3	9	14.3 / 126.55	2000	3000			Inc 20bit			
UMD-0015E-■3		1.5 / 2.01	UMM-0010EN -B2										130	4.3	7.16 / 63.36	12.9
UMD-0020E-■3		2 / 2.68	UMM-0015EA -B2								UMM-0015EN -B2	Inc 20bit				
UMD-0030E-■3		3 / 4.02	UMM-0020EA -B2								UMM-0020EN -B2	Abs 23bit				
			UMM-0030EA -B3	180	8.8	14.3 / 126.55	26.4	36.5 / 323.02			Inc 20bit					
			UMM-0030EN -B3								Abs 23bit					
UMD-0050E-■3	5 / 6.7	UMM-0050EA -B3	UMM-0050EN -B3	180	15	23.9 / 211.51	45	71.6 / 633.66			Inc 20bit					

* All motors are offered with oil seal as standard
 Add the letter B in the square in order to include holding brake eg. UMM-0004BA- -B4 -> UMM-0004BAB-B4
 ■ For CANopen add B. For EtherCAT add E. UMD-0000B-■3 -> UMD-0000B-B3/UMD-0000B-E3

Drive Specification



Input Power Supply	Main Circuit	200V	Single-Phase 200-230VAC (50W-1kW / 0.06 - 1.34HP)
	Control Circuit	400V	Three-phase 200-230VAC (750W-5.0kW / 1.01 - 6.7HP)
Control Circuit		200V	Three-phase 380-440VAC (1-5.0kW / 1.34 - 6.7HP)
	Control Circuit	400V	Single-Phase 200-230VAC (50W-5.0kW / 0.06 - 6.7HP)
Control Method		SVPWM Control	
Feedback		20bit incremental encoder: 1048576 PRR 23bit Absolute encoder: 8388608 PRR	
Operating Conditions	Ambient Temperature		0~+55°C / 32-131°F
	Storage Temperature		-25~+85°C / -13-185°F
	Ambient/Storage Humidity		5%-95% RH (no condensation)
	Elevation		1000m/3280ft or less
	Vibration Resistance		4.9m/s ² / 0.5g
	Impact Resistance		19.6m/s ² / 2g
Configuration		Wall mounted	
I/O Signals	Encoder Dividing Pulses Output	Phase-A, phase-B, phase-C:line driver output Number of dividing pulses: Any setting ratio is available	
	8 Digital Inputs		
	4 Digital Outputs		
Other	Built-in regenerative resistor	750W-5.0kW / 1.01 - 6.7HP	
	Protection Functions	Overcurrent, overvoltage, low voltage, overload, regeneration error, overspeed	
	Display	CHARGE(Red), POWER (Green), 7-segment LEDS × 5 (Built-in digital panel operator)	
	Communication	EtherCAT/CANopen	

Product Designation Key

Drive

UMD - 0004 B - B3			
①	②	③	④
No.	Key	Description	
①	Product Line	Unitronics Servo Drive	
②	Rated Power	0001: 100W 0010: 1KW	
③	Input Voltage	B: 1PH 200V-230V C: 3PH 200V-230V E: 3PH 380V-440V	
④	Product Series	B3- CANopen E3- EtherCAT	

Cables

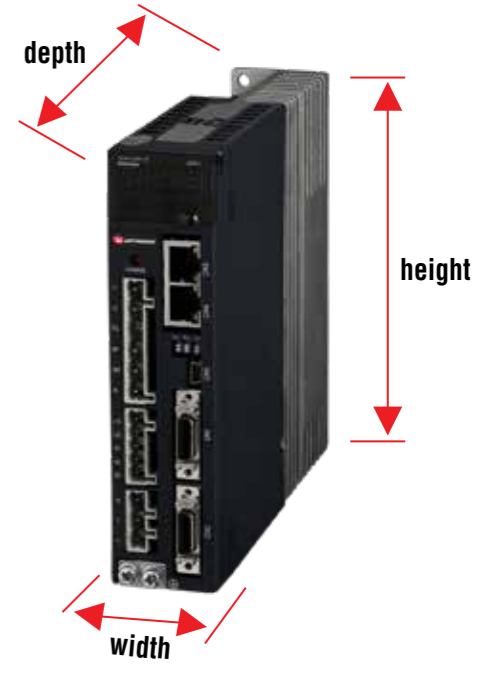
UMC B4 FN R 05				
①	②	③	④	⑤
No.	Key	Description		
①	Product line	Unitronics Servo Cable		
②	Motor series	B2/B3/B4		
③	Cable functionality	PN- Power cable without brake PB-Power cable with brake FA-Feedback cable absolute encoder FN-Feedback cable incremental encoder		
④	Cable type	None: Standard cable R-Robotic cable		
⑤	Cable length	03/05/10 Meters		

Motor

UMM - 0004 B N B - B4					
①	②	③	④	⑤	⑥
No.	Key	Description			
①	Product Line	Unitronics Servo Motor			
②	Rated Power	0001: 100W 0010: 1KW			
③	Input Voltage	B: 1PH 200V-230V C: 3PH 200V-230V E: 3PH 380V-440V			
④	Encoder	A: Absolute N: Incremental			
⑤	Brake	None: No Brake B: With Brake			
⑥	Product Series	B2/B3/B4			

Servo Drive Dimensions

Power (kW)	200V W×H×D(mm)	400V W×H×D(mm)
0.05	40X160X180	—
0.1	40X160X180	—
0.2	40X160X180	—
0.4	40X160X180	—
0.75	84X186X180	—
1.0	84X186X180	100X186X180
1.5	100X186X180	100X186X180
2.0	100X186X180	100X186X180
3.0	125X271X205	125X271X205
5.0	125X271X205	125X271X205



** UL certification is valid for all 220V products

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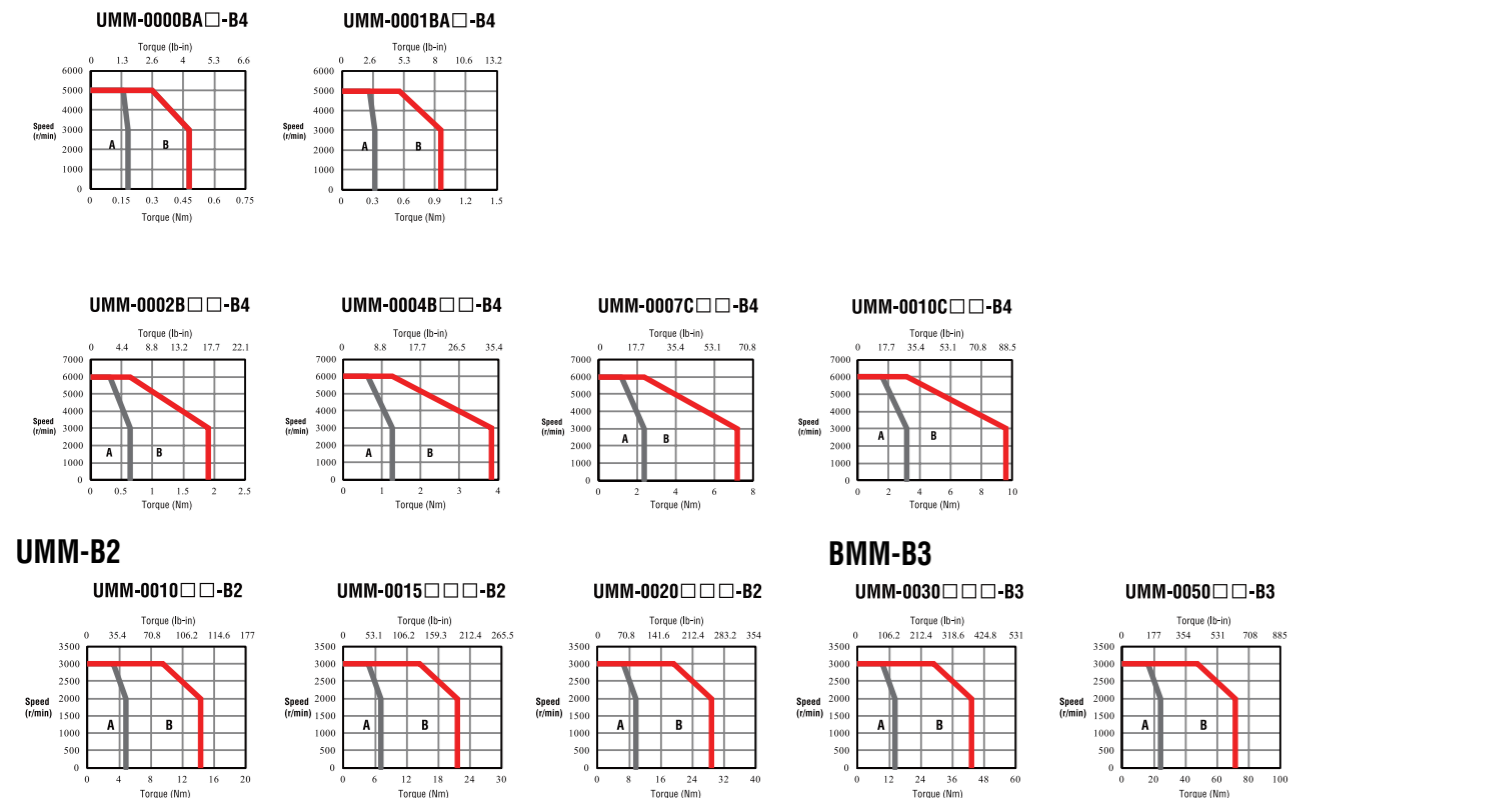
Servo Motor Specification



		200 VAC						200 VAC						400 VAC					
		B4		B2		B3		B2		B3		B2		B3					
Rated Output Power	Kw / HP	0.05 / 0.06	0.1 / 0.13	0.2 / 0.26	0.4 / 0.53	0.75 / 1	1 / 1.34	1.5 / 2.01	2 / 2.68	3 / 4.02	5 / 6.7	1 / 1.34	1.5 / 2.01	2 / 2.68	3 / 4.02	5 / 6.7			
Rated Torque	NM / lb-in	0.16 / 1.41	0.32 / 2.83	0.637 / 5.63	1.27 / 11.23	2.39 / 21.15	3.18 / 28.14	7.16 / 63.36	9.55 / 84.51	14.3 / 126.55	23.9 / 211.51	4.78 / 42.3	7.16 / 63.36	9.55 / 84.51	14.3 / 126.55	23.9 / 211.51			
Peak Torque	NM / lb-in	0.48 / 4.24	0.96 / 8.49	1.91 / 16.9	3.82 / 33.8	7.16 / 63.36	8.8 / 77.88	21.5 / 190.27	28.7 / 253.99	36.5 / 323.02	54.3 / 480.55	14.3 / 126.55	21.5 / 190.27	28.7 / 253.99	36.5 / 323.02	71.6 / 633.66			
Rated Current	A	0.6	1.1	1.5	2.9	5.1	6.8	8.2	11.3	18.0	28.0	3.0	4.3	5.7	8.8	15.0			
Max Current	A	1.7	3.0	4.7	9.2	15.3	21.0	24.6	33.9	54.0	84.0	9.0	12.9	17.1	26.4	45.0			
Rated Speed	RPM	3000						2000											
Max. Speed	RPM	6000						3000											
Rotor Moment of Inertia (with brake)	kg*cm ²	0.019 (0.05)	0.035 (0.052)	0.1469 (0.1794)	0.2435 (0.2759)	0.9094 (1.0655)	1.144 (1.3)	18.4 (19.5)	23.5 (24.6)	41.3 (44.5)	65.7 (68.9)	13.2 (14.3)	18.4 (19.5)	23.5 (24.6)	41.3 (44.5)	65.7 (68.9)			
	lb-in ²	0.0065 (0.017)	0.012 (0.0177)	0.0501 (0.0613)	0.0832 (0.0942)	0.3107 (0.3640)	0.3909 (0.4442)	6.2875 (6.6634)	8.0303 (8.40621)	14.1128 (15.2063)	22.3824 (23.5442)	4.5106 (4.8865)	6.2875 (6.6634)	8.0303 (8.40621)	14.1128 (15.2063)	22.3824 (23.5442)			
weight (with brake)	kg	0.374 (0.566)	0.508 (0.7)	0.9 (1.3)	1.3 (1.7)	2.6 (3.2)	3.1 (3.8)	8.9 (10.4)	10.8 (12.3)	16.63 (20.23)	24.3 (27.9)	7 (8.5)	8.9 (10.4)	10.8 (12.3)	16.63 (20.23)	24.3 (27.9)			
	lb	0.82 (1.24)	1.12 (1.543)	1.984 (2.866)	2.866 (3.747)	5.732 (7.054)	6.834 (8.377)	19.621 (22.928)	23.81 (27.116)	36.662 (44.6)	53.572 (61.509)	15.432 (18.74)	19.621 (22.928)	23.81 (27.116)	36.662 (44.6)	53.572 (61.509)			
Brake Rated Voltage		DC24V±10%																	
Brake Rated Power	W	4.0		7.4		9.6		19.5		35.0		19.5		35.0					
Brake Holding Torque	NM / lb-in	0.318 / 2.814		1.5 / 13.276		3.2 / 28.322		12 / 106.209		40 / 354.03		12 / 106.209		40 / 354.03					
Incremental Encoder	PPR	-		20 bit (1,048,576)				20 bit (1,048,576)											
Absolute Encoder	PPR	23bit (8,388,609)				23 bit (8,388,608)													
Insulation class		F																	
Ambient Temperature	°C / °F	0~+40°C / 32~+104°F (No freezing)																	
Ambient Humidity	RH	20% to 80% non-condensing																	
Enclosure		IP65 / NEMA4X																	

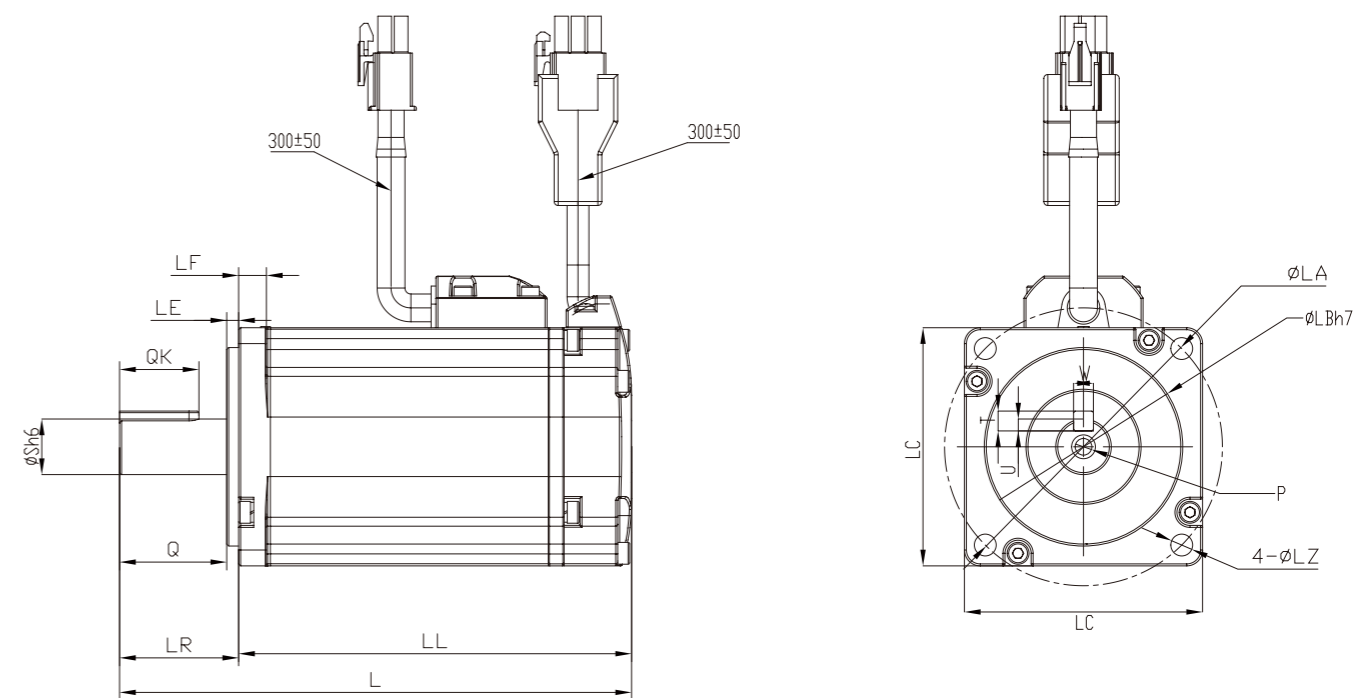
* The values in parentheses are for servo motors with holding brakes

UMM-B4



** UL certification is valid for all 220V products

UMM-B4: Motor Dimensions



unit: mm

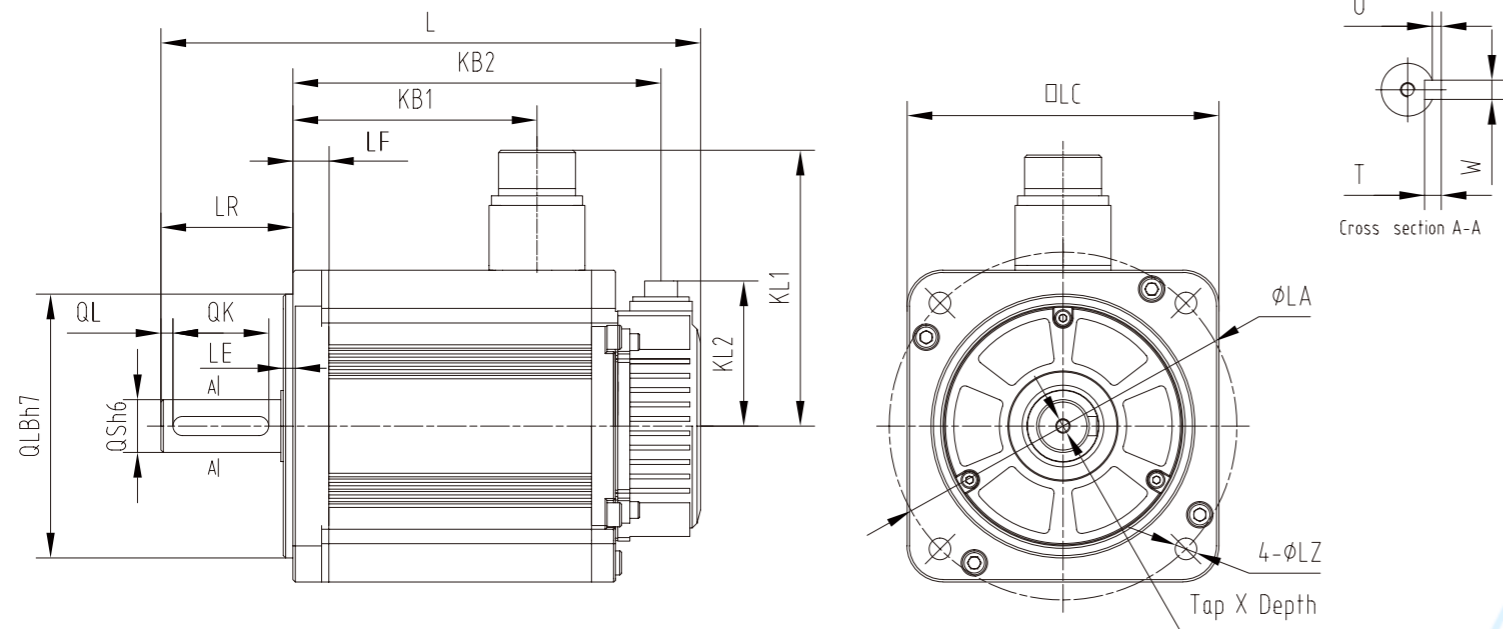
Part Number	L*	LL*	Flange Side						S	Tap x Depth	Key					
			LR	LE	LF	LC	LA	LB			LZ	QK	W	T	U	Q
UMM-0000BA -B4	92.5 (126)	62.5 (96)	25	2.5	5	40	46	30	4.3	8	M3X6	14	3	3	1.8	22.5
UMM-0001BA -B4	108.5 (142)	78.5 (112)														
UMM-0002BA -B4	108 (137)	78 (107)	30	3	7	60	70	50	6	14	M5x12	20	5	5	3	27
UMM-0004BA -B4	129 (158)	99 (128)														
UMM-0007CA -B4	141 (184)	111 (144)	40	3	8	80	90	70	7	19	M6x12	25	6	6	3.5	37
UMM-0010CA -B4	155 (198)	125 (158)														
UMM-0002BN -B4	126.5 (155.5)	96.5 (125.5)	30	3	7	60	70	50	6	14	M5x12	20	5	5	3	27
UMM-0004BN -B4	147.5 (176.5)	117.5 (146.5)														
UMM-0007CN -B4	159.5 (202.5)	129.5 (162.5)	40	3	8	80	90	70	7	19	M6x12	25	6	6	3.5	37
UMM-0010CN -B4	173.5 (216.5)	143.5 (176.5)														

*The values in parentheses are for servo motors with holding brakes
 - Add the letter B in the square in order to include holding brake eg. UMM-0004BA -B4 -> UMM-0004BAB-B4

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UMM-B2 & UMM-B3: Motor Dimensions



unit: mm

Part Number	L*	*LL	Flange Side							S	Tap × Depth	Key					KB1*	KB2*	KL1	KL2
			LR	LE	LF	LC	LA	LB	LZ			QK	W	T	U	Q				
UMM-0010EA -B2	203 (245.5)	148 (190.5)														80 (103.2)	131.5 (174)			
UMM-0015CA -B2	225 (267.5)	170 (212.5)														102 (125.2)	153.5 (196)			
UMM-0015EA -B2	225 (267.5)	170 (212.5)	55	4	12	130	145	110	9	22	M6×20	40	5	8	7	4			117	60.5
UMM-0020CA -B2	247 (289.5)	192 (234.5)															124 (147.2)	175.5 (218)		
UMM-0020EA -B2	247 (289.5)	192 (234.5)																		
UMM-0030CA -B3	307 (378)	228 (299)															143	203 (274)		
UMM-0030EA -B3	307 (378)	228 (299)	79	3.2	18	180	200	114.3	14	35	M8×16	55	6	10	8	5			140	79
UMM-0050CA -B3	357 (428)	278 (349)															183	253 (324)		
UMM-0050EA -B3	357 (428)	278 (349)																		

* The values in parentheses are for servo motors with holding brakes
 - Add the letter B in the square in order to include holding brake eg. UMM-0010EA -B2 -> UMM-0010EAB-B2

One Integrated Solution for Control & Automation

Complete Servo Solution

- Drives & Motors (50W to 5,000W, 0.06-6.7 HP)
- Communications: automatic setup, seamless
- No coding needed in order to diagnose and tune the system
- Assisting programmer with mechanical aspects
- Easy Coding: using industry standard motion Function Blocks (PLCopen)
- Control up to 8 axes

Broad Range of PLCs and HMI Panels

- Powerful, Multi-function Controllers
- Up to 2048 I/Os per controller
- Quality HMI Panels
- Field-hardened

Full Range of VFDs

- Easy to Program
- Simple to Use
- Setup & Program via Software or VFD Keypad

All-in-One Programming Software

- Servo made Simple: Easy Setup, Ready-made code, Built-in Diagnostics
- Program Ladder Logic
- Design HMI & Web pages
- Configure VFDs
- Hardware & Communication Configuration
- One intuitive Environment

Total Solution for Industry 4.0

- MQTT
- SQL
- FTP
- SNMP
- Built-in Web Server
- Remote Access via VNC



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Contact us for more information:
global.sales@unitronics.com



GEN00613-B6