

Servo Drives & Motors

Servo Made Simple: we do the work for you

- Ready Made Motion Code
- Embedded Diagnostic Tools
- Safe Values Recommendation
- Automatic Communication Setup
- Tuning Using One Parameter

Everything you need for your Servo Solution:

Hardware

- Drives: single and three-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: EtherCAT¹ 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

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	60	3.3	0.318 / 2.81	4	1.11 / 9.82			Abs 23bit
UMD-0002B-■3		0.2 / 0.26	UMM-0002BA -B4 UMM-0002BN -B4		1.5	0.637 / 5.63	4.7	1.91 / 16.9			Inc 20bit
UMD-0004B-■3		0.4 / 0.53	UMM-0004BA -B4 UMM-0004BN -B4	2.9	1.27 / 11.23	9.2	3.82 / 33.8	Abs 23bit Inc 20bit			
UMD-0007C-■3	1-Phase 220V and 3-Phase 220V	0.75 / 1	UMM-0007CA -B4 UMM-0007CN -B4	80	5.1	2.39 / 21.15	16.1	7.16 / 63.36	3000	6000	Abs 23bit Inc 20bit
UMD-0010C-■3		1 / 1.34	UMM-0010CA -B4 UMM-0010CN -B4	6.9	3.18 / 28.14	19.5	8.8 / 77.88	Abs 23bit Inc 20bit			
UMD-0015C-■3		1.5 / 2.01	UMM-0015CA -B2 UMM-0015CN -B2	8.2	7.16 / 63.36	24.6	21.5 / 190.27	Abs 23bit Inc 20bit			
UMD-0020C-■3	3-Phase 220V	2 / 2.68	UMM-0020CA -B2 UMM-0020CN -B2	130	11.3	9.55 / 84.51	33.9	28.7 / 253.99	2000	3000	Abs 23bit Inc 20bit
UMD-0030C-■3		3 / 4.02	UMM-0030CA -B3 UMM-0030CN -B3	18	14.3 / 126.55	54	36.5 / 323.02	Abs 23bit Inc 20bit			
UMD-0050C-■3		5 / 6.7	UMM-0050CA -B3 UMM-0050CN -B2	28	23.9 / 211.51	84	54.3 / 480.55	Abs 23bit Inc 20bit			
UMD-0010E-■3	3-Phase 400V	1 / 1.34	UMM-0010EA -B2 UMM-0010EN -B2	130	3	4.78 / 42.3	9	14.3 / 126.55	2000	3000	Abs 23bit Inc 20bit
UMD-0015E-■3		1.5 / 2.01	UMM-0015EA -B2 UMM-0015EN -B2	4.3	7.16 / 63.36	12.9	21.5 / 190.27	Abs 23bit Inc 20bit			
UMD-0020E-■3		2 / 2.68	UMM-0020EA -B2 UMM-0020EN -B2	5.7	9.55 / 84.51	17.1	28.7 / 253.99	Abs 23bit Inc 20bit			
UMD-0030E-■3		3 / 4.02	UMM-0030EA -B3 UMM-0030EN -B3	8.8	14.3 / 126.55	26.4	36.5 / 323.02	Abs 23bit Inc 20bit			
UMD-0050E-■3		5 / 6.7	UMM-0050EA -B3 UMM-0050EN -B3	15	23.9 / 211.51	45	71.6 / 633.66	Abs 23bit 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

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

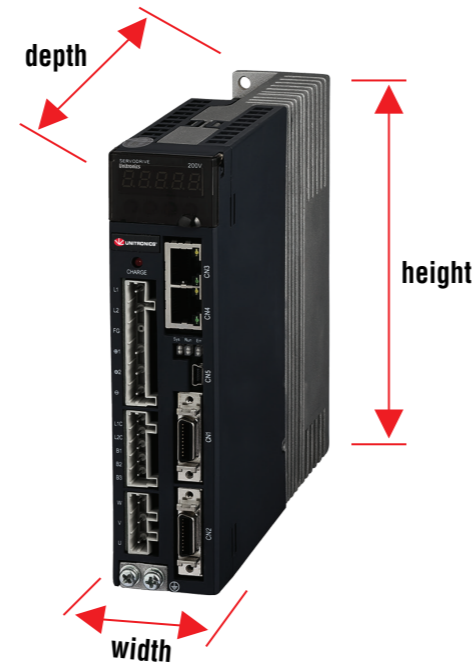
Drive Specification



Input Power Supply	Main Circuit	200V	Single-Phase 200~230VAC (50W~1kW / 0.06 - 1.34HP)
		400V	Three-phase 200~230VAC (750W~5.0kW / 1.01 - 6.7HP)
	Control Circuit	200V	Single-Phase 200~230VAC (50W~5.0kW / 0.06 - 6.7HP)
		400V	24VDC (1~5.0kW / 1.34 - 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	Up to 1000m/3280ft	
	Vibration Resistance	4.9m/s ² / 0.5g	
Impact Resistance		19.6m/s ² / 2g	
Configuration		Wall mounted	
I/O Signals	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 LEDES × 5 (Built-in digital panel operator)	
	Communication	EtherCAT/CANopen	

Servo Drive Dimensions

Power	200V	400V
(kW)	W×H×D(mm)	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

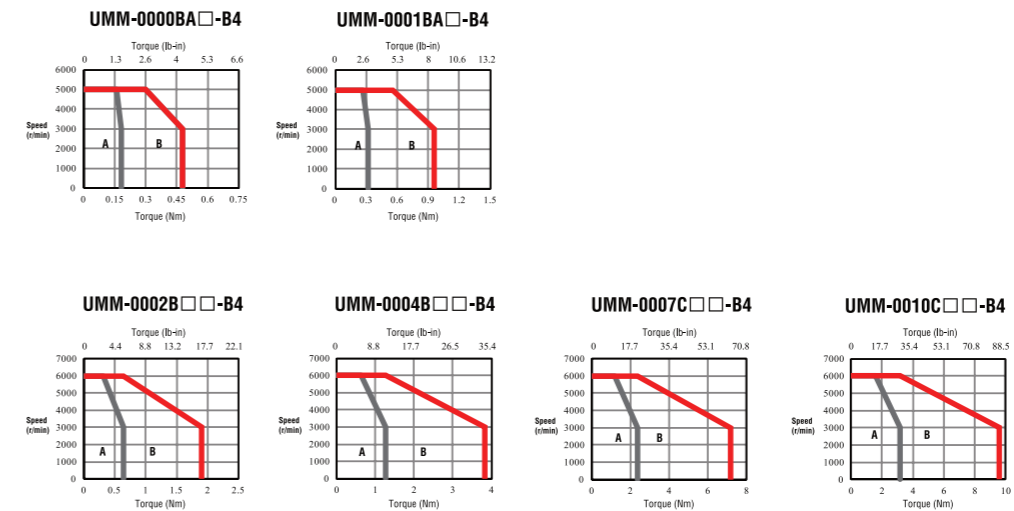
Servo Motor Specification



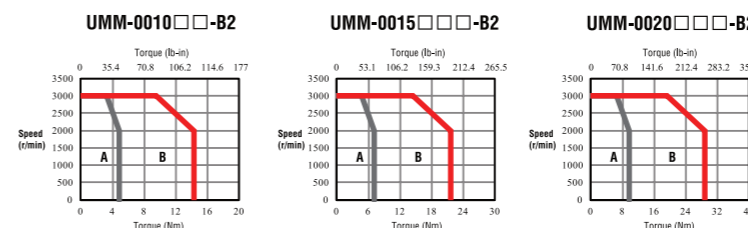
		200 VAC		200 VAC				200 VAC			400 VAC					
		B4		B2		B3		B2		B3						
Rated Output Power	Kw / HP	0.05 / 0.06	0.1 / 0.13	0.2 / 0.26	0.4 / 0.53	0.75 / 1	1 / 1.34	1.5 / 2.01	2 / 2.68	3 / 4.02	5 / 6.7	1 / 1.34	1.5 / 2.01	2 / 2.68	3 / 4.02	5 / 6.7
Rated Torque	NM / lb-in	0.16 / 1.41	0.32 / 2.83	0.637 / 5.63	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

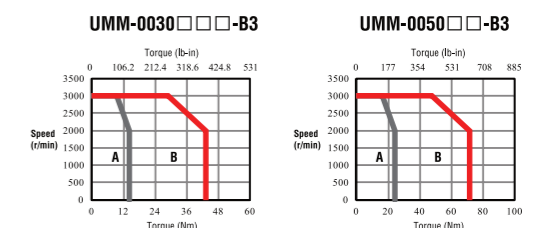
UMM-B4



UMM-B2

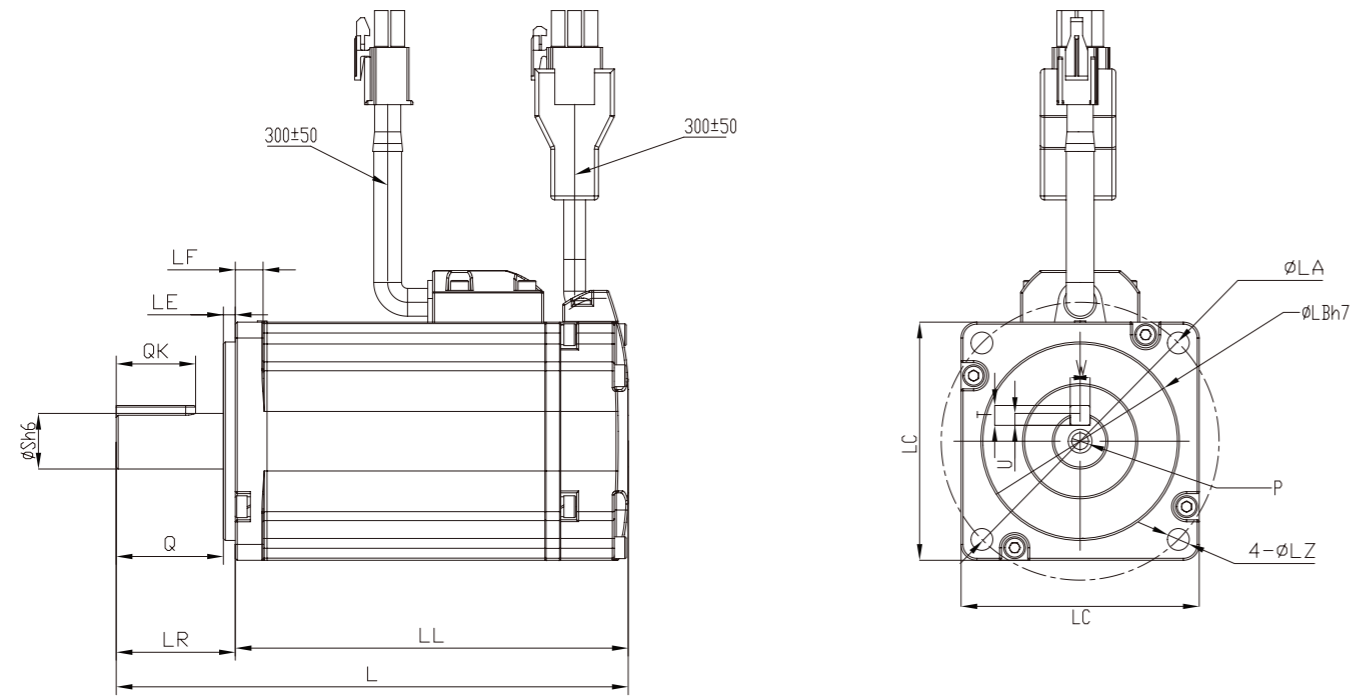


BMM-B3



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UMM-B4: Motor Dimensions



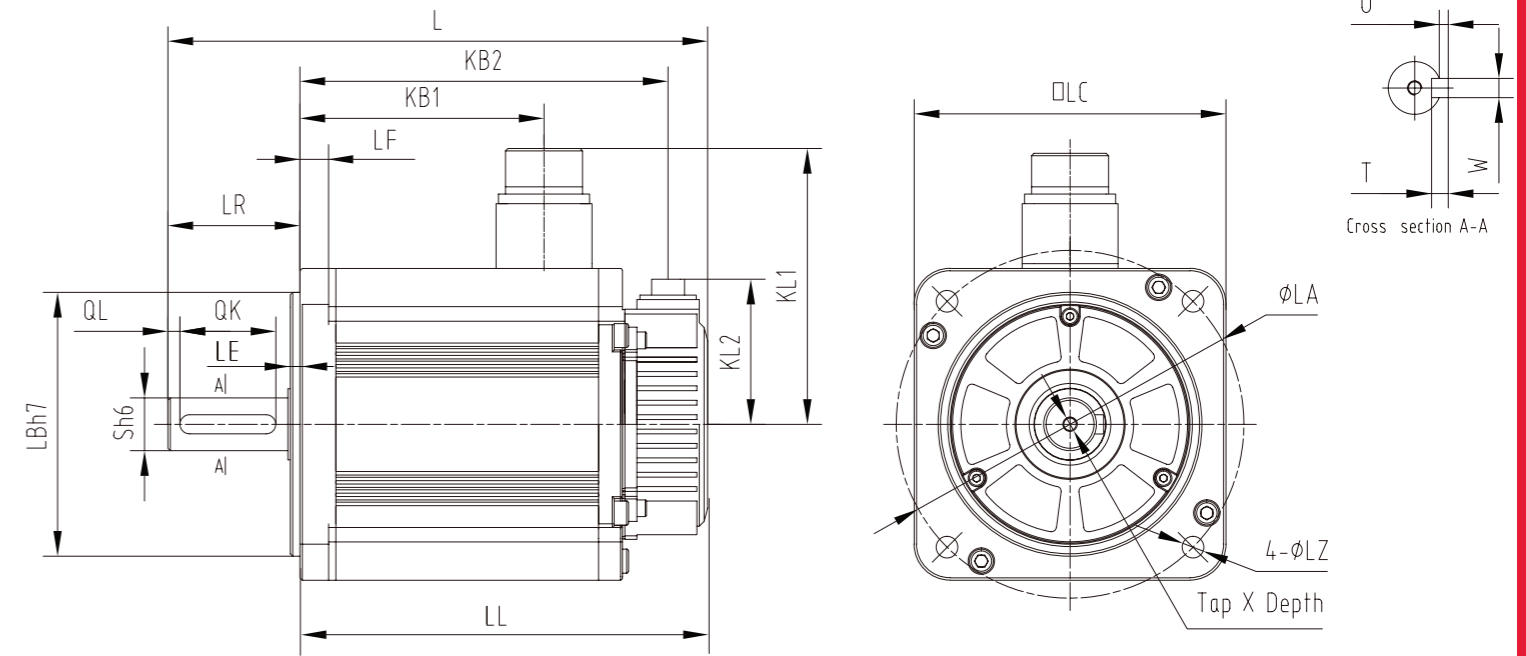
unit: mm

Part Number	L*	LL*	Flange Side							S	Tap × 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	M5×12	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	M6×12	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	5.5	14	M5×12	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	M6×12	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	QL	W	T	U				
UMM-0010EA -B2	203 (245.5)	148 (190.5)	55	4	12	130	145	110	9	22	M6×20	40	5	8	7	3	80 (103.2)	131.5 (174)	117	60.5
UMM-0015CA -B2	225 (267.5)	170 (212.5)																		
UMM-0015EA -B2	225 (267.5)	170 (212.5)																		
UMM-0020CA -B2	247 (289.5)	192 (234.5)																		
UMM-0020EA -B2	247 (289.5)	192 (234.5)	79	3.2	18	180	200	114.3	13.5	35	M8×16	55	6	10	8	4.5	143	203 (274)	140	79
UMM-0030CA -B3	307 (378)	228 (299)																		
UMM-0030EA -B3	307 (378)	228 (299)																		
UMM-0050CA -B3	357 (428)	278 (349)																		
UMM-0050EA -B3	357 (428)	278 (349)	183	253 (324)	183	253 (324)	183	253 (324)	183	253 (324)	183	253 (324)	183	253 (324)	183	253 (324)	183	253 (324)	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

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