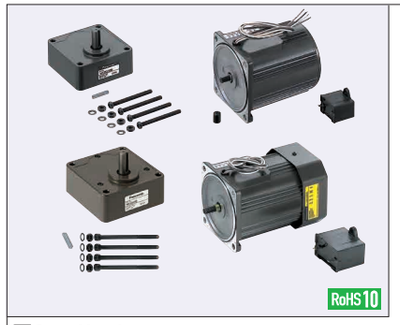
Small Geared Motors / Gear Heads

Induction Motors / Reversible Motors

■Features Induction Motor: Motor suitable for continuous one-way direction operations. Reversible Motor: Motor capable of instantaneous rotation reversals.



Type		
Motor		Gear Heads
Induction	Reversible	
(Single-phase) PACMS	PACMR	(40W or lower) PACMGX
(3-Phase) PACMT		(60W or higher) PACMGZ

A Accessory

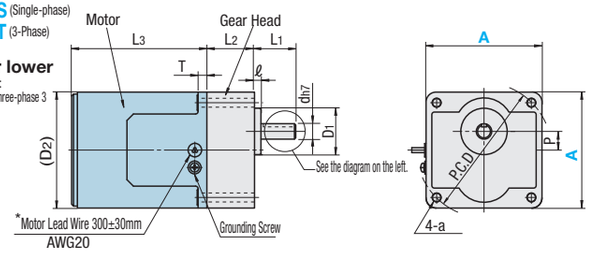
Motor	Capacitor (Not available for 3-Phase Motor)
Gear Heads	Key (Not available for A60) Screws, Nuts, Washers (4 each)

■Induction Motor

PACMS (Single-phase)
PACMT (3-Phase)

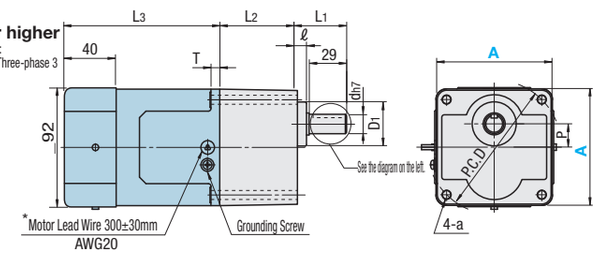
• 40W or lower

*Motor Leads:
Single-phase 4, Three-phase 3



• 60W or higher

*Motor Leads:
Single-phase 4, Three-phase 3

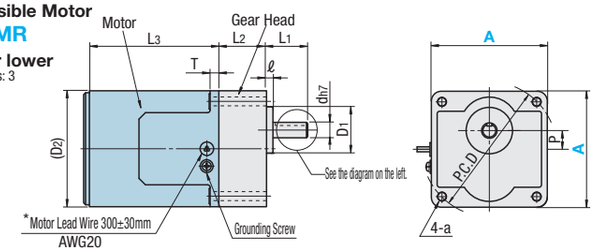


■Reversible Motor

PACMR

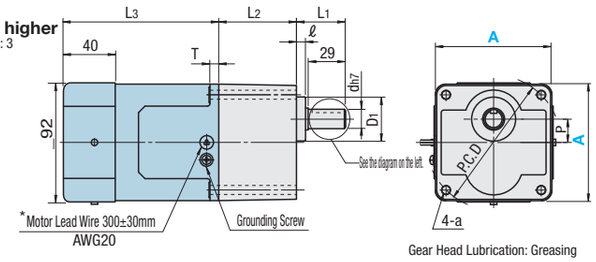
• 40W or lower

* Motor Leads: 3



• 60W or higher

* Motor Leads: 3

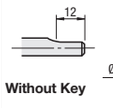


Gear Head Lubrication: Greasing

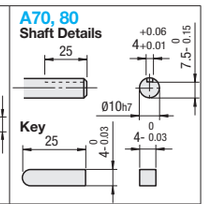
■Gear Heads

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

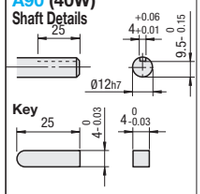
A60
Shaft Details



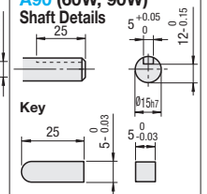
A70, 80
Shaft Details



A90 (40W)
Shaft Details

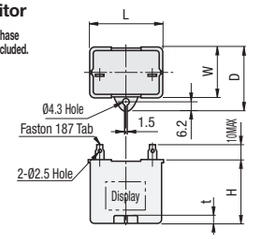


A90 (60W, 90W)
Shaft Details



· Capacitor

Single-phase Motor is included.

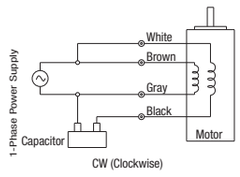


Rated Life (When used for 8hrs./day at a constant load such as belt conveyors)
- Induction Motor: 10,000 hours
- Reversible Motor: 5,000hrs

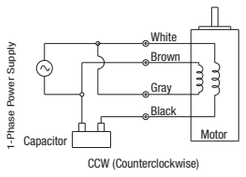
For motor brackets, see ☞P.1115
Seal Connector Type PACMSK, PACMTK, and PACMRK are available on our website.
For transportation, installation, assembly, wiring, operating, and maintenances of motors, see the included manual.

Connection Diagram

Induction Motor (Single-phase)

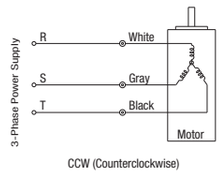


CW (Clockwise)



CCW (Counterclockwise)

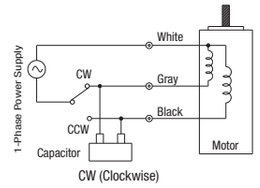
Induction Motor (3-Phase)



CCW (Counterclockwise)

Rotates clockwise if two of the White, Gray, and Black wires are switched.

Reversible Motor (Single-phase)



CW (Clockwise)

Rotates counterclockwise when switched to CCW position.

■Induction Motors / Reversible Motors

Part Number Type	A	Output (W)	Voltage (V)	d	D1	L1	L2*2	L3	ℓ	T	(D2)	P	a	P.C.D	Mass (kg) *2 Motor Lead Wire	Motor Connector	Gear Heads	Unit Price Induction PACMS	Induction PACMT	Reversible PACMR
PACMS *1PACMT PACMR	60	6	100	8	25	32	26 (33)	75	6	7	65	10	4.5	70	0.67	-	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	1.8	0.6		-	
			200																	
	90	40	100	12	36		37	105	5		95				2.4	2.8	0.8		-	
			200																	
		60	100	15	34	38	60	120	7	7.5	-	18	6.5	104	2.7	3.0	1.4		-	
			200																	
		90	100					135			-				3.2	3.3	1.4		-	
			200																	

*1. The 3-Phase Motors can be used at 220V.
*2. The values in ( ) are weight and dimensions for gearheads with reduction ratio 30 or higher.

■Induction Motor Specification (Single-phase) Continuous Rating, Number of Poles: 4P

Part Number Type	A	Output (W)	Voltage (V)	50Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m	60Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m	Capacitor µF
PACMS	60	6	100	20	0.21	1250	0.048	0.3	0.049	20	0.2	1575	0.038	0.3	0.049	2.5(200V)
			200	20	0.11	1250	0.048	0.15	0.049	20	0.1	1600	0.037	0.15	0.049	0.7(400V)
	70	15	100	34	0.37	1250	0.11	0.61	0.077	33	0.33	1575	0.088	0.57	0.077	4 (200V)
			200	33	0.18	1300	0.11	0.3	0.077	34	0.17	1600	0.088	0.29	0.077	1 (400V)
	80	25	100	51	0.55	1250	0.19	0.98	0.16	49	0.48	1550	0.15	0.94	0.16	6 (200V)
			200	51	0.27	1250	0.19	0.5	0.16	49	0.24	1575	0.15	0.47	0.16	1.5(400V)
	90	40	100	78	0.86	1225	0.30	1.5	0.24	72	0.72	1550	0.25	1.5	0.25	10 (200V)
			200	79	0.43	1250	0.30	0.83	0.25	72	0.36	1575	0.24	0.76	0.25	2.5(400V)
		60	100	118	1.3	1250	0.46	2.2	0.41	117	1.2	1550	0.36	2.2	0.42	15 (210V)
			200	120	0.65	1250	0.46	1.1	0.42	119	0.59	1550	0.36	1.1	0.44	3.8(400V)
		90	100	153	1.6	1325	0.65	3.3	0.47	160	1.6	1625	0.53	3.0	0.47	25 (200V)
			200	150	0.75	1325	0.62	1.7	0.47	160	0.8	1650	0.51	1.5	0.47	5.8(400V)

■Capacitor for Motor(Accessory)
PACMS, PACMT<For Induction Motors>
Included with single-phase motors only.

A	Output (W)	Voltage (V)	L	W	D	H	t
60	6	100	39.5	16	26.5	30.5	4
		200	39.5	16.2	27	27	4
70	15	100	39.5	16	26.5	30.5	4
		200	39.5	16.2	27	27	4
80	25	100	39.5	17.5	28	30.5	4
		200	39.5	22	32.5	32.5	4
90	40	100	39.5	26.7	37	32	4
		200	49.7	24	34.5	34.5	4
	60	100	39.5	26.7	37	41	4
		200	50	26.7	37.5	38	4
	90	100	50.2	31	41	42	5
		200	50	30.5	41	41.5	4

■Induction Motor Specification (3-Phase) Continuous Rating, Number of Poles: 4P

The 3-Phase Motor can be used in 220V.

Part Number Type	A	Output (W)	Voltage (V)	Input Voltage (V)	50Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m	60Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m
PACMT	80	25	200	200	50	0.25	1350	0.18	0.62	0.54	47	0.22	1625	0.15	0.58	0.40
				220	54	0.27	1375	0.18	0.67	0.66	49	0.23	1650	0.15	0.64	0.50
	90	40		200	69	0.31	1350	0.28	0.9	0.72	68	0.29	1625	0.24	0.82	0.51
				220	70	0.32	1375	0.27	1.0	0.88	66	0.28	1675	0.23	0.91	0.63
		60		200	101	0.45	1350	0.42	1.3	1.0	96	0.41	1625	0.35	1.2	0.69
				220	103	0.46	1375	0.41	1.5	1.2	98	0.4	1650	0.34	1.3	0.87
		90		200	141	0.62	1350	0.63	2.0	1.6	137	0.56	1625	0.53	1.8	1.1
				220	143	0.65	1400	0.62	2.2	2.0	137	0.56	1650	0.52	2.0	1.4

*1. Breaking torque values are for reference
*2. "Override" means motor's fly wheeling rotation from power-OFF to a stop.

■Reversible Motor Specification (Single-phase) Rated for 30 minutes, Number of Poles: 4P

Part Number Type	A	Output (W)	Voltage (V)	50Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m	60Hz Ratings Input (W)	Current (A)	Rotational Speed (r/min)	Torque N·m	Starting Current (A)	Starting Torque N·m	Capacitor µF	Braking Torque *1x10-3N·m	Override *2 rotation
PACMR	60	6	100	22	0.23	1250	0.047	0.3	0.050	22	0.22	1575	0.037	0.31	0.052	3.5(200V)	0.588	5.0
			200	22	0.11	1275	0.045	0.16	0.053	22	0.12	1600	0.036	0.16	0.053	0.9(400V)		
	70	15	100	36	0.37	1275	0.11	0.59	0.085	37	0.38	1575	0.088	0.57	0.085	6 (200V)	1.27	4.5
			200	36	0.19	1275	0.11	0.3	0.078	37	0.19	1575	0.088	0.29	0.078	1.5(400V)		
	80	25	100	58	0.59	1275	0.19	1.0	0.17	57	0.59	1575	0.16	1.0	0.17	9.5(200V)	1.47	5.5
			200	57	0.29	1275	0.19	0.52	0.19	57	0.29	1575	0.16	0.50	0.19	2.4(400V)		
	90	40	100	94	0.96	1200	0.32	1.6	0.27	93	0.93	1525	0.25	1.5	0.26	15 (210V)	3.92	6.0
			200	92	0.48	1200	0.32	0.81	0.28	93	0.46	1525	0.25	0.77	0.29	3.8(400V)		
		60	100	144	1.5	1200	0.46	2.4	0.50	163	1.5	1500	0.39	2.3	0.53	25 (200V)		
			200	146	0.74	1225	0.46	1.2	0.53	153	0.77	1525	0.39	1.3	0.55	6.2(375V)		
		90	100	171	1.7	1225	0.70	2.8	0.63	181	1.9	1525	0.56	2.7	0.64	30 (200V)		
			200	184	0.93	1150	0.72	1.4	0.64	170	0.96	1475	0.57	1.4	0.66	7.5(370V)		

■Capacitor for Motor(Accessory)
PACMR<For Reversible Motors>

A	Output (W)	Voltage (V)	L	W	D	H	t
60	6	100	39.5	16	26.5	30.5	4
		200	39.5	16.2	27	27	4
70	15	100	39.5	17.5	28	30.5	4
		200	39.5	22	32.5	32.5	4
80	25	100	39.5	22	32.5	30.5	4
		200	49.7	24	34.5	34.5	4
90	40	100	39.5	26.7	37	41	4
		200	50	26.7	37.5	38	4
	60	100	50.2	31	41	42	5
		200	50	30.5	41	41.5	4
	90	100	50.2	31	41	42	5
		200	50	34	45	45	6

■Allowable Torque when Gear Heads are Mounted

The rotational speeds shown are based on synchronous operation speeds. Generally, the actual speeds may be 2 ~ 20% less than indicated value depending on load conditions.
Output shaft rotation direction is same as the motor for [ ], others are reverse rotation.

Part Number Type	A	Output (W)	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
			Rotational Speed (r/min)	50Hz	500	416.7	300	250	200	166.7	150	120	100	83.3	75	60	50	41.7	30	25	20	16.7	15	12.5	10	8.3
				60Hz	600	500	360	300	240	200	180	144	120	100	90	72	60	50	36	30	24	20	18	15	12	10
PACMGX	60	6	Allowable Torque (N·m)	50Hz	0.098	0.12	0.16	0.19	0.25	0.29	0.33	0.4	0.49	0.59	0.66	0.79	0.95	1.18	1.57	1.86	2.25	2.45				
				60Hz	0.081	0.098	0.13	0.16	0.21	0.25	0.26	0.33	0.4	0.49	0.53	0.66	0.79	0.95	1.27	1.57	1.86	2.25	2.45			
	70	15		50Hz	0.24	0.28	0.39	0.47	0.59	0.71	0.8	0.98	1.18	1.37	1.57	1.86	2.25	2.74	3.82	4.61	4.9					
				60Hz	0.2	0.24	0.32	0.39	0.49	0.59	0.66	0.81	0.98	1.18	1.27	1.57	1.86	2.25	3.23	3.82	4.8	4.9				
	80	25		50Hz	0.39	0.47	0.66	0.78	0.98	1.18	1.27	1.57	1.96	2.35	2.55	3.14	3.82	4.61	6.37	7.64	7.84					
				60Hz	0.32	0.39	0.55	0.66	0.81	0.98	1.08	1.27	1.57	1.96	2.06	2.65	3.14	3.82	5.29	6.37	7.84					
	90	40		50Hz	0.66	0.78	1.08	1.27	1.57	1.86	2.25	2.74	3.23	3.92	4.41	5.29	6.37	7.94	9.8							
				60Hz	0.55	0.66	0.9	1.08	1.27	1.57	1.76	2.25	2.74	3.23	3.53	4.41	5.29	6.37	8.82	9.8						
PACMGZ	90	60		50Hz	0.98	1.18	1.57	1.96	2.35	2.94	3.14	3.92	4.7	5.59	6.27	7.55	9.11	11	15.2	17.8	19.6					
				60Hz	0.78	0.98	1.37	1.57	1.96	2.35	2.65	3.33	3.92	4.7	5.29	6.47	7.55	9.11	12.6	15.2	19.6					
		90		50Hz	1.37	1.67	2.25	2.74	3.43	4.12	4.51	5.68	6.76	8.04	9.02	10.9	13	15.7	19.6							
				60Hz	1.18	1.37	1.86	2.25	2.84	3.43	3.72	4.7	5.68	6.76	7.55	9.21	10.9	13	18.3	19.6						

■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)

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

• Motors						• Gearheads		
Part Number	Output (W)	Voltage (V)	Part Number	Reduction Ratio
PACMS80	W25	V100	PACMGX80	50
PACMR90	W60	V200		

Alterations ☞P.1115