



■ Specs

Motor Output		6W							
Round Shaft		6R6S-1M		6R6S-2M		6I6S-3M	6R6S-2ME	6I6S-3ME	
Pinion Shaft		6R6P-1M		6R6P-2M		6I6P-3M	6R6P-2ME	6I6P-3ME	
Specification Certification									
Motor	Capacity of Capacitor(μF)	3.5		0.8		-		0.6	-
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230	Three phase 230
	Power Frequency (Hz)	60				50			
	Rated Current (A)	0.29	0.30	0.13	0.14	0.10		0.15	0.12
	Starting Torque (Nm)	0.04		0.04		0.04		0.05	0.05
	Rated Torque (Nm)	0.04		0.04		0.04		0.05	0.05
	Rated Speed (r/min)	1450		1550		1500		1200	1200
	Permissible Inertia (GD ²)	0.25 kgcm ²							
	Ambient Temperature	Single phase 110V/115V : -10~+50°C ; Single phase 220V/230V: -10~+40°C							
	Ambient Humidity	Max.85%RH							
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230	
	Power Frequency (Hz)	60				50			
	Consumption Current (A)	0.08				0.08			
	Consumption Power (W)	8							
	Static Friction Torque (Nm)	0.3							

※ 1 Nm = 10.19716 Kgcm

※ 6R6□-□M(E) holding torque is 50gcm(but at the initial the holding torque may lower than 50gcm); over rotation around 4 rev/min(reference value).

■ 6R6P-□M(E)/6I6P-3M(E)+6A□ Series Gearbox Specs & Permissible Torque / Permissible Inertial Load(GD²)When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60
	Permissible Torque(Nm) -1M,-2M,-3M Type	0.11	0.14	0.19	0.23	0.28	0.34	0.38	0.47	0.57	0.68	0.8	0.9	1.1
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50
	Permissible Torque(Nm) -2ME,-3ME Type	0.14	0.17	0.23	0.28	0.34	0.41	0.46	0.57	0.69	0.83	0.9	1.1	1.3
Permissible inertia load GD ² (kgcm ²)		2.3	3.3	6.3	9	14	20.3	25	39	56.3	81	100	156	225

Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5
	Permissible Torque(Nm) -1M,-2M,-3M Type	1.3	1.8	2.2	2.7	3.3	3.6	4.1	5.1	6				
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4
	Permissible Torque(Nm) -2ME,-3ME Type	1.6	2.2	2.6	3.3	3.9	4.4	5	6					
Permissible inertia load GD ² (kgcm ²)		324	625					625						

※ 1 : Gearbox 6A□series, please enter the gear ratio 3~360 in the box□.

※ 2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※ 3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 6R6P-□M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※ 4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

※ 5 : 1 Nm = 10.19716 Kgcm

※ 6 : The Gearboxes of all series have certification.

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
6R6S-□M(E) 6I6S-3M(E)	5	11	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
6R6P-□M(E) 6I6P-3M(E)	3, 3.6, 5	10	15	3
	6, 7.5, 9, 10, 12.5, 15, 18, 20	15	20	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	20	30	

■ Dimensions

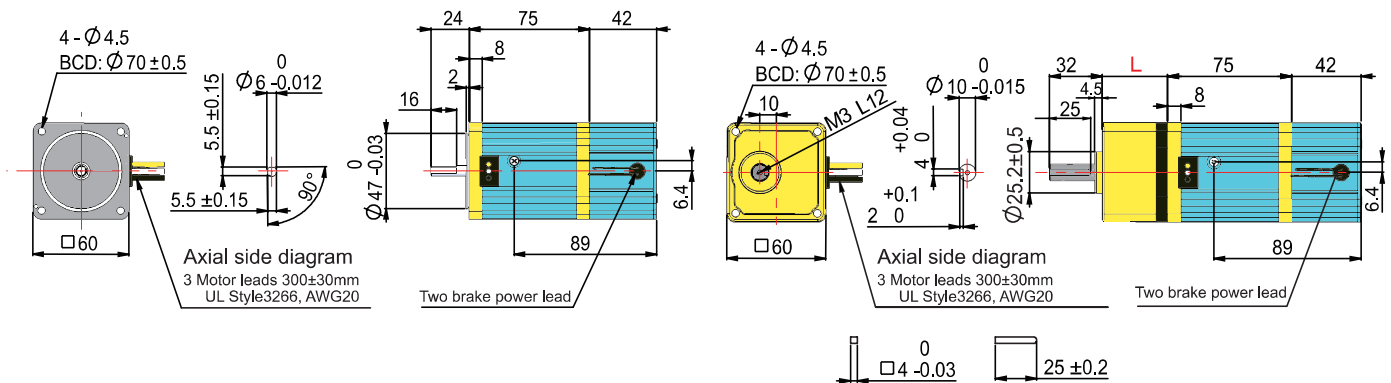
Unit : mm

Round Shaft Type 6R6S-□M(E) / 6I6S-3M(E)

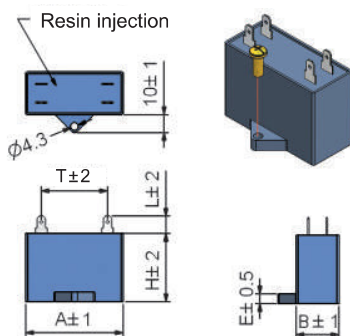
Motor Weight : 1410g

Pinion Shaft Type 6R6P-□M(E) / 6I6P-3M(E)+6A□

Motor Weight : 1400+W



■ Capacitor Dimensions (Single phase motors only)



* 6A pinion shaft type 6A3~360, the spec of Gearbox "L" length and weight "W" as following :

6A□Gearbox Length/Weight		
Model	Length (mm)	Weight (g)
6A3~6A100	39.5	400
6A120~6A360	43.5	440

* We also have Gearbox 6A□N with shaft Ø8. For details please refer to the P.4.

Capacity of capacitor (µF/VAC)	A	B	H	L	T	E
3.5/250	37	14	23	10	24	4
0.8/450	37	14	23	8	24	4
0.6/450	37	14	23	7	24	4

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.



Specs

Motor Output		25W							
Round Shaft		8R25S-1M		8R25S-2M		8I25S-3M	8R25S-2ME	8I25S-3ME	
Pinion Shaft		8R25P-1M		8R25P-2M		8I25P-3M	8R25P-2ME	8I25P-3ME	
Specification Certification									
Motor	Capacity of Capacitor(μF)	8		2		—		1.5	—
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230	Three phase 230
	Power Frequency (Hz)	60						50	
	Rated Current (A)	0.69	0.70	0.32	0.33	0.23		0.26	0.28
	Starting Torque (Nm)	0.14		0.14		0.17		0.16	0.22
	Rated Torque (Nm)	0.17		0.17		0.17		0.21	0.22
	Rated Speed (r/min)	1500		1500		1500		1250	1200
	Permissible Inertia (GD ²)	1.2 kgcm ²							
	Ambient Temperature	Single phase 110V/115V : -10~+50°C ; Single phase 220V/230V, Three phase 220V/230V: -10~+40°C							
	Ambient Humidity	Max.85%RH							
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230	
	Power Frequency (Hz)	60						50	
	Consumption Current (A)	0.08						0.08	
	Consumption Power (W)	8						8	
	Static Friction Torque (Nm)	0.3						0.3	

※ 8R25□-□M(E) holding torque is 150gcm (but at the initial the holding torque may lower than 150gcm); over rotation around 5 rev/min (reference value).

8R25P-□M(E)/8I25P-3M(E)+8A□ Series Gearbox Specs & Permissible Torque / Permissible Inertial Load (GD²) When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60	
	Permissible Torque (Nm)	-1M, -2M Type	0.46	0.55	0.77	0.92	1.15	1.38	1.53	1.91	2.3	2.75	3.1	3.7	4.4
		-3M Type	0.46	0.55	0.77	0.92	1.15	1.38	1.53	1.91	2.3	2.75	3.1	3.7	4.4
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50	
	Permissible Torque (Nm)	-2ME Type	0.56	0.67	0.93	1.11	1.39	1.67	1.85	2.32	2.78	3.34	3.7	4.4	5.3
		-3ME Type	0.59	0.71	0.99	1.19	1.49	1.78	1.98	2.48	2.97	3.56	3.96	4.7	5.7
Permissible inertia load GD ² (kgcm ²)		10.8	15.6	30	43.2	67.5	97.2	120	187.5	270	389	480	750	1080	
Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360	
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5	
	Permissible Torque (Nm)	-1M, -2M Type	5.3	7.3	8.8	11	13.2	14.6	15						
		-3M Type	5.3	7.3	8.8	11	13.2	15	15						
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4	
	Permissible Torque (Nm)	-2ME Type	6.4	8.9	10.6	13.3	15		15						
		-3ME Type	6.8	9.5	11.4	14.2	15		15						
Permissible inertia load GD ² (kgcm ²)		1555	3000				3000								

※1 : Gearbox 8A□series, please enter the gear ratio 3~360 in the box□.

※2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 8R25P-□M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

※5 : 1 Nm = 10.19716 Kgcm

※6 : The Gearboxes of all series have certification.

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
8R25S-□M(E) 8I25S-3M(E)	9	14	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

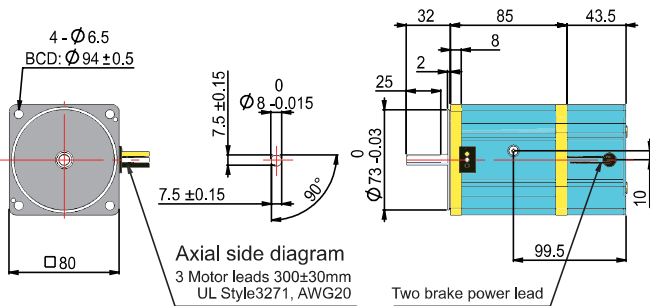
Pinion Shaft Type(Gearbox Attached)

Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
8R25P-□M(E) 8I25P-3M(E)	3, 3.6, 5	20	25	5
	6, 7.5, 9, 10, 12.5, 15, 18, 20	30	35	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	45	55	

■ Dimensions

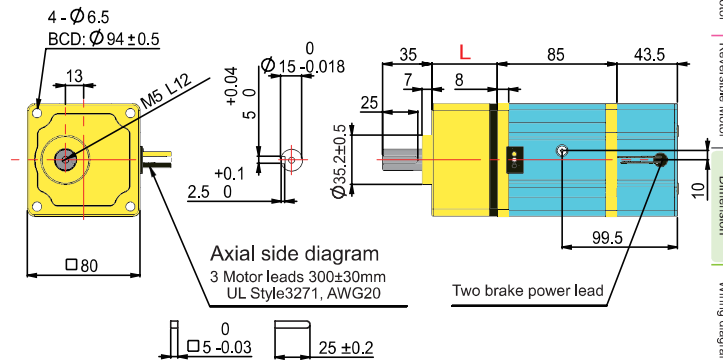
Round Shaft Type 8R25S-□M(E) / 8I25S-3M(E)

Motor Weight : 2700g

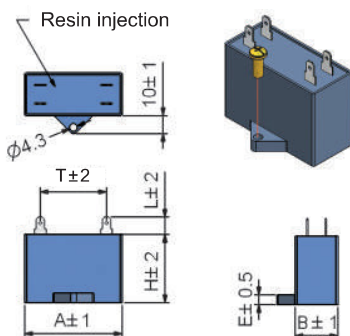


Pinion Shaft Type 8R25P-□M(E) / 8I25P-3M(E)+8A□

Motor Weight : 2680+W



■ Capacitor Dimensions (Single phase motors only)



* 8A pinion shaft type 8A3~360, the spec of Gearbox "L" length and weight "W" as following :

8A□Gearbox	Length/Weight	
Model	Length (mm)	Weight (g)
8A3~8A100	46.5	880
8A120~8A360	50.5	940

* We also have Gearbox 8A□N with shaft Ø10. For details please refer to the P.4.

Capacity of Capacitor (µF/VAC)	A	B	H	L	T	E
8/250	48	19	29	10	34	5
2/450	38	20	29	8	24	4.5
1.5/450	38	17	26	9	24	5

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.



■ Specs

Motor Output		40W							
Round Shaft		9R40S-1M		9R40S-2M		9I40S-3M	9R40S-2ME	9I40S-3ME	
Pinion Shaft		9R40P-1M		9R40P-2M		9I40P-3M	9R40P-2ME	9I40P-3ME	
Specification Certification									
Motor	Capacity of Capacitor(μF)	12		3.5		—		2.5	—
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230	Three phase 230
	Power Frequency (Hz)	60				50			
	Rated Current (A)	0.97	1.00	0.59	0.61	0.36		0.38	0.42
	Starting Torque (Nm)	0.27		0.27		0.27		0.32	0.45
	Rated Torque (Nm)	0.28		0.28		0.27		0.33	0.35
	Rated Speed (r/min)	1450		1450		1500		1250	1200
	Permissible Inertia (GD ²)	3 kgcm ²							
	Ambient Temperature	Single phase 110V/115V : -10~+50°C ; Single phase 220V/230V, Three phase 220V/230V: -10~+40°C							
	Ambient Humidity	Max.85%RH							
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230	
	Power Frequency (Hz)	60				50			
	Consumption Current (A)	0,09				0,09			
	Consumption Power (W)	9							
	Static Friction Torque (Nm)	0,5							

※ 9R40□-□M(E) holding torque is 400gcm (but at the initial the holding torque may lower than 400gcm); over rotation around 6 rev/min (reference value).

■ 9R40P-□M(E)/9I40P-3M(E)+9A□ Series Gearbox Specs & Permissible Torque / Permissible Inertial Load(GD²)When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60	
	Permissible Torque(Nm)	-1M,-2M Type	0.77	0.92	1.28	1.53	1.92	2.3	2.56	3.2	3.83	4.6	5.1	6.1	7.3
		-3M Type	0.73	0.87	1.22	1.46	1.82	2.19	2.43	3.04	3.65	4.37	4.86	5.8	7
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50	
	Permissible Torque(Nm)	-2ME Type	0.89	1.07	1.49	1.78	2.23	2.67	2.97	3.71	4.46	5.35	5.9	7.1	8.5
		-3ME Type	0.95	1.13	1.58	1.89	2.36	2.84	3.15	3.94	4.73	5.67	6.3	7.5	9
Permissible inertia load GD ² (kgcm ²)		27	39	75	108	169	243	300	469	675	972	1200	1875	2700	
Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360	
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5	
	Permissible Torque(Nm)	-1M,-2M Type	8.8	12.2	14.7	18.3	22	24.4	27.6	34.5	40				
		-3M Type	8.4	11.6	13.9	17.4	20.9	23.2	26.2	32.8	39.4	40			
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4	
	Permissible Torque(Nm)	-2ME Type	10.2	14.2	17	21.3	25.5	28.4	32.1	40					
		-3ME Type	10.8	15.1	18.1	22.6	27.1	30.1	34	40					
Permissible inertia load GD ² (kgcm ²)		3888	7500					7500							

※1 : Gearbox 9A□series, please enter the gear ratio 3~360 in the box□.

※2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 9R40P-□M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

※5 : 1 Nm = 10.19716 Kgcm

※6 : The Gearboxes of all series have certification.

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
9R40S-□M(E) 9I40S-3M(E)	14	20	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

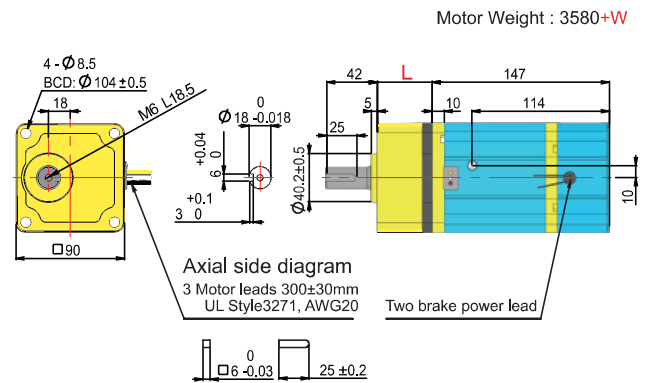
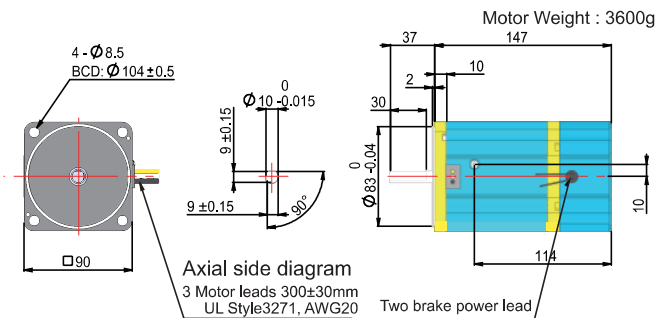
Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
9R40P-□M(E) 9I40P-3M(E)	3, 3.6, 5	50	60	15
	6, 7.5, 9, 10, 12.5, 15, 18, 20	60	70	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	70	80	

■ Dimensions

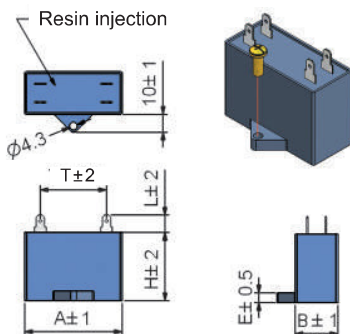
Unit : mm

Round Shaft Type 9R40S=□M(E) / 9I40S-3M(E)

Pinion Shaft Type 9R40P=□M(E) / 9I40P-3M(E)+9A□



■ Capacitor Dimensions (Single phase motors only)



* 9A pinion shaft type 9A3~360, the spec of Gearbox " L " length and weight " W " as following :

9A□Gearbox	Length/Weight	
Model	Length (mm)	Weight (g)
9A3~9A20	45.5	1170
9A25~9A100	58.5	1520
9A120~9A360	64.5	1610

* We also have Gearbox 9A□N with shaft ∅12. For details please refer to the P.4.

Capacity of Capacitor (μF/VAC)	A	B	H	L	T	E
12/250	50	22	35	9	34	5
3.5/450	49	21	31.5	8	34	5
2.5/450	48	17	27	9	34	5

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.



Specs

Motor Output		60W								
Round Shaft		9R60S-1M		9R60S-2M		9I60S-3M	9R60S-2ME	9I60S-3ME		
Pinion Shaft		9R60P-1M		9R60P-2M		9I60P-3M	9R60P-2ME	9I60P-3ME		
Specification Certification										
Motor	Capacity of Capacitor(μF)	20		5		—		4		
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230 Three phase 230		
	Power Frequency (Hz)	60					50			
	Rated Current (A)	1.49	1.53	0.75	0.78	0.80		0.83	1.00	
	Starting Torque (Nm)	0.4		0.4		0.56		0.47	0.7	
	Rated Torque (Nm)	0.42		0.42		0.43		0.51	0.54	
	Rated Speed (r/min)	1500		1500		1450		1200	1150	
	Permissible Inertia (GD ²)	4.6 kgcm ²								
	Ambient Temperature	Single phase 110V/115V : -10~+50℃ ; Single phase 220V/230V, Three phase 220V/230V: -10~+40℃								
	Ambient Humidity	Max.85%RH								
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230		
	Power Frequency (Hz)	60					50			
	Consumption Current (A)	0.09					0.09			
	Consumption Power (W)	9								
	Static Friction Torque (Nm)	0.5								

※ 9R60□-□M(E) holding torque is 400gcm (but at the initial the holding torque may lower than 400gcm); over rotation around 6 rev/min (reference value).

9R60P-□M(E)/9I60P-3M(E)+9A□ Series Gearbox Specs & Permissible Torque / Permissible Inertial Load(GD²) When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60	
	Permissible Torque(Nm)	-1M,-2M Type	1.13	1.36	1.89	2.27	2.84	3.4	3.78	4.73	5.67	6.8	7.6	9	10.8
		-3M Type	1.16	1.39	1.94	2.32	2.9	3.48	3.87	4.84	5.81	6.97	7.7	9.2	11.1
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50	
	Permissible Torque(Nm)	-2ME Type	1.38	1.65	2.3	2.75	3.44	4.13	4.59	5.74	6.89	8.26	9.2	11	13.2
		-3ME Type	1.47	1.76	2.44	2.93	3.67	4.4	4.89	6.11	7.33	8.8	9.8	11.7	14
Permissible inertia load GD ² (kgcm ²)		41	60	115	166	259	373	460	719	1035	1490	1840	2875	4140	
Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360	
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5	
	Permissible Torque(Nm)	-1M,-2M Type	13	18.1	21.7	27.1	32.5	36.1	40						
		-3M Type	13.3	18.5	22.2	27.7	33.3	37	40						
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4	
	Permissible Torque(Nm)	-2ME Type	15.8	21.9	26.3	32.9	39.5	40	40						
		-3ME Type	16.8	23.3	28	35	40	40							
Permissible inertia load GD ² (kgcm ²)		5962	11500					11500							

※1 : Gearbox 9A□series, please enter the gear ratio 3~360 in the box□.

※2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 9R60P-□M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

※5 : 1 Nm = 10.19716 Kgcm

※6 : The Gearboxes of all series have certification.

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

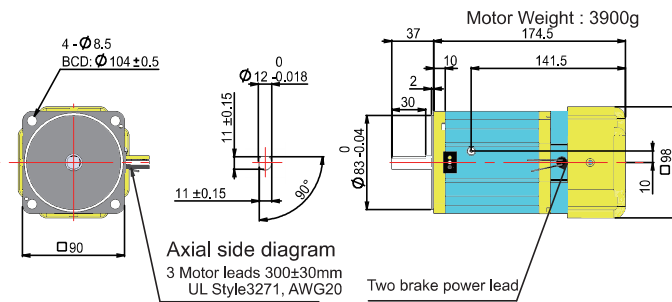
Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
9R60S-□M(E) 9I60S-3M(E)	24	27	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

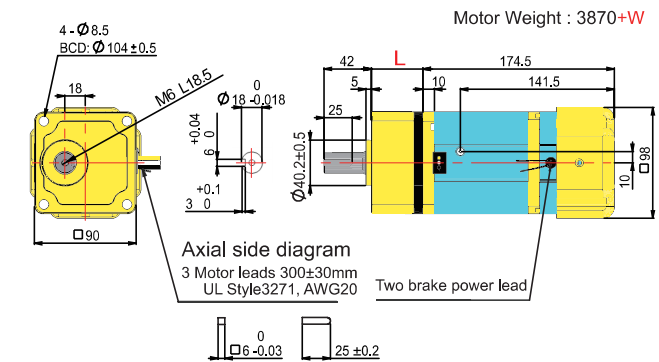
Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
9R60P-□M(E) 9I60P-3M(E)	3, 3.6, 5	50	60	15
	6, 7.5, 9, 10, 12.5, 15, 18, 20	60	70	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	70	80	

■ Dimensions

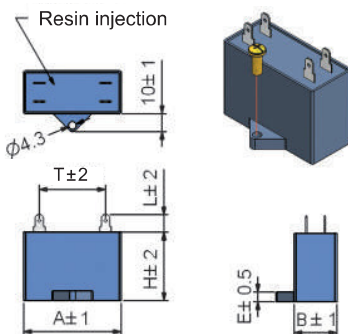
Round Shaft Type 9R60S=□M(E) / 9I60S-3M(E)



Pinion Shaft Type 9R60P=□M(E) / 9I60P-3M(E)+9A□



■ Capacitor Dimensions (Single phase motors only)



* 9A pinion shaft type 9A3~360, the spec of Gearbox "L" length and weight "W" as following :

9A□Gearbox		Length/Weight	
Model	Length (mm)	Weight (g)	
9A3~9A20	45.5	1170	
9A25~9A100	58.5	1520	
9A120~9A360	64.5	1610	

* We also have Gearbox 9A□U with shaft Ø15. For details please refer to the P.4.

Capacity of Capacitor (µF/VAC)	A	B	H	L	T	E
20/250	59	23	35	10	48	4.2
5/450	50	22	35	9	34	5
4/450	49	21	31.5	9	34	5

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.



■ Specs

Motor Output		90W									
Round Shaft		9R90S-1M		9R90S-2M		9I90S-3M		9R90S-2ME		9I90S-3ME	
Pinion Shaft		9R90P-1M		9R90P-2M		9I90P-3M		9R90P-2ME		9I90P-3ME	
Specification Certification											
Motor	Capacity of Capacitor(μF)	30		7		—		6		—	
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230		Three phase 230	
	Power Frequency (Hz)	60						50			
	Rated Current (A)	2.13	2.35	1.00	1.03	0.84		1.00		0.94	
	Starting Torque (Nm)	0.53		0.58		0.75		0.64		0.94	
	Rated Torque (Nm)	0.61		0.61		0.61		0.74		0.75	
	Rated Speed (r/min)	1500		1550		1500		1250		1250	
	Permissible Inertia (GD ²)	4.6 kgcm ²									
	Ambient Temperature	Single phase 110V/115V : -10~+50°C ; Single phase 220V/230V, Three phase 220V/230V: -10~+40°C									
	Ambient Humidity	Max.85%RH									
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230			
	Power Frequency (Hz)	60						50			
	Consumption Current (A)	0.09						0.09			
	Consumption Power (W)	9									
	Static Friction Torque (Nm)	0.5									

※ 9R90□-□M(E) holding torque is 400gcm(but at the initial the holding torque may lower than 400gcm); over rotation around 6 rev/min(reference value).

■ 9R90P-□M(E)/9I90P-3M(E)+9A□Series Gearbox Specs & Permissible Torque / Permissible Inertial Load(GD²)When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60	
	Permissible Torque(Nm)	-1M,-2M Type	1.65	1.98	2.75	3.3	4.12	4.94	5.5	6.86	8.24	9.88	11	13.1	15.7
		-3M Type	1.65	1.98	2.75	3.29	4.12	4.94	5.49	6.86	8.24	9.88	11	13.1	15.7
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50	
	Permissible Torque(Nm)	-2ME Type	2	2.4	3.33	4	5	6	6.66	8.33	10	12	13.3	15.9	19.1
		-3ME Type	2.03	2.43	3.38	4.05	5.06	6.08	6.75	8.44	10.1	12.2	13.5	16.1	19.4
Permissible inertia load GD ² (kgcm ²)		41	60	115	166	259	373	460	719	1035	1490	1840	2875	4140	
Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360	
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5	
	Permissible Torque(Nm)	-1M,-2M Type	18.9	26.2	31.5	39.3	40		40						
		-3M Type	18.9	26.2	31.5	39.3	40		40						
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4	
	Permissible Torque(Nm)	-2ME Type	22.9	31.8	38.2	40		40							
		-3ME Type	23.2	32.3	38.7	40		40							
Permissible inertia load GD ² (kgcm ²)		5962	11500					11500							

※1 : Gearbox 9A□series, please enter the gear ratio 3~360 in the box□.

※2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 9R90P-□M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

※5 : 1 Nm = 10.19716 Kgcm

※6 : The Gearboxes of all series have certification.

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

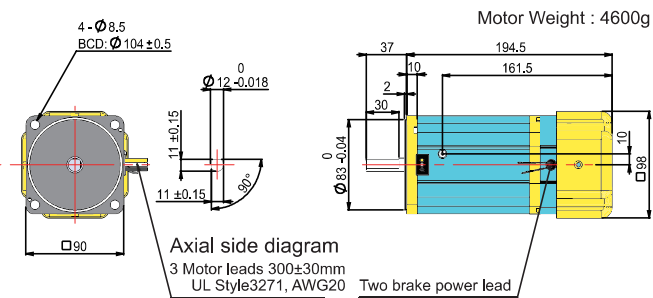
Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
9R90S-□M(E) 9I90S-3M(E)	24	27	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

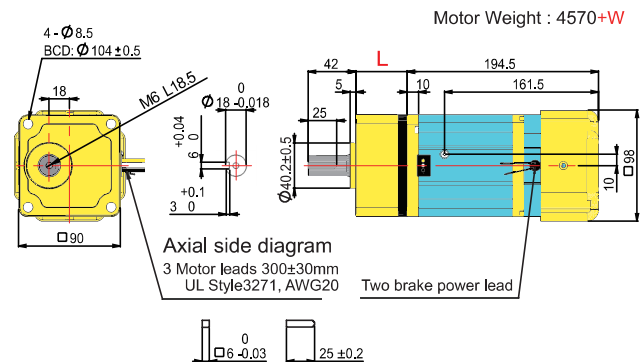
Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
9R90P-□M(E) 9I90P-3M(E)	3, 3.6, 5	50	60	15
	6, 7.5, 9, 10, 12.5, 15, 18, 20	60	70	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	70	80	

■ Dimensions

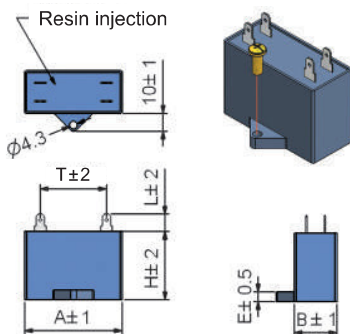
Round Shaft Type 9R90S=□M(E) / 9I90S-3M(E)



Pinion Shaft Type 9R90P=□M(E) / 9I90P-3M(E)+9A□



■ Capacitor Dimensions (Single phase motors only)



* 9A pinion shaft type 9A3~360, the spec of Gearbox "L" length and weight "W" as following :

9A□ Gearbox	Length/Weight	
Model	Length (mm)	Weight (g)
9A3~9A20	45.5	1170
9A25~9A100	58.5	1520
9A120~9A360	64.5	1610

* We also have Gearbox 9A□U with shaft $\varnothing 15$. For details please refer to the P.4.

Capacity of Capacitor (μ F/VAC)	A	B	H	L	T	E
30/250	59	40	40	12	44	4
7/450	57.5	25	39	8	44	4
6/450	59	23	35	9	44	4.2

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.



Specs

Motor Output		135W									
Round Shaft		9R135S-1M		9R135S-2M		9I135S-3M		9R135S-2ME		9I135S-3ME	
Pinion Shaft		9R135P-1M		9R135P-2M		9I135P-3M		9R135P-2ME		9I135P-3ME	
Specification Certification											
Motor	Capacity of Capacitor(μF)	27		8		—		6		—	
	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Three phase 230		Single phase 230		Three phase 230	
	Power Frequency (Hz)	60						50			
	Rated Current (A)	2.30	2.35	1.30	1.35	1.00		1.20		1.25	
	Starting Torque (Nm)	0.60		0.60		1.00		0.60		1.30	
	Rated Torque (Nm)	0.85	0.90	0.85	0.90	0.95		0.90		1.10	
	Rated Speed (r/min)	1500		1550		1550		1250		1200	
	Permissible Inertia (GD ²)	4.6 kgcm ²									
	Ambient Temperature	Single phase 110V/115V : -10~+50°C ; Single phase 220V/230V, Three phase 220V/230V: -10~+40°C									
	Ambient Humidity	Max.85%RH									
Braker	Power Input (V)	Single phase 110	Single phase 115	Single phase 220	Single phase 230	Single phase 220	Single phase 230	Single phase 230			
	Power Frequency (Hz)	60						50			
	Consumption Current (A)	0.09						0.09			
	Consumption Power (W)	9									
	Static Friction Torque (Nm)	0.5									

※9R135□-□M(E) holding torque is 400gcm(but at the initial the holding torque may lower than 400gcm); over rotation around 6 rev/min(reference value).

9R135P-□M(E)/9I135P-3M(E)+9A□ Series Gearbox Specs & Permissible Torque / Permissible Inertial Load(GD²)When Gearbox Attached

Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	
60 Hz	Rotation Speed (r/min)	600	500	360	300	240	200	180	144	120	100	90	72	60	
	Permissible Torque(Nm)	-1M,-2M Type	2.4	2.9	4.1	4.9	6.1	7.3	8.1	10.2	12.2	14.6	16.3	19.3	23.2
		-3M Type	2.6	3.1	4.3	5.1	6.4	7.7	8.6	10.7	12.9	15.4	17.2	20.4	24.4
50 Hz	Rotation Speed (r/min)	500	417	300	250	200	167	150	120	100	83	75	60	50	
	Permissible Torque(Nm)	-2ME Type	2.4	2.9	4.1	4.9	6.1	7.3	8.1	10.2	12.2	14.6	16.3	19.3	23.2
		-3ME Type	3	3.6	5	6	7.5	8.9	9.9	12.4	14.9	17.9	19.9	23.6	28.3
Permissible inertia load GD ² (kgcm ²)		41	60	115	166	259	373	460	719	1035	1490	1840	2875	4140	
Gear Ratio		36	50	60	75	90	100	120	150	180	200	250	300	360	
60 Hz	Rotation Speed (r/min)	50	36	30	24	20	18	15	12	10	9	7	6	5	
	Permissible Torque(Nm)	-1M,-2M Type	27.8	38.6	40				40						
		-3M Type	29.3	40				40							
50 Hz	Rotation Speed (r/min)	42	30	25	20	17	15	13	10	8	8	6	5	4	
	Permissible Torque(Nm)	-2ME Type	27.8	38.6	40				40						
		-3ME Type	34	40				40							
Permissible inertia load GD ² (kgcm ²)		5962	11500				11500								

※1 : Gearbox 9A□series, please enter the gear ratio 3~360 in the box□.

※2 : 60Hz: The max synchronous speed is 1800r/min; 50Hz: The max synchronous speed is 1500r/min.

※3 : "Permissible torque" It refers to the value of load torque driven by the Gearbox's output. -1M type: It indicates 9R135P- □M is single phase 110V/115V 60Hz; -2M type: Single phase 220V/230V 60Hz; -2ME type: Single phase 230V 50Hz; the other types please refer to the above table.

※4 : A colored background indicates gear shaft rotation in the opposite direction as the motor shaft. No marking indicates rotation in the same direction.

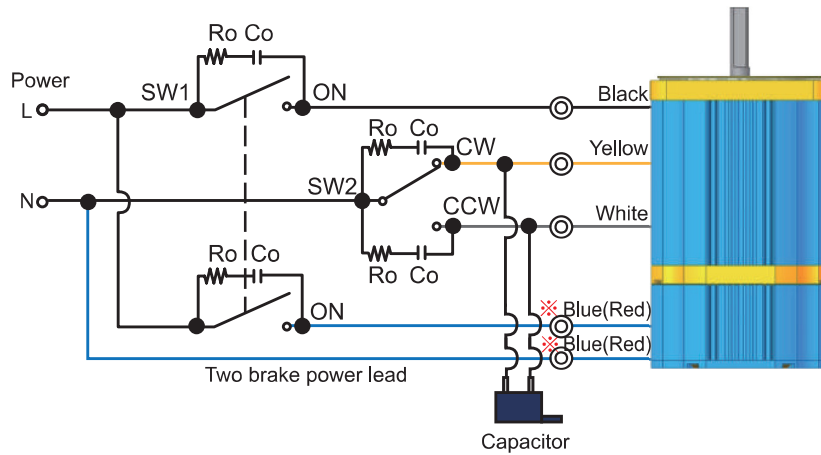
※5 : 1 Nm = 10.19716 Kgcm

※6 : The Gearboxes of all series have certification.

Electromagnetic Brake Motor Wiring Diagram 6W · 25W · 40W · 60W · 90W · 135W

■ Applicable Models : Single Phase Motor

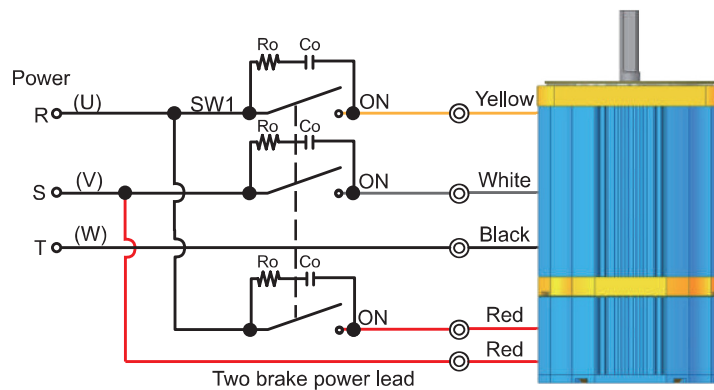
6R6□-1M	6R6□-2M	6R6□-2ME
8R25□-1M	8R25□-2M	8R25□-2ME
9R40□-1M	9R40□-2M	9R40□-2ME
9R60□-1M	9R60□-2M	9R60□-2ME
9R90□-1M	9R90□-2M	9R90□-2ME
9R135□-1M	9R135□-2M	9R135□-2ME



※ When Motor is 110 / 115V, the electromagnetic brake leads are blue; when the Motor is 220 / 230V, the electromagnetic brake leads are red.

■ Applicable Models : 3 Phase Motor

6I6□-3M	6I6□-3ME
8I25□-3M	8I25□-3ME
9I40□-3M	9I40□-3ME
9I60□-3M	9I60□-3ME
9I90□-3M	9I90□-3ME
9I135□-3M	9I135□-3ME



Note: Any exchange U, V, W either two leads, that is counterclockwise rotation.

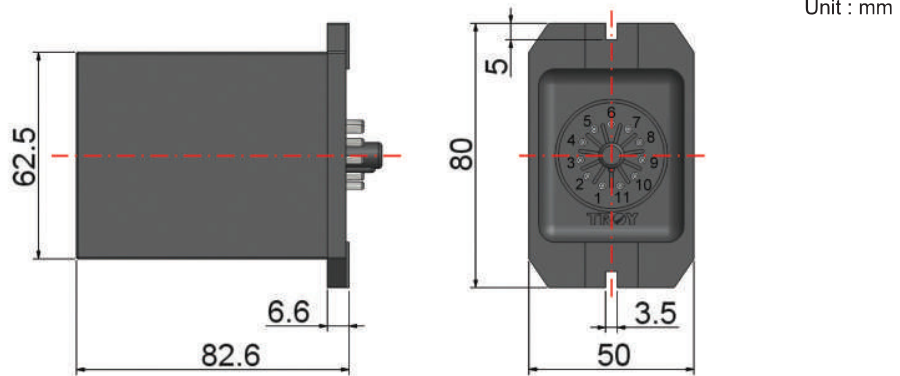
Torque Motor TP51.TP52 Torque Controller



■ Specs

Model	TP51	TP52
Specification Certification		
Power Input (V)	Single phase AC100~115	
Power Frequency (Hz)	50	60
Drive Current (A)	5	
Drive Power	Max.40W	
Voltage Adjustment Range(V)	AC10~110	AC35~200
Ambient Temperature	0~+40°C	
Ambient Humidity	Max.85%RH	
Dimension (mm)	82.6(L) × 50(W) × 80(H)	
Weight (g)	98.5	

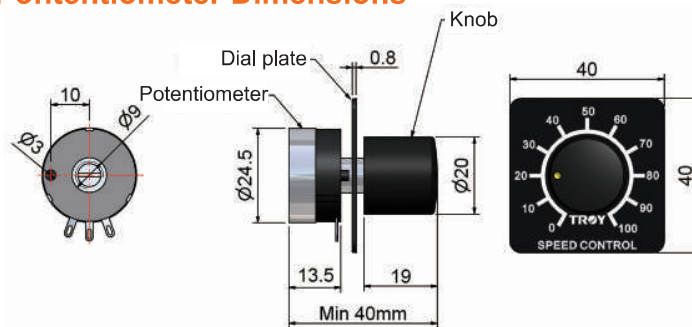
■ Dimension



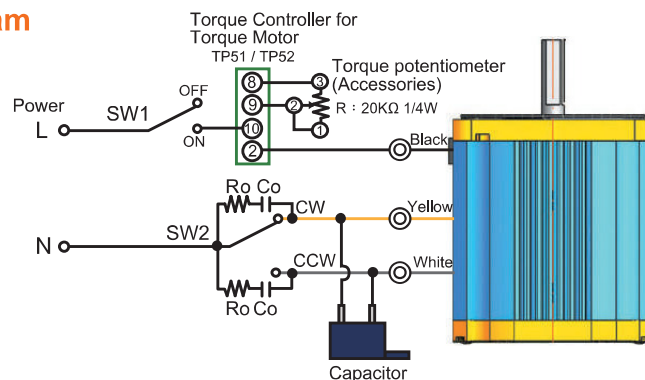
Unit : mm

※ Flush mounting socket is sold separately.

■ External Speed Potentiometer Dimensions



■ Wiring Diagram



* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

Common Technical Information
Product Number Code
Induction Motor
Reversible Motor
Speed Control Motor
Electromagnetic Brake Motor
Torque Motor
Inverter
Brake Controller
Accessories

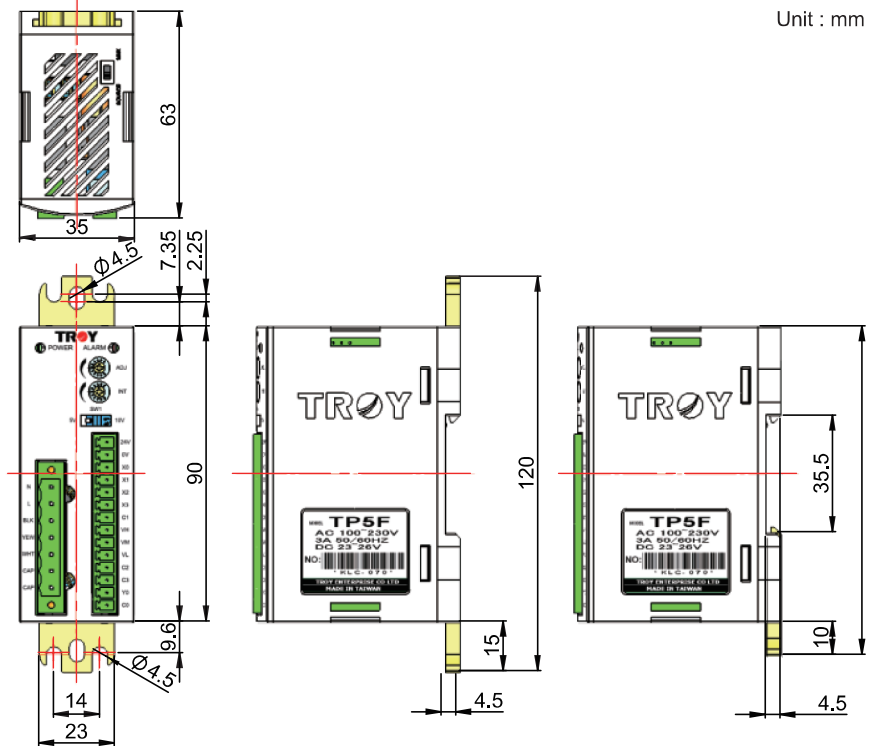


■ Specs

Model	TP5F	
Specification Certification	—	
AC Power Voltage(V)	Single phase AC100~230※	
DC Power Voltage(V)	DC23~26	
Power Frequency (Hz)	50	60
Drive Current (A)	3	
Drive Ability	20W or less	
Function	<ul style="list-style-type: none"> •Instant counter revolution. •Torque trimming setting. •ALARM-RESET 	<ul style="list-style-type: none"> •VR internal torque control, VR external torque control. •Motor overheat protection detection (ALARM output).
Ambient Temperature	0~+40°C	
Ambient Humidity	Max.85%RH	
Dimension (mm)	90(L) X 35(W) X 63(H)	
Weight (g)	120	

※ Please according to the value of the AC power supply voltage input the motor to choose the value of the AC power voltage input the controller.

■ Dimension

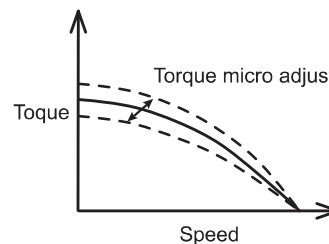
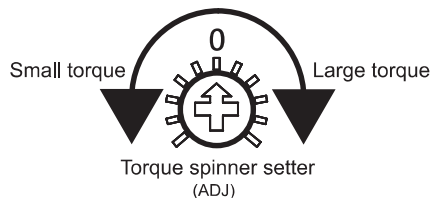


Unit : mm

* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

■ Torque Setting for Fine Adjustment Device Operation Introducing

Because of the torque Controller, torque Motors, capacitors somewhat error, when it compensates and corrects the error, it can be used to fine-tune the torque setter (Adjust).

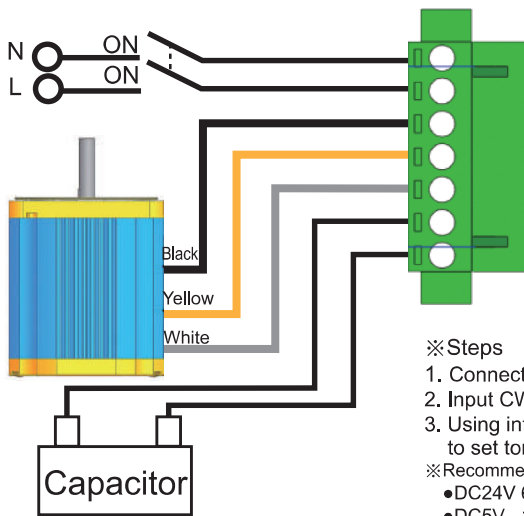


Wiring Diagram

Power Circuit Terminal Wiring

Note

This Controller is a single-phase power supply AC100 ~ 230V, please note that the power supply voltage to the Motor with the Motor specifications are the same as used for any errors fear will cause damage to the Motor Controller.

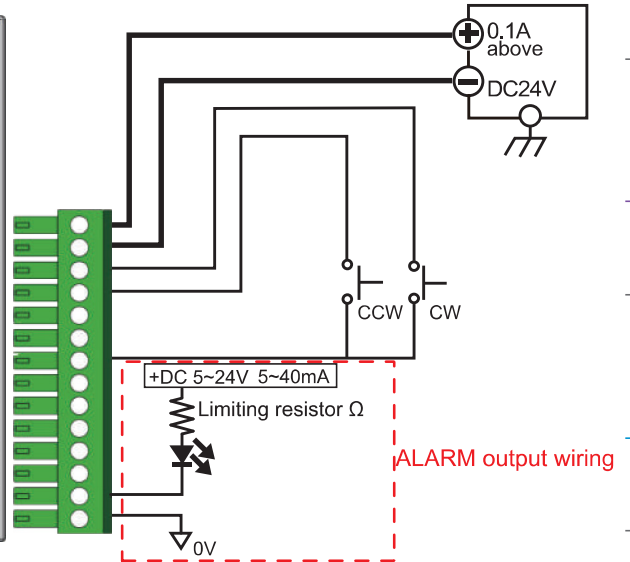


Steps

1. Connecting AC, DC power.
 2. Input CW or CCW signal.
 3. Using internal torque setter (INT) to set torque.
- ※Recommending limiting resistor value
- DC24V 680Ω~ 4.7kΩ(2W).
 - DC5V 150Ω~1.0kΩ(0.5W).

The Basic Operation of Wiring

This wiring is set through internal torque setter.



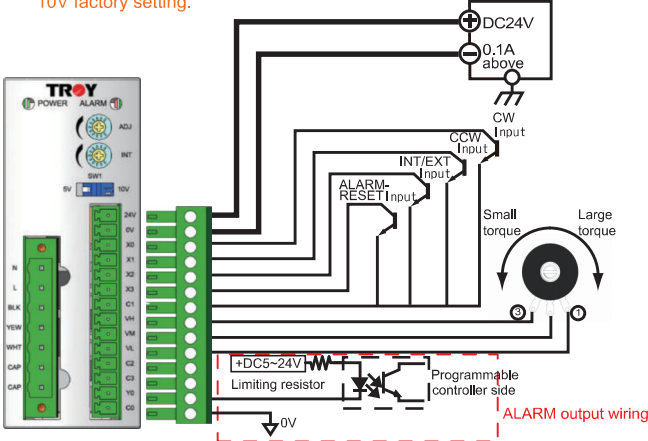
CWinput	CCWinput	Motor Action
ON	OFF	Forward
OFF	ON	Reverse
ON	ON	Stop

Input Logical Wiring Chart

Input SINK Logic - with External Torque Setter Wiring Operation

With accessories DBVR-20kΩ, do external torque setter operated; SOURCE input mode also can be used with an external torque setter.

※Make sure that the external voltage selector switch is set at 5V, 10V factory setting.



Steps

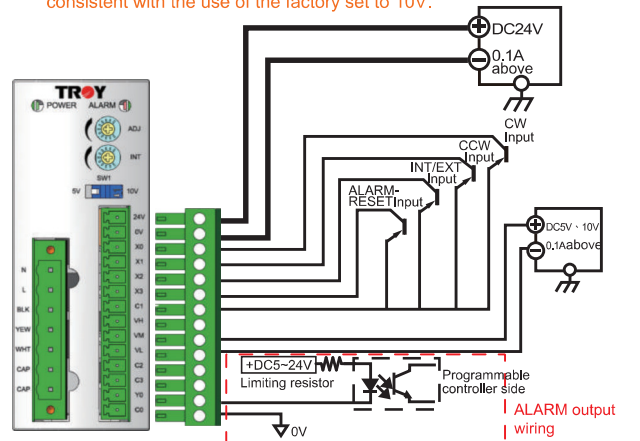
1. Connecting AC,DC power.
2. Setting input signal INT / EXT to ON.
3. Setting CW input or CCW input to ON. (Both are ON, Motor stops)
4. Adjust the torque through the external torque setter.(Clockwise torque is large, counterclockwise is small.)
5. Can use the input signal INT / EXT switch, do two power torque setting to link AC, DC.
6. If the external switching voltage switch set to 10V,it will cause the Motor torque can not reach the maximum.

External Torque Setting Terminal	Torque Controller Terminal
3	VH
2	VM
1	VL

Input SOURCE Logic - with External DC Voltage Wiring operation

According to an external 10V DC voltage DC5V or using torque input mode can also be set to SINK with external DC voltage.

※Please confirm whether the external voltage selector switch is consistent with the use of the factory set to 10V.



Steps

1. The 5V, 10V switch is set to 5V or 10V side. (Appearance set to 10V.)
2. Connecting AC, DC power.
3. Setting input signal INT / EXT to ON.
4. Setting CW input or CCW input to ON.(Both are ON, Motor stops.)
5. Through external DC voltage adjustment torque, the torque is increased to increase the voltage and reduce the smaller.
6. Can use the input signal INT / EXT switch, make two torque setting.

Signal Line	Torque Controller Terminal
+	VM
-	VL



■ Specs

Motor Output	3W						
Round Shaft Type	6T3S-1		6T3S-2		6T3S-2E		
Pinion Shaft Type	6T3P-1		6T3P-2		6T3P-2E		
Specification Certification							
With the Controller Model	TP51, TP5F		TP52, TP5F		TP52, TP5F		
Capacity of Capacitor (μF)	6.5		1.5		1.5		
Use Freeze [when restraint] (min)	5	Continuous	5	Continuous	5	Continuous	
Power Input (V)	Single phase AC110	Single phase AC60	Single phase AC220	Single phase AC115	Single phase AC230	Single phase AC115	
Power Frequency (Hz)	60				50		
Starting Torque (Nm)	0.07	0.03	0.07	0.03	0.07	0.02	
Maximum Output Power(W)	3.5	1.2	3.5	1.2	3	0.8	
Maximum Output	Rotational Speed(r/min)	900		900		750	
	Torque(Nm)	0.04	0.01	0.04	0.01	0.04	0.01
	Electric Current(A)	0.42	0.26	0.22	0.13	0.24	0.10
	Power Input(W)	45	15	45	14	50	10
Ambient Temperature	-10~+50°C						
Ambient Humidity	Max.85%RH						

※ 1 Nm = 10,19716 Kgcm

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
6T3S-□	5	11	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

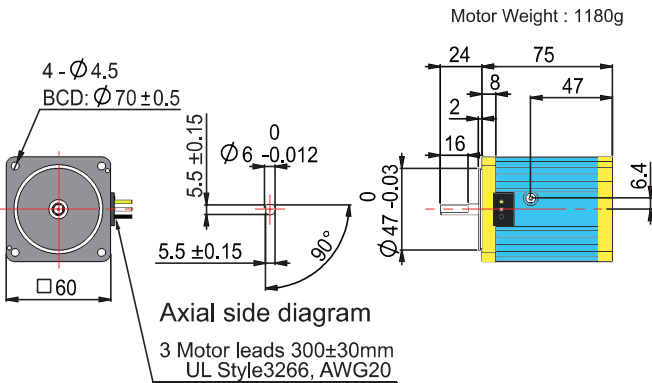
Pinion Shaft Type(Gearbox Attached)

Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
6T3P-□	3, 3.6, 5	10	15	3
	6, 7.5, 9, 10, 12.5, 15, 18, 20	15	20	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	20	30	

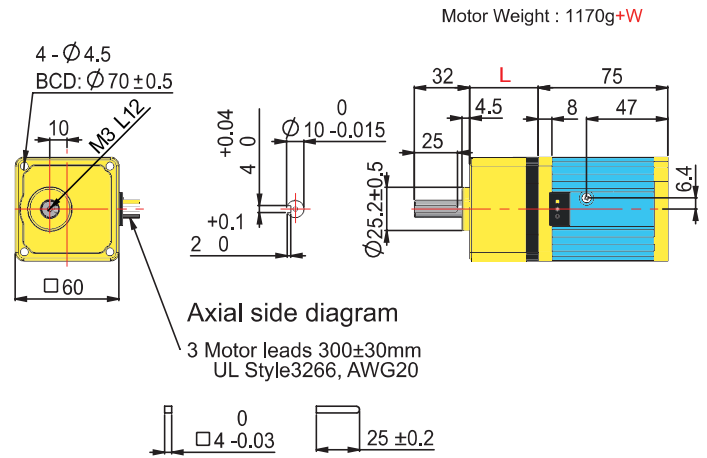
※1 : The Gearboxes of all series have certificates.

■ Dimensions

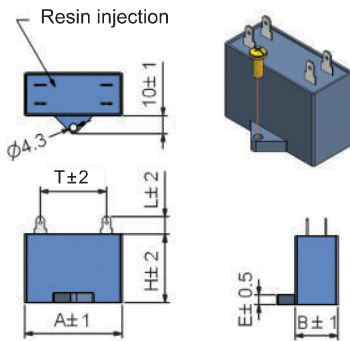
Round Shaft Type 6T3S=□



Pinion Shaft Type 6T3P=□+6A□



■ Capacitor Dimensions (Single phase motors only)



* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

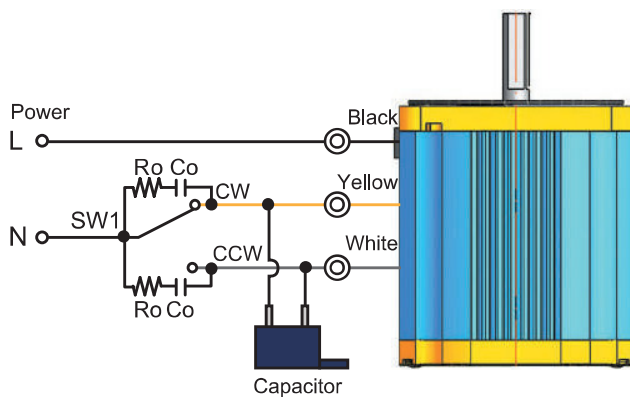
* 6A pinion shaft type 6A3~360, the spec of Gearbox "L" length and weight "W" as following :

6A□Gearbox		Length/Weight	
Model	Length (mm)	Weight (g)	
6A3~6A100	39.5	400	
6A120~6A360	43.5	440	

* We also have Gearbox 6A□N with shaft Ø8. For details please refer to the P.4.

Capacity of Capacitor (μF/VAC)	A	B	H	L	T	E
6.5/250	48	17	27	9	34	5
1.5/450	38	17	26	9	24	5

■ Wiring Diagram





■ Specs

Motor Output	10W						
Round Shaft Type	8T10S-1		8T10S-2		8T10S-2E		
Pinion Shaft Type	8T10P-1		8T10P-2		8T10P-2E		
Specification Certification							
With the Controller Model	TP51, TP5F		TP52, TP5F		TP52, TP5F		
Capacity of Capacitor (μF)	10		2.5		2.5		
Use Freeze [when restraint] (min)	5	Continuous	5	Continuous	5	Continuous	
Power Input (V)	Single phase AC110	Single phase AC60	Single phase AC220	Single phase AC115	Single phase AC230	Single phase AC115	
Power Frequency (Hz)	60				50		
Starting Torque (Nm)	0.21	0.07	0.21	0.07	0.22	0.07	
Maximum Output Power(W)	12	3.3	12	3.3	10	2.8	
Maximum Output	Rotational Speed(r/min)	900		900		750	
	Torque(Nm)	0.13	0.04	0.13	0.04	0.13	0.04
	Electric Current(A)	0.74	0.45	0.39	0.24	0.45	0.18
	Power Input(W)	80	25	80	25	90	20
Ambient Temperature	-10~+50°C						
Ambient Humidity	Max.85%RH						

※ 1 Nm = 10.19716 Kgcm

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
8T10S-□	9	14	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

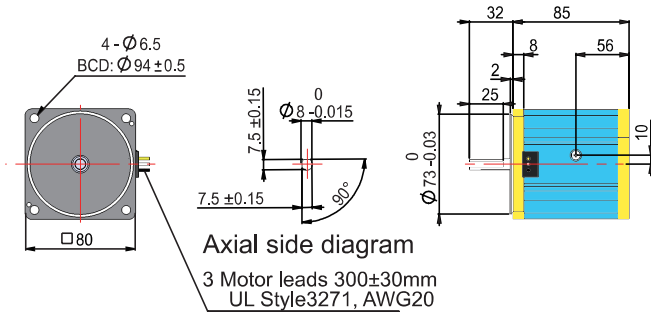
Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
8T10P-□	3, 3.6, 5	20	25	5
	6, 7.5, 9, 10, 12.5, 15, 18, 20	30	35	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	45	55	

※1 : The Gearboxes of all series have certificates.

■ Dimensions

Round Shaft Type 8T10S=□

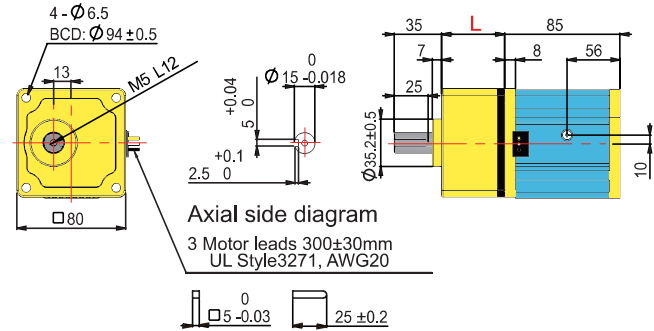
Motor Weight : 2050g



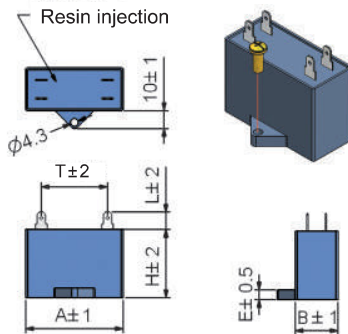
Pinion Shaft Type 8T10P=□+8A□

Unit : mm

Motor Weight : 2030g+W



■ Capacitor Dimensions (Single phase motors only)



* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

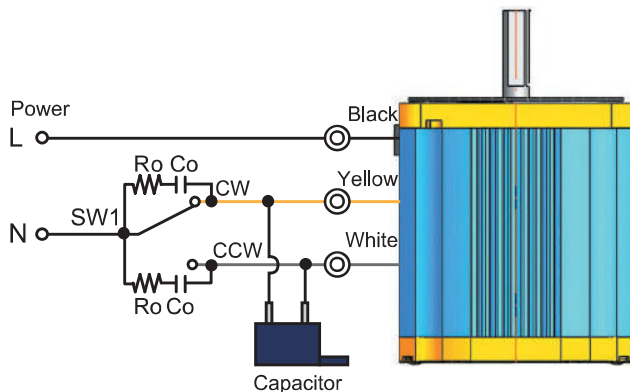
* 8A pinion shaft type 8A3~360, the spec of Gearbox "L" length and weight "W" as following :

8A□Gearbox Length/Weight		
Model	Length (mm)	Weight (g)
8A3~8A100	46.5	880
8A120~8A360	50.5	940

* We also have Gearbox 8A□□ with shaft $\phi 10$. For details please refer to the P.4.

Capacity of Capacitor (μ F/VAC)	A	B	H	L	T	E
10/250	49	21	31.5	8	38	5
2.5/450	48	17	27	9	34	5

■ Wiring Diagram



Torque Motor Standard Type Independent Fan Type 20W



■ Specs

Motor Output	20W						
Round Shaft Type	9T20S(F)-1		9T20S(F)-2		9T20S(F)-2E		
Pinion Shaft Type	9T20P(F)-1		9T20P(F)-2		9T20P(F)-2E		
Specification Certification							
With the Controller Model	TP51,TP5F		TP52,TP5F		TP52,TP5F		
Capacity of Capacitor (μF)	12		3		3		
Use Freeze [when restraint] (min)	5	Continuous	5	Continuous	5	Continuous	
Power Input (V)	Single phase AC110	Single phase AC60	Single phase AC220	Single phase AC115	Single phase AC230	Single phase AC115	
Power Frequency (Hz)	60				50		
Starting Torque (Nm)	0.27	0.09	0.28	0.09	0.35	0.11	
Maximum Output Power(W)	18	6	20	6	20	6	
Maximum Output	Rotational Speed(r/min)	900		900		750	
	Torque(Nm)	0.2	0.07	0.21	0.06	0.26	0.07
	Electric Current(A)	0.82	0.49	0.50	0.23	0.50	0.27
	Power Input(W)	82	29	92	30	101	33
Ambient Temperature	-10~+50°C						
Ambient Humidity	Max.85%RH						

※ 9T20S-□/9T20P-□ is standard type, 9T20SF-□/9T20PF-□ is independent fan type.

※ 1 Nm = 10.19716 Kgcm

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
9T20S(F)-□	14	20	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
9T20P(F)-□	3, 3.6, 5	50	60	15
	6, 7.5, 9, 10, 12.5, 15, 18, 20	60	70	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	70	80	

※1 : The Gearboxes of all series have certificates.

◆ Dimensions

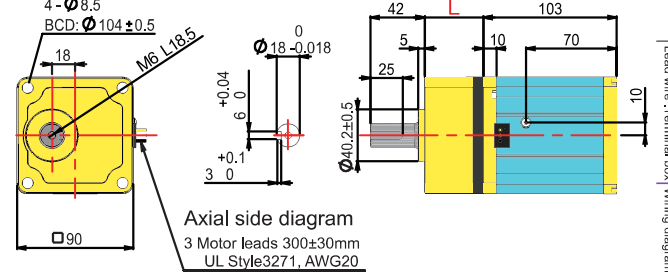
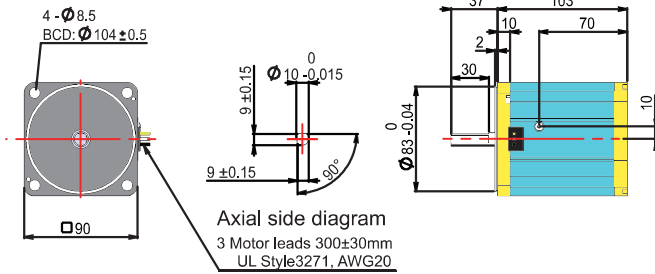
◆ Standard Type

Round Shaft Type 9T20S-□

Motor Weight : 3100g

Pinion Shaft Type 9T20P-□+9A□

Unit : mm
Motor Weight : 3080g+W



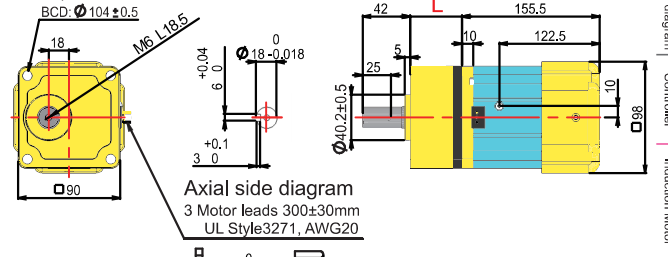
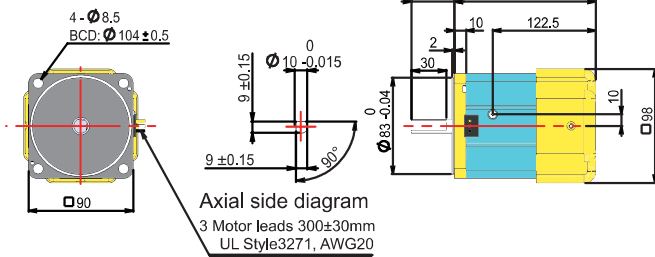
◆ Independent Fan Type

Round Shaft Type 9T20SF-□

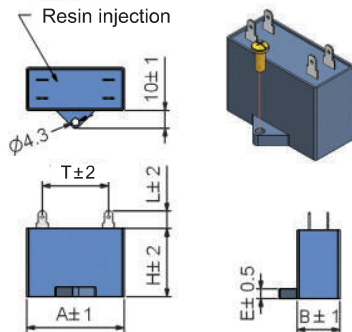
Motor Weight : 3365g

Pinion Shaft Type 9T20PF-□+9A□

Motor Weight : 3345g+W



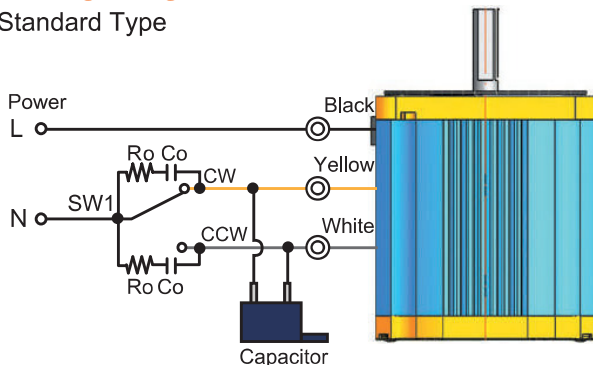
◆ Capacitor Dimensions (Single phase motors only)



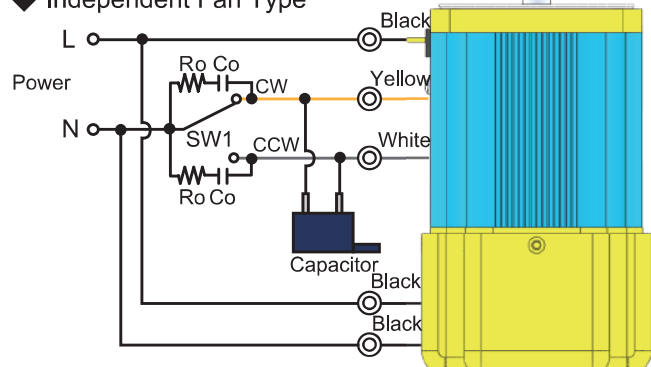
* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

◆ Wiring Diagram

◆ Standard Type



◆ Independent Fan Type



* 9A pinion shaft type 9A3~360, the spec of Gearbox "L" length and weight "W" as following :

9A□ Gearbox		Length/Weight	
Model	Length (mm)	Weight (g)	
9A3~9A20	45.5	1170	
9A25~9A100	58.5	1520	
9A120~9A360	64.5	1610	

※ We also have Gearbox 9A□N with shaft Ø12. For details please refer to the P.4.

Capacity of Capacitor (µF/VAC)	A	B	H	L	T	E
12/250	50	22	35	9	34	5
3/450	48	19	29	9	34	5

Torque Motor Standard Type Independent Fan Type 40W



■ Specs

Motor Output	40W						
Round Shaft Type	9T40S(F)-1		9T40S(F)-2		9T40S(F)-2E		
Pinion Shaft Type	9T40P(F)-1		9T40P(F)-2		9T40P(F)-2E		
Specification Certification							
With the Controller Model	TP51		TP52		TP52		
Capacity of Capacitor (μF)	30		7		7		
Use Freeze [when restraint] (min)	5	Continuous	5	Continuous	5	Continuous	
Power Input (V)	Single phase AC110	Single phase AC60	Single phase AC220	Single phase AC115	Single phase AC230	Single phase AC115	
Power Frequency (Hz)	60				50		
Starting Torque (Nm)	0.85	0.2	0.85	0.2	0.9	0.2	
Maximum Output Power(W)	40	10	40	10	40	9	
Maximum Output	Rotational Speed(r/min)	900		900		750	
	Torque(Nm)	0.67	0.1	0.67	0.1	0.74	0.11
	Electric Current(A)	2.30	1.30	1.20	0.70	1.50	0.70
	Power Input(W)	240	76	248	79	280	80
Ambient Temperature	-10~+50°C						
Ambient Humidity	Max.85%RH						

※ 9T40S-□/9T40P-□ is standard type, 9T40SF-□/9T40PF-□ is independent fan type.

※ 1 Nm = 10.19716 Kgcm

■ Permissible Overhung Load / Permissible Thrust Load

Round Shaft Type

Model	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
	10mm from shaft end	20mm from shaft end	
9T40S(F)-□	24	27	Permissible thrust load do not exceed the weight of Motor 1/2. If exceed the rated weight will decrease the service life of Motor. Please using indirect transmission machinery such as coupling, belt, chain. As the applications which will need the thrust load.

Pinion Shaft Type(Gearbox Attached)

Model	Gear Ratio	Permissible Overhung Load(Unit : kg f)		Permissible Thrust Load (Unit : kg f)
		10mm from shaft end	20mm from shaft end	
9T40P(F)-□	3, 3.6, 5	50	60	15
	6, 7.5, 9, 10, 12.5, 15, 18, 20	60	70	
	25, 30, 36, 50, 60, 75, 90, 100, 120, 150, 180, 200, 250, 300, 360	70	80	

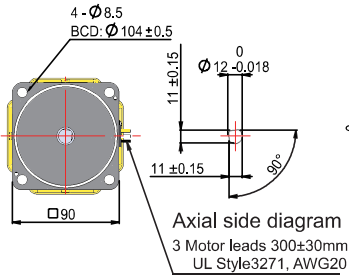
※1 : The Gearboxes of all series have certificates.

■ Dimensions

◆ Standard Type

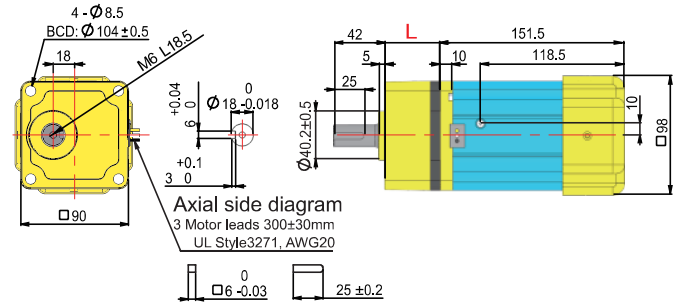
Round Shaft Type 9T40S-□

Motor Weight : 4100g



Pinion Shaft Type 9T40P-□+9A□

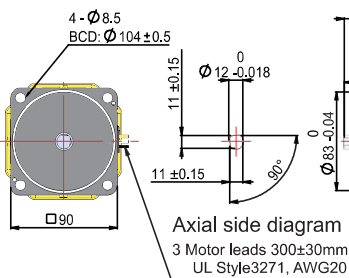
Unit : mm
Motor Weight : 4070g+W



◆ Independent Fan Type

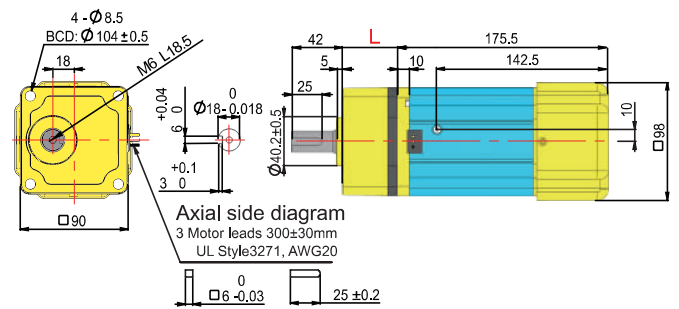
Round Shaft Type 9T40SF-□

Motor Weight : 4365g

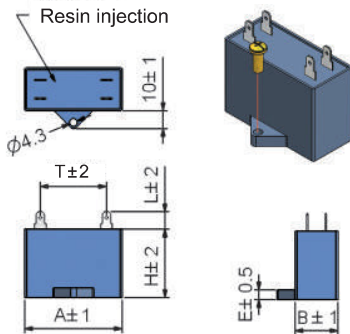


Pinion Shaft Type 9T40PF-□+9A□

Motor Weight : 4335g+W



■ Capacitor Dimensions (Single phase motors only)



* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

* 9A pinion shaft type 9A3-360, the spec of Gearbox "L" length and weight "W" as following :

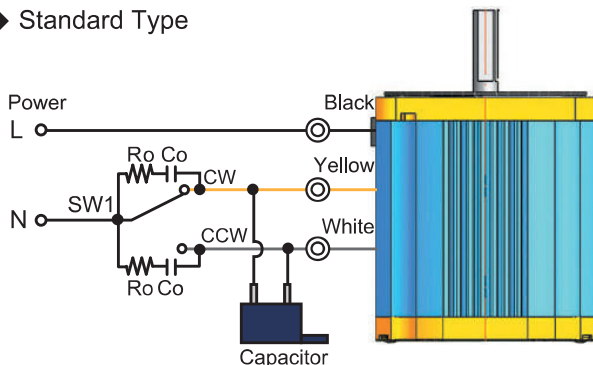
9A□Gearbox Length/Weight		
Model	Length (mm)	Weight (g)
9A3~9A20	45.5	1170
9A25~9A100	58.5	1520
9A120~9A360	64.5	1610

※ We also have Gearbox 9A□U with shaft Ø15. For details please refer to the P.4.

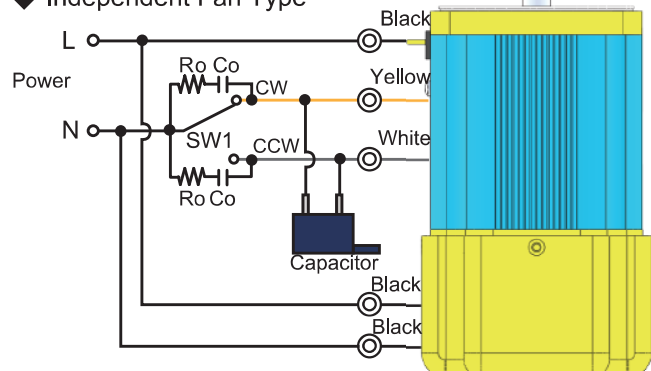
Capacity of Capacitor (µF/VAC)	A	B	H	L	T	E
30/250	59	40	40	12	44	4
7/450	57.5	25	39	8	44	4

■ Wiring Diagram

◆ Standard Type



◆ Independent Fan Type

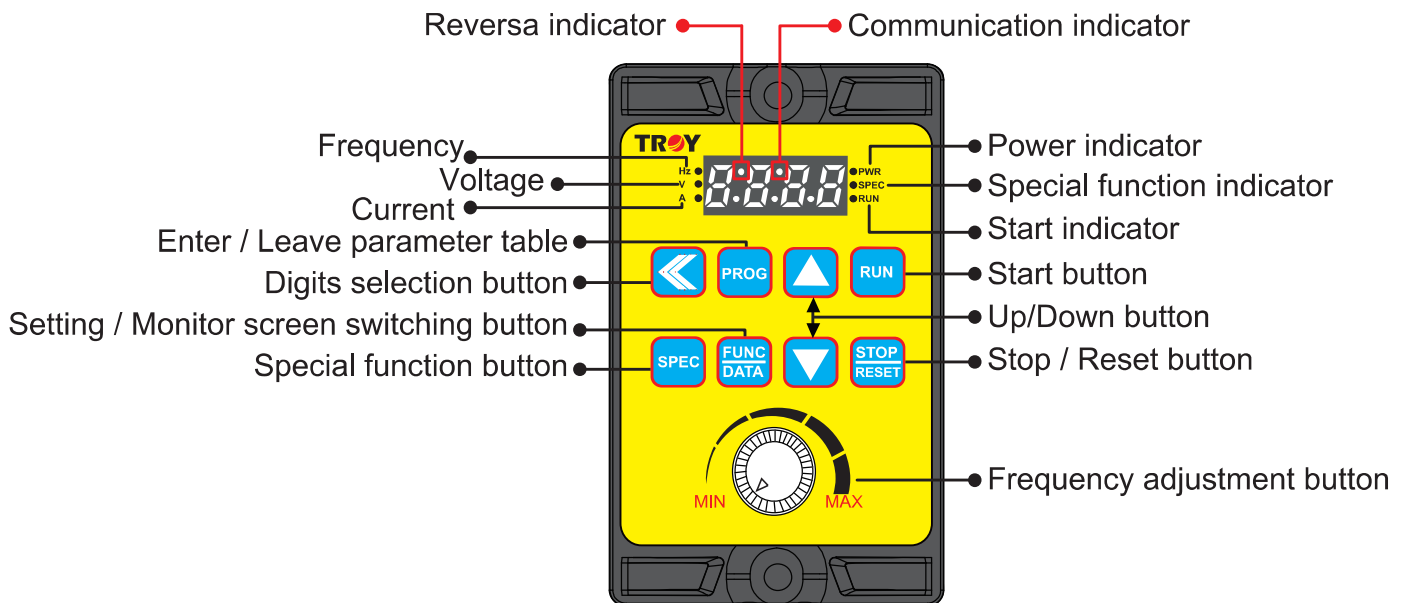




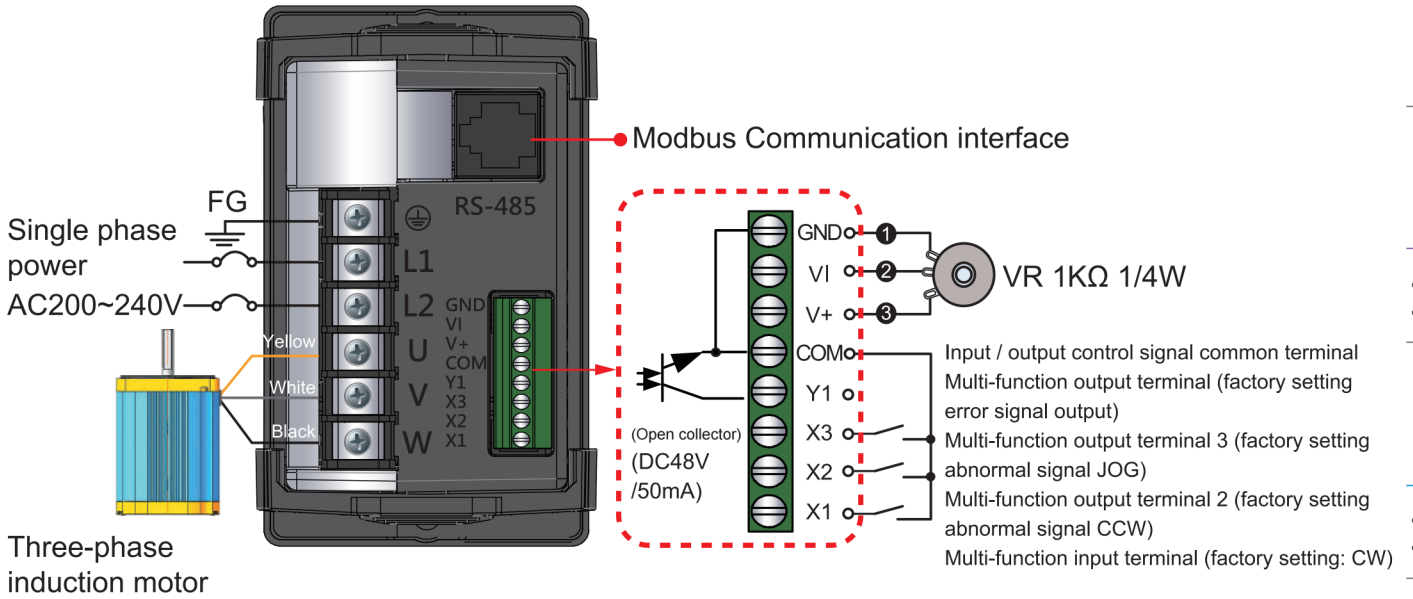
■ Specs

Model	TI125-2	TI200-2	
Maximum applicable Motor(HP/W)	0.17/125	0.25/200	
Output	Rated Capacity(VA)	400	600
	Rated Voltage(V)	3 Phase AC200~240	
	Rated Current (A)	1	1.5
	Frequency control range(Hz)	0.1~400.00	
Input	Power Input (V)	Single AC200~240 (Permissible range : Single AC176~264)	
	Power Frequency (Hz)	50/60Hz (Permissible range : 50/60Hz ±5%)	
	Electric Current(A)	2	3
Protection function	Overload, Overcurrent, Overheat, Overvoltage, Low voltage		
Protection level	IP20		
Vibration level	Max. 5.9m/sec ² (0.6G)		
Ambient Temperature / Humidity	-10~+45°C (No frost and freezing) / Max. 90%RH(No condensation) (Avoid dust and corrosive, flammable gas, allogenic)		
Weight (kg)	0.4		

■ Panel Functions Instruction

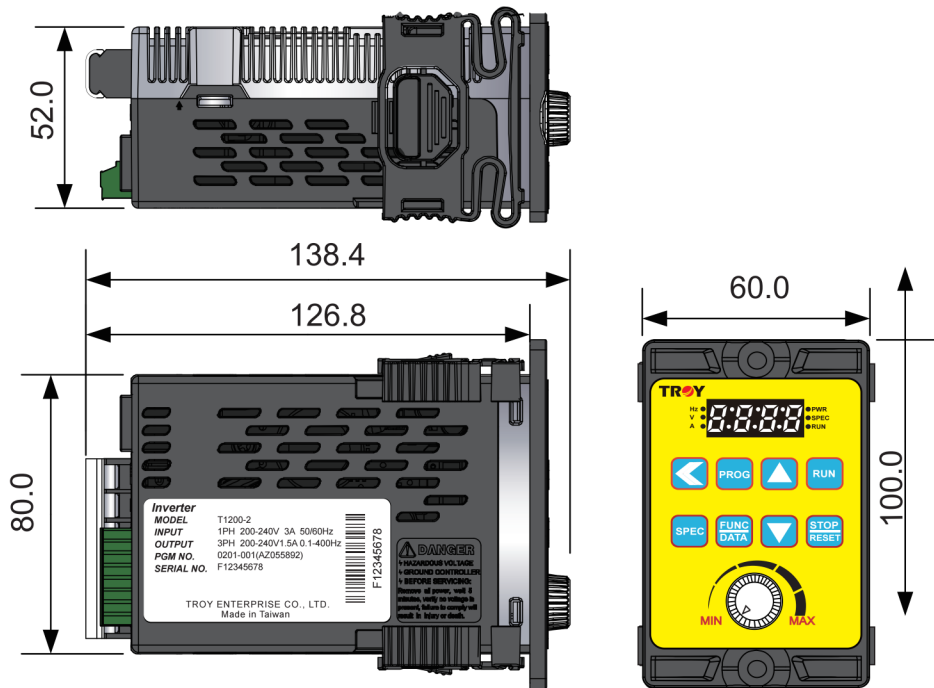


Wiring Diagram



Dimension

Unit : mm



* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

Electromagnetic / Electronic Brake Dual-function Controller



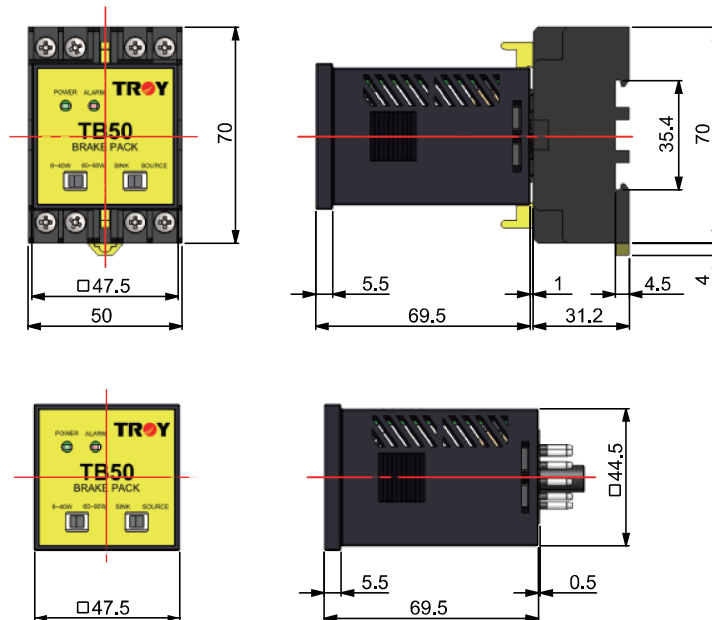
■ Specs

Model	TB50	
Specification Certification	—	
AC Power Voltage(V)	Single phase AC100~230※	
DC Power Voltage(V)	DC23~26	
Power Frequency (Hz)	50	60
Drive Current (A)	3	
Brake Current Time(Sec)	about 0.5	
Drive Ability	90W or less	
Function	<ul style="list-style-type: none"> ● Instant stop ● Counter revolution ● Electromagnetic brake lift ● Motor overheat protection detection (ALARM output) 	
Ambient Temperature	0~+40°C	
Ambient Humidity	Max.85%RH	
Dimension (mm)	47.5(L) X 47.5(W) X 69.5(H)	
Weight (g)	104	

※ Please select the input power according to the Motor input power specifications.

■ Dimension

Unit : mm

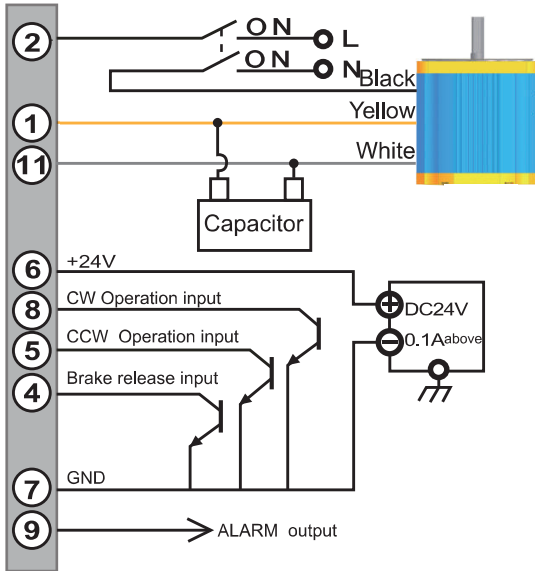


※ Foot Controller is non-accessory, it should order additionally.

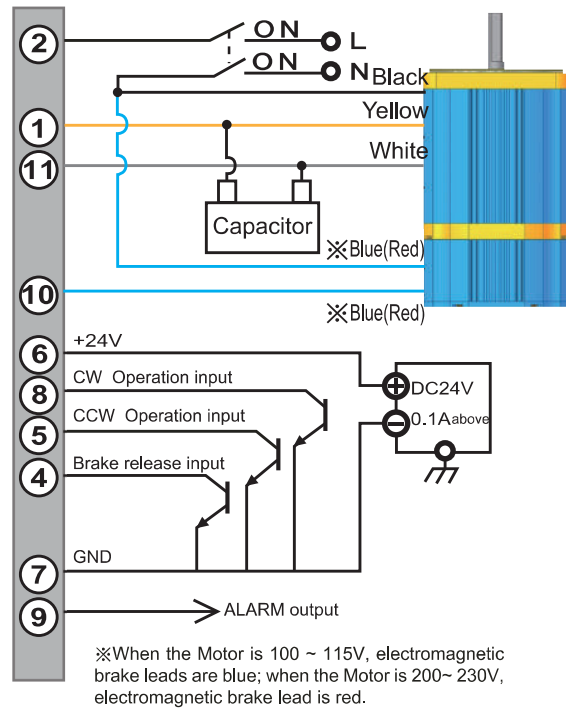
* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

Wiring Diagram

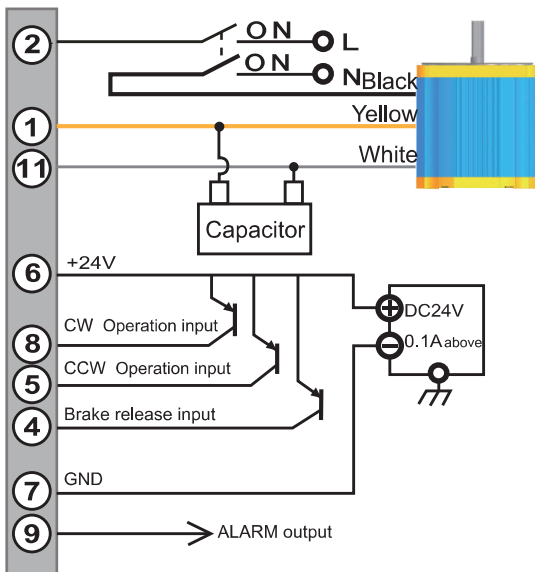
Induction Motor / Reversible Motor - SINK Mode Wiring Diagram



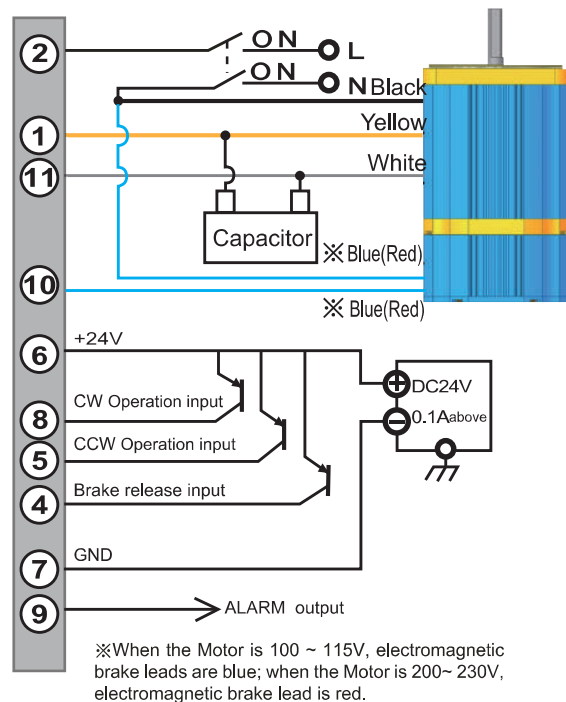
Electromagnetic Brake Motor - SINK Mode Wiring Diagram



Induction Motor / Reversible Motor - SOURCE Mode Wiring Diagram



Electromagnetic Brake Motor - SOURCE Mode Wiring Diagram

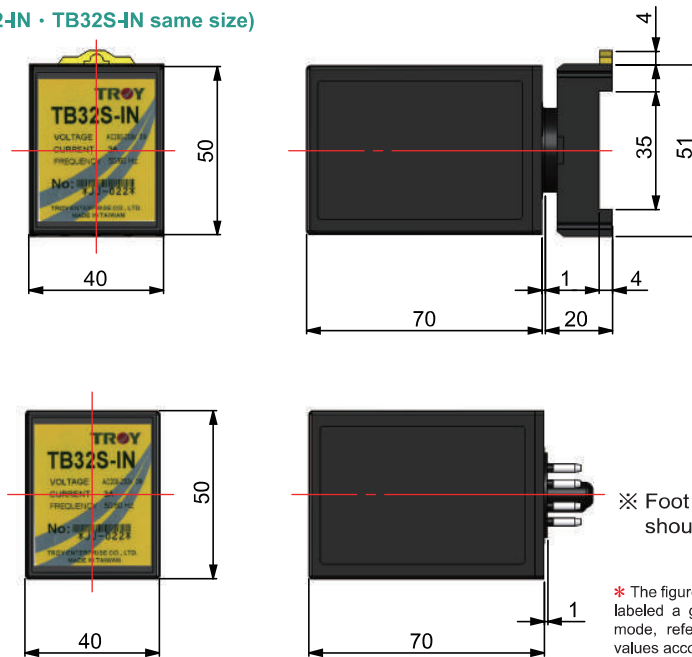




■ Specs

Model	TB32-IN	TB32S-IN
Specification Certification	-	
AC Power Voltage(V)	Single phase AC200~230	Three phase AC200~230
Drive Current (A)	≤ 3	
Brake Current Time (sec)	About 0.5	
Drive Ability	Induction Motor : Max 135W(90W, 135W need to connect braking resistor) Reversible Motor : Max 60W	Max 90W (60W, 90W need to connect braking resistor)
Function	• Instant stop	
Ambient Temperature	0~+40°C	
Ambient Humidity	Max.85%RH	
Dimension (mm)	50(L) X 40(W) X 70(H)	
Weight (g)	88	

■ Dimension (TB32-IN · TB32S-IN same size)



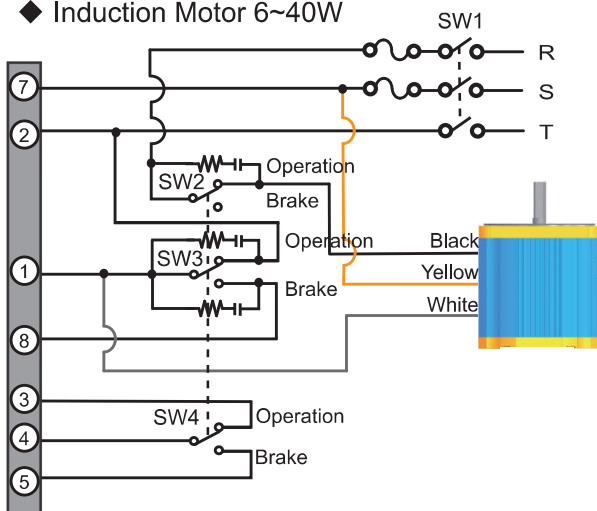
Unit : mm

※ Foot Controller is non-accessory, it should order additionally.

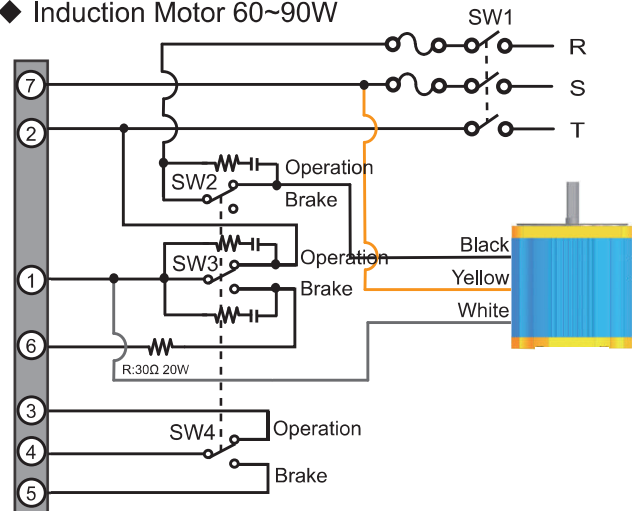
* The figure above dimension tolerance values are not labeled a general machining tolerances, the control mode, refer to P.8, others have marked tolerance values according to the drawing labeled based.

■ TB32S-IN Wiring Diagram

◆ Induction Motor 6~40W



◆ Induction Motor 60~90W



■ Surge Protection Device

Model	RCM-601BQZ-4
Functions	Avoid the device from lightning strikes or surges.



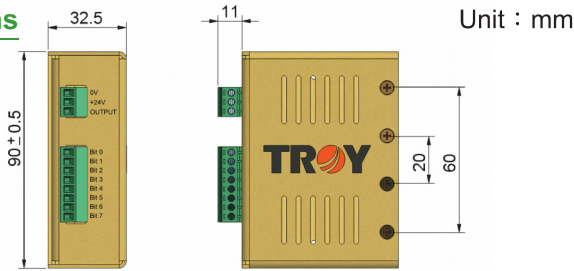
D/A Speed Setter

Specs

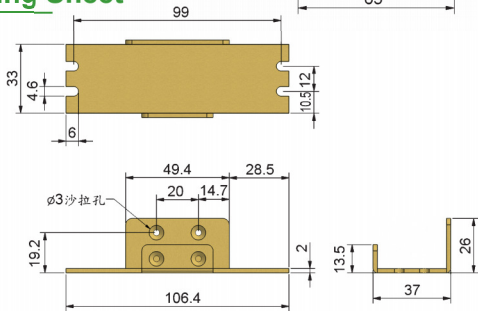
Model	TRDAC
Power Input	DC24V / Current Min. 0.1A
Signal Input	8 bit (Bit) Digital signal
Voltage Output	0~4.93V (256steps voltage output setting)
Ambient Temperature	0~+40°C
Weight	180g



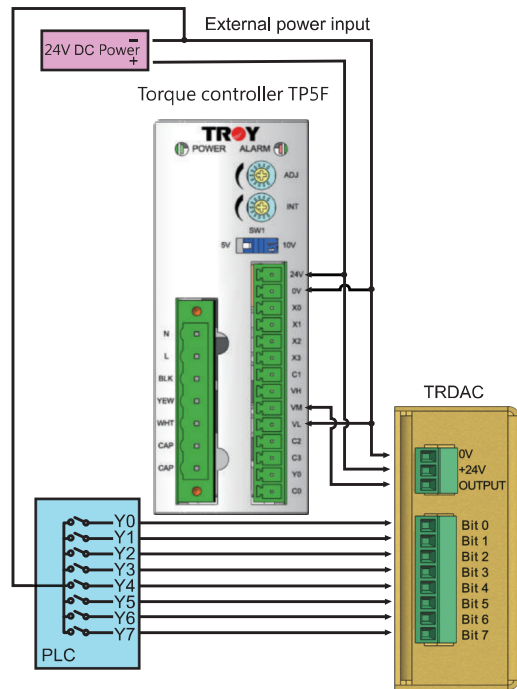
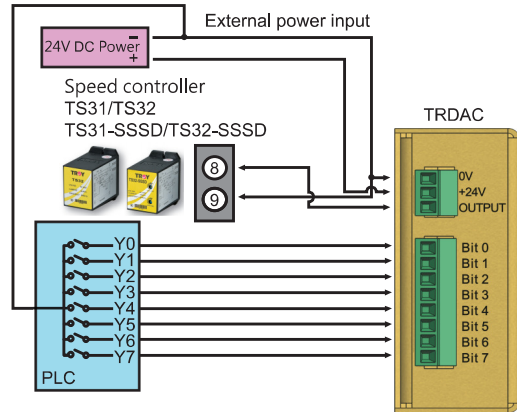
Dimensions



Mounting Sheet



Wiring Operation



Common Technical Information

Product Numer Code

Induction Motor
Lead wire Terminal box Wiring diagram

Reversible Motor
Lead wire Terminal box Wiring diagram

Speed Control Motor
Controller Induction Motor Reversible Motor

Electromagnetic Brake Motor
Wiring diagram

Torque Motor
Controller Dimension

Inverter

Brake Controller

Accessories