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

A Accessory

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

Unit Configuration

①Variable Speed Motors
②Speed Controller
③Capacitor
Integrated in the speed controller for 40W or lower.
④Motor Extension Cable (1m)

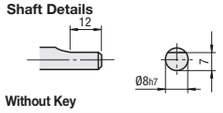
Rated Life: 10,000 hours
(When used for 8hrs./day at a constant load such as belt conveyors)
For motor brackets, see P.1115

Gear Heads

PACMGX (for Motor Output 40W or lower)
PACMGZ (for Motor Output 60W or higher)

A60

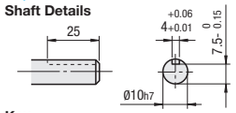
Shaft Details



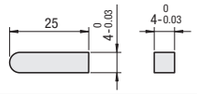
Without Key

A70, 80

Shaft Details

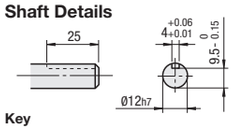


Key

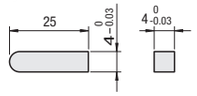


A90 (40W)

Shaft Details

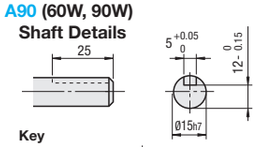


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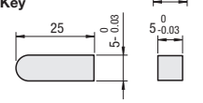


A90 (60W, 90W)

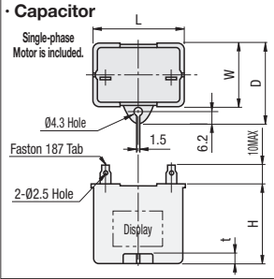
Shaft Details



Key



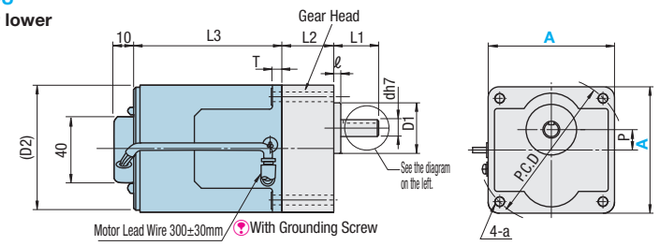
· Capacitor



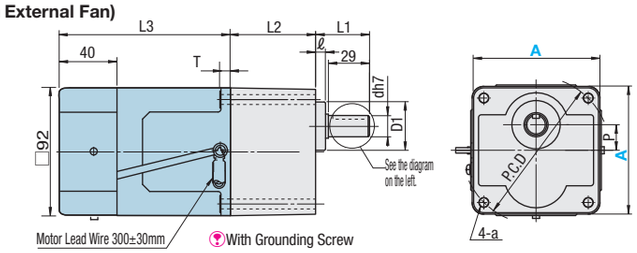
Variable Speed Motors

PACMV-U

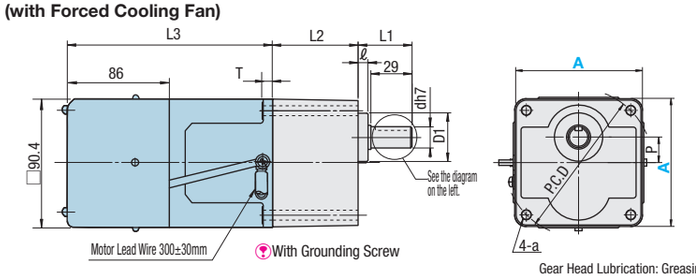
· 40W or lower



· 60W (with External Fan)

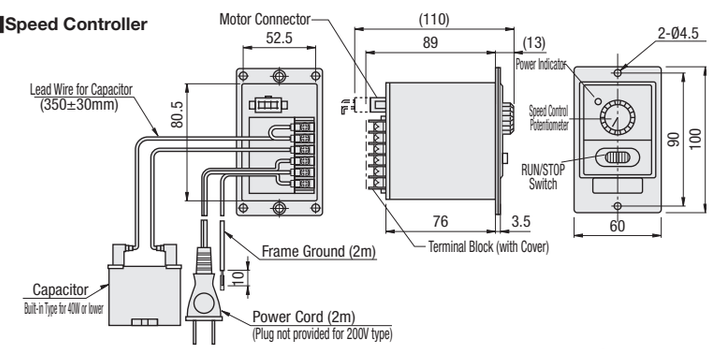


· 90W (with Forced Cooling Fan)



Gear Head Lubrication: Greasing

Speed Controller



How to Mount P.1110

Variable Speed Motor Unit

Part Number Type	A	Output (W)	Voltage (V)	d	D1	L1	L2*	L3	ℓ	T	(D2)	P	a	P.C.D	Mass (kg)* Motor	Mass (kg)* Gear Heads	Unit Price
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														
	70	15	100	10	30		30(36)	80	5		74	15	5.5	82	1.1	0.38 (0.45)	
			200														
	80	25	100				30	85	6		86			94	1.5	0.6	
			200														
	90	40	100	12	36		37	105	5	7.5	95	18	6.5	104	2.4	0.8	
			200														
		60	100	15	34	38	60	150	7		-				2.7	1.4	
			200														
		90	100					172			-				3.5	1.4	
			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 Allowable Torque N · m (kgf · cm) When 1200r/min	50Hz Allowable Torque N · m (kgf · cm) When 90r/min	50Hz Starting Current (A)	50Hz Starting Torque N · m (kgf · cm)	60Hz Allowable Torque N · m (kgf · cm) When 1200r/min	60Hz Allowable Torque N · m (kgf · cm) When 90r/min	60Hz Starting Current (A)	60Hz Starting Torque N · m (kgf · cm)	Capacitor µF
PACMV-U	60	6	100	0.032(0.32)	0.025(0.25)	0.3	0.037(0.37)	0.032(0.32)	0.025(0.25)	0.3	0.037(0.37)	2.5(200V)
			200			0.15				0.15		0.6(400V)
	70	15	100	0.089(0.90)	0.029(0.29)	0.6	0.068(0.69)	0.089(0.90)	0.029(0.29)	0.56	0.068(0.69)	5 (200V)
			200			0.3				0.28		1.3(400V)
	80	25	100	0.14 (1.4)	0.039(0.39)	1.0	0.16 (1.6)	0.14 (1.4)	0.039(0.39)	1.0	0.16 (1.6)	8 (200V)
			200			0.5				0.5		2 (400V)
	90	40	100	0.30 (3.0)	0.049(0.5)	1.6	0.25 (2.5)	0.24 (2.4)	0.049(0.5)	1.6	0.25 (2.5)	12 (200V)
			200			0.8				0.8		3 (400V)
		60	100	0.43 (4.3)	0.078(0.79)	2.3	0.46 (4.6)	0.36 (3.6)	0.078(0.79)	2.4	0.46 (4.6)	20 (200V)
			200			1.2				1.2		5 (400V)
		90	100	0.59 (6.0)	0.25 (2.5)	2.3	0.53 (5.4)	0.54 (5.5)	0.25 (2.5)	2.2	0.56 (5.7)	25 (200V)
			200			1.1	0.57 (5.8)			1.1	0.59 (6.0)	6.2(375V)

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

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.)

Output shaft rotation direction is same as the motor for , others are reverse rotation.

Allowable Torque N · m

Part Number 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
PACMV-U	60	6	1200	50Hz 60Hz	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
			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
	70	15	1200	50Hz 60Hz	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
			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
	80	25	1200	50Hz 60Hz	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
			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 60Hz	0.72 0.58	0.87 0.69	1.21 0.97	1.45 1.16	1.82 1.45	2.18 1.74	2.43 1.92	3.03 2.42	3.64 2.91	4.37 3.49	4.86 3.88	6.07 4.85	6.54 5.23	7.84 6.26	9.80 8.70	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
	90	60	1200	50Hz 60Hz	0.98 0.82	1.17 0.98	1.57 1.31	1.87 1.57	2.35 1.96	2.80 2.35	3.14 2.62	3.92 3.28	4.70 3.92	5.60 4.70	6.27 5.29	7.55 6.32	9.01 7.55	10.80 9.11	15.20 12.70	18.10 15.20	19.60 19.00	19.60	19.60	19.60	19.60	19.60
			90	50/60Hz	0.18	0.22	0.31	0.37	0.47	0.56	0.63	0.70	0.84	1.00	1.12	1.40	1.68	1.81	2.50	3.00	3.75	4.50	5.00	6.00	7.50	9.00
		90	1200	50Hz 60Hz	1.43 1.31	1.71 1.57	2.38 2.18	2.86 2.62	3.57 3.27	4.29 3.93	4.77 4.37	5.36 4.91	6.43 5.89	7.72 7.07	8.58 7.86	10.97 9.82	12.80 11.70	13.70 12.60	19.20 17.60	19.60	19.60	19.60	19.60	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

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

Part Number Type	A	Reduction Ratio Selection	Unit Price Reduction Ratio 3~18	20~36	50~180
PACMGX	60	3 3.6 5 6 7.5 9 10			
	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)

(kgf · cm=N · m x 10.1972)

Part Number Type	A	Reduction Ratio Selection	Unit Price 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				

Ordering Example

· Variable Speed Motor Unit: Part Number - Output (W) - Voltage (V) → PACMV-U80 - W25 - V100

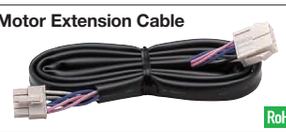
· Gearheads: Part Number - Reduction Ratio → PACMGX80 - 50

Alterations

Part Number - Output (W) - Output (W) - (MTC) → PACMV-U80 - W25 - V100 - MTC3

For transportation, installation, assembly, wiring, operating, and maintenances of motors, see the included manual.

Motor Extension Cable



Alteration Code	Length (m)
MTC	2
	3
	5