

Small Geared Motors

Variable Speed Motor Unit

■ **Features:** Motor combined with a speed controller, capable of infinitely variable speeds.



Type	
Motor	Gear Heads
PACMV-U	(40W or lower)
	PACMGX
	(60W or higher)
PACMGZ	

■ **Unit Configuration**

- ① Variable Speed Motors
- ② Speed Controller
- ③ Capacitor
- ④ Motor Extension Cable (1m)

Rated Life: 10,000 hours
(When used for 8hrs./day at a constant load such as belt conveyors)

For motor brackets, see **P.1115**

■ **Accessories**

Accessories	Key (Not available for A60)
Gear Heads	Screws, Nuts, Washers (4 each)

■ **Variable Speed Motors**

PACMV-U

• 40W or lower

A60

Shaft Details

Without Key

A70, 80

Shaft Details

Key

A90 (40W)

Shaft Details

Key

A90 (60W, 90W)

Shaft Details

Key

■ **Capacitor**

Single-phase Motor is included.

Faston 187 Tab

2-Ø2.5 Hole

Display

t

H

6.2

1.5

Ø4.3 Hole

L

W

D

10MAX

■ **Speed Controller**

Motor Connector 52.5

Lead Wire for Capacitor (350±30mm)

80.5

89

(110)

(13)

Power Indicator

Speed Control Potentiometer

RUN/STOP Switch

76

3.5

Terminal Block (with Cover)

Frame Ground (2m)

Power Cord (2m)
(Plug not provided for 200V type)

Capacitor

Built-in type for 40W or lower

How to Mount **P.1110**

Variable Speed Motor Unit

Part Number		Output (W)	Voltage (V)	d	D1	L1	L2*	L3	ℓ	T	(D2)	P	a	P.C.D	Mass (kg)*		Unit Price																	
Type	A														Motor	Gear Heads																		
PACMV-U	60	6	100	8	25	32	26(33)	75	6	7	65	10	4.5	70	0.71	0.24 (0.3)																		
			200				30(36)								80	5	74	15	5.5	82	1.1	0.38 (0.45)												
			200																		94	1.5	0.6											
	80	25	100	12	36		30	85	6		86	15	5.5	94	1.5	0.6																		
			200												37	105	5	95	18	6.5	104	2.4	0.8											
			200																			150	7	7.5	-	18	6.5	104	2.7	1.4				
	90	60	200	15	34	38	60	172	7	7.5	-	18	6.5	104	3.5	1.4																		
			100																															
			200																															
				100																														
				200																														
				200																														

* The values in () are weight and dimensions for gear heads with reduction ratio 30 or higher.

Variable Speed Motor Unit Specifications Continuous Rating, Number of Poles: 4P

Part Number	Type	A	Output (W)	Voltage (V)	50Hz				60Hz				Capacitor μF
					Allowable Torque N·m (kgf·cm)	Starting Current (A)	Starting Torque N·m (kgf·cm)	When 1200r/min	When 90r/min	Allowable Torque N·m (kgf·cm)	Starting Current (A)	Starting Torque N·m (kgf·cm)	
PACMV-U	60	6	100	100	0.032(0.32)	0.3	0.037(0.37)	0.032(0.32)	0.025(0.25)	0.3	0.037(0.37)	0.037(0.37)	2.5(200V)
				200	0.089(0.90)	0.6	0.068(0.69)	0.089(0.90)	0.029(0.29)	0.6	0.068(0.69)	0.068(0.69)	0.6(400V)
				200	0.14 (1.4)	1.0	0.16 (1.6)	0.14 (1.4)	0.039(0.39)	1.0	0.16 (1.6)	0.16 (1.6)	8 (200V)
		15	200	100	0.089(0.90)	0.3	0.068(0.69)	0.089(0.90)	0.029(0.29)	0.3	0.068(0.69)	0.068(0.69)	2 (400V)
				200	0.14 (1.4)	0.5	0.16 (1.6)	0.14 (1.4)	0.039(0.39)	0.5	0.16 (1.6)	0.16 (1.6)	12 (200V)
				200	0.30 (3.0)	1.6	0.25 (2.5)	0.24 (2.4)	0.049(0.5)	1.6	0.25 (2.5)	0.25 (2.5)	3 (400V)
	80	25	200	100	0.14 (1.4)	1.0	0.16 (1.6)	0.14 (1.4)	0.039(0.39)	1.0	0.16 (1.6)	0.16 (1.6)	20 (200V)
				200	0.30 (3.0)	0.8	0.25 (2.5)	0.24 (2.4)	0.049(0.5)	0.8	0.25 (2.5)	0.25 (2.5)	5 (400V)
				200	0.43 (4.3)	2.3	0.46 (4.6)	0.36 (3.6)	0.078(0.79)	2.4	0.46 (4.6)	0.46 (4.6)	25 (200V)
		40	200	100	0.43 (4.3)	1.2	0.46 (4.6)	0.36 (3.6)	0.078(0.79)	1.2	0.46 (4.6)	0.46 (4.6)	6.2(375V)
				200	0.59 (6.0)	2.3	0.53 (5.4)	0.54 (5.5)	0.25 (2.5)	2.2	0.56 (5.7)	0.56 (5.7)	
				200	0.59 (6.0)	1.1	0.57 (5.8)	0.54 (5.5)	0.25 (2.5)	1.1	0.59 (6.0)	0.59 (6.0)	

Capacitor (Accessory)

A	Output (W)	Voltage (V)	L	W	D	H	t
90	60	100	50.2	26.7	37	36	5
		200	50	30.5	41	41.5	4
	90	100	50.2	31	41	42	5
		200	50	30.5	41	41.5	4
	120	100	50.2	31	41	42	5
		200	50	30.5	41	41.5	4

④ Included with 60 / 90W motors only (Integrated with the speed controllers for 40W or lower).

■ **Allowable Torque when Gear Heads are Mounted** (For Variable Speed Motor Unit, available torque is restricted depending on the rotational speed of the motor. For details, see **P.1109**.)

④ Output shaft rotation direction is same as the motor for **PACMV-U**, others are reverse rotation.

Part Number		Output Type	A	Output (W)	Rotational Speed (r/min)	Reduction Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
							3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
PACMV-U	60	6	1200	50Hz	0.077	0.093	0.13	0.15	0.19	0.23	0.25	0.32	0.38	0.46	0.51	0.64	0.69	0.83	1.16	1.39	1.74	2.09	2.33	2.45	2.45	2.45	2.45	
			90	50/60Hz	0.06	0.07	0.10	0.12	0.15	0.18	0.20	0.25	0.30	0.36	0.40	0.50	0.54	0.65	0.90	1.08	1.35	1.62	1.81	2.17	2.45	2.45		
		15	1200	50Hz	0.21	0.25	0.36	0.43	0.54	0.64	0.72	0.86	1.08	1.29	1.44	1.88	1.92	2.3	3.20	3.84	4.80	4.90	4.90	4.90	4.90	4.90	4.90	
			90	50/60Hz	0.070	0.084	0.11	0.14	0.17	0.21	0.23	0.28	0.35	0.42	0.47	0.58	0.63	0.75	1.05	1.26	1.58	1.89	2.11	2.53	3.16	3.79		
	25	1200	50Hz	0.34	0.4	0.56	0.68	0.85	1.02	1.13	1.41	1.7	2.04	2.26	2.83	3.06	3.67	5.1	6.12	7.65	7.84	7.84	7.84	7.84	7.84	7.84		
		90	50/60Hz	0.094	0.11	0.15	0.18	0.23	0.28	0.31	0.39	0.47	0.56	0.63	0.78	0.84	1.01	1.41	1.69	2.12	2.54	2.83	3.39	4.24	5.09			
	90	40	1200	50Hz	0.72	0.87	1.21	1.45	1.82	2.18	2.43	3.03	3.64	4.37	4.86	6.07	6.54	7.84	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	
			90	50/60Hz	0.11	0.14	0.19	0.23	0.29	0.35	0.39	0.49	0.59	0.71	0.79	0.99	1.06	1.28	1.78	2.13	2.67	3.20	3.56	4.27	5.34	6.40		
		60	1200	50Hz	0.98	1.17	1.57	1.87	2.35	2.80	3.14	3.92	4.70	5.60	6.27	7.55	9.01	10.80	15.20	18.10	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
			90	50/60Hz	0.82	0.98	1.31	1.57	1.96	2.35	2.62	3.28	3.92	4.70	5.29	6.32	7.55	9.11	12.70	15.20	19.00	19.60	19.60	19.60	19.60	19.60	19.60	
	90	90	1200	50Hz	1.43	1.71	2.38	2.86	3.57	4.29	4.77	5.36	6.43	7.72	8.58	10.97	12.80	13.70	19.20	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
			90	50/60Hz	1.31	1.57	2.18	2.62	3.27	3.93	4.37	4.91	5.89	7.07	7.86	9.82	11.70	12.60	17.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	19.60	
		90	1200	50Hz	0.60	0.72	1.01	1.21	1.51	1.81	2.02	2.26	2.71	3.25	3.62	4.52	5.43	5.83	8.10	9.72	12.10	14.50	16.20	19.40	19.60	19.60	19.60	
			90	50/60Hz	0.60	0.72	1.01	1.21	1.51	1.81	2.02	2.26	2.71	3.25	3.62	4.52	5.43	5.83	8.10	9.72	12.10	14.50	16.20	19.40	19.60	19.60	19.60	

Gear Heads (for Motor Output of 40W or lower)

Part Number		Reduction Ratio Selection								Unit Price		
Type	A									Reduction Ratio		
PACMGX	60	3	3.6	5	6	7.5	9	10	3-18	20-36	50-180	
	70		12.5	15	18	20	25					
	80	30	36	50	60	75	90					
	90	100	120	150	180							

Gear Heads (for Motor Output of 60W or higher)

Part Number		Reduction Ratio Selection	Unit Price			
Type	A		Reduction Ratio			
			3-9	10-18	20-60	75-180
PACMGZ	90	3 3.6 5 6 7.5 9 10				
		12.5 15 18 20 25				
		30 36 50 60 75 90				
		100 120 150 180				