



LSA-P SERIES CONTRLLERS

Frame size 90mm sq. (3.54 in.sq.)

PLUG-IN TYPE

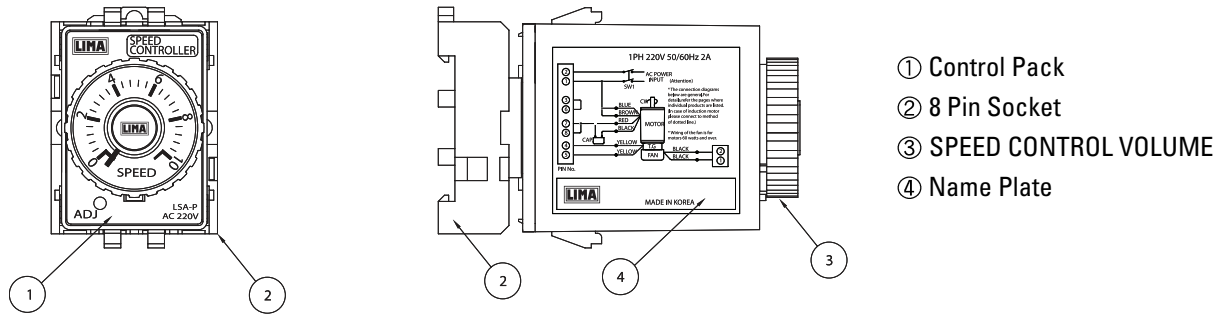
CONTROLLERS

Features

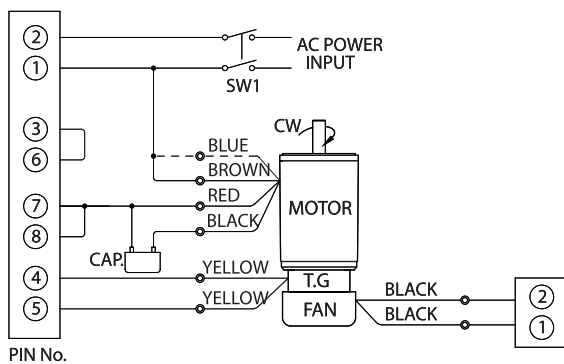
- Speed Controller with Tacho generator
- Plug-in type for standard 8 pin socket
- Built-in speed setting(external speed setting applicable)
- Instantaneous stop by electric brake circuit
- Various application



Function Identification



Basic Wiring diagram



- ※ The rotation speed of motor can be changed by controller
- ※ In case that the T.G's wire is long, please connect double twist sealed wire (Please, Don't connect double twist shield wire to earth)
- ※ In case of induction motor please connect to method of dotted line
- ※ Wiring of the fan is for motors 60 watts and over.

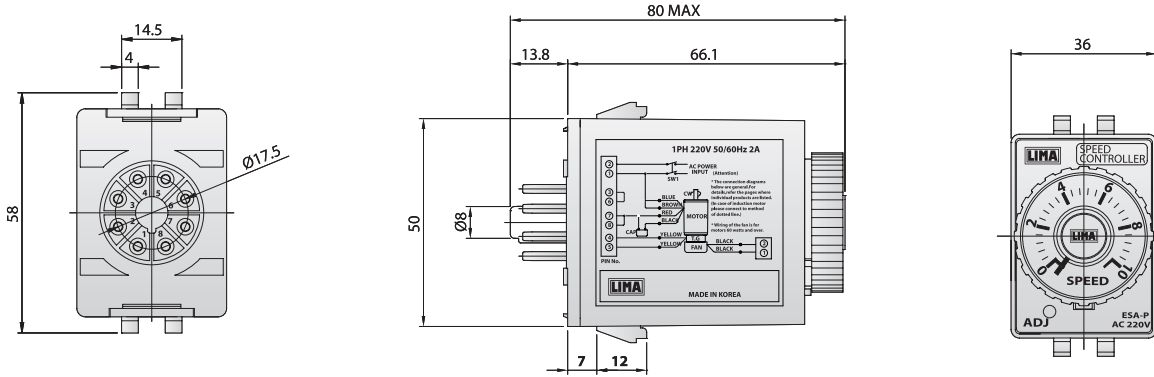
LSA-P SERIES CONTROLLERS



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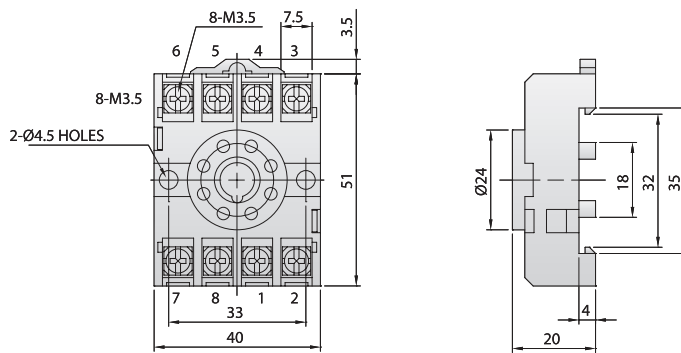
Dimensions

Unit : mm(inch)



CONTROLLERS

Control Pack



Socket

Performance Data

Item	Model	LSA-P □□				
		1 Ph. 100V	1 Ph. 200V	1 Ph. 115V	1 Ph. 220V	1 Ph. 220V~240V
1	Input voltage	1 Ph. 100V	1 Ph. 200V	1 Ph. 115V	1 Ph. 220V	1 Ph. 220V~240V
2	Input voltage Threshold	Rated voltage $\pm 10\%$				
3	Input Frequency	50 / 60 Hz				
4	Speed Range	50Hz : 90~1400 rpm, 60Hz : 90~1700rpm				
5	Motor output	6W ~ 180 W				
6	Control method	TRIAC AC PHASE CONTROL				
7	Speed Control method	PI Automatic Control by MICOM				
8	Sensor Type	AC Tacho Generator(T.G)				
9	Speed set method	Volume type(With external speed setting device optional)				
10	Brake	Run electric brake for certain period to motor				
11	Electric Brake Time	0.5sec. (Average)				
12	Slow Run, Slow Stop	None				
13	Operating Temp.	$-5^{\circ} \sim +40^{\circ}$				
14	Operating Humidity	Max 85% (No condensation)				



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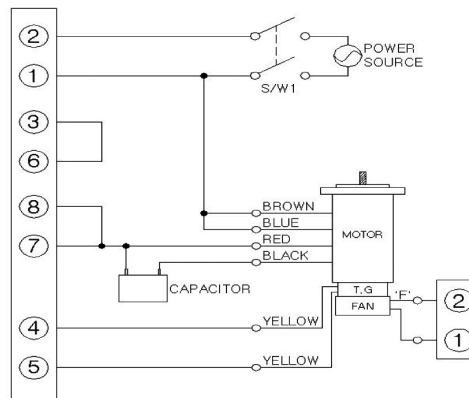
BASIC CONNECTION DIAGRAM

Induction Motor(Continuous Duty) 4 Lead wire type

◆ Single Direction+Variable Speed(6W~120W)

S/W 1	AC 125[V] or AC 250[V] Min. 5A
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- The motor rotating direction is CW when viewed from shaft side if connected like the solid line of above diagram.
- When adjusting to CCW direction, change and connect blue and red wire of motor.
- The wiring of fan motor is applicable for motors 60W and over.

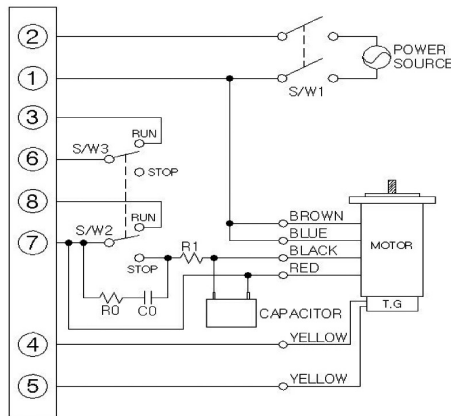


SOCKET PIN NO.

◆ Single Direction + Variable Speed + Electric Brake(6W~25W)

S/W 1, S/W 2	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- The motor rotating direction is CW when viewed from shaft side if connected like the solid line of above diagram.
- When adjusting to CCW direction, change and connect blue and red wire of motor.
- When changing from RUN to STOP, the control brake willfunction for 0.5sec and the motor stops immediately.

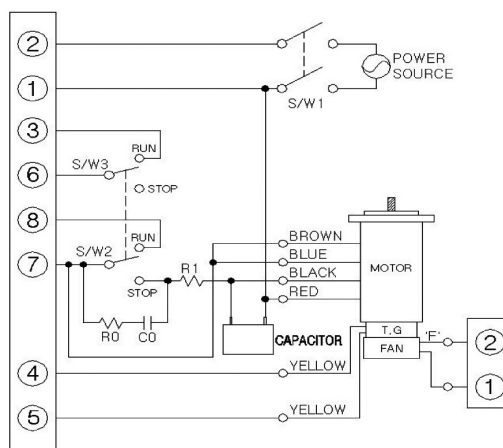


SOCKET PIN NO.

◆ Single Direction + Variable Speed + Electric Brake(40W~120W)

S/W 1, S/W 2	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- The motor rotating direction is CW when viewed from shaft side if connected like the solid line of above diagram.
- When adjusting to CCW direction, change and connect blue and red wire of motor.
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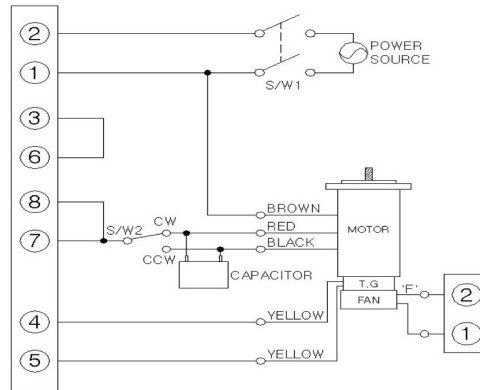
BASIC CONNECTION DIAGRAM

Induction(3 Lead wire type) & Reversible Motor(30min. Duty)

◆ Reverse + Variable Speed(6W~120W)

S/W 1, S/W 2	AC 125[V] or AC 250[V] Min. 5A
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- Change to S/W2 after a certain period of stop for motor
- The wiring of fan motor is applicable for motors 60W and over.
- Induction Motor(3 Lead wire type) - Continuous duty

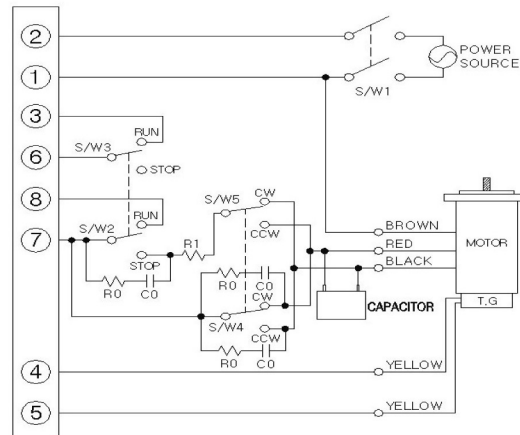


SOCKET PIN NO.

◆ Reverse + Variable Speed + Electric Brake(6W~25W)

S/W 1, S/W 2 S/W 4, S/W 5	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- When stopped from running the electric brake will function for 0.5sec and the motor stops immediately.
- During this 0.5sec, do not operate S/W4 or S/W5.
- Before S/W2 and S/W3 is switched to run, stop S/W2 and S/W3 and than convert S/W4 and S/W5.

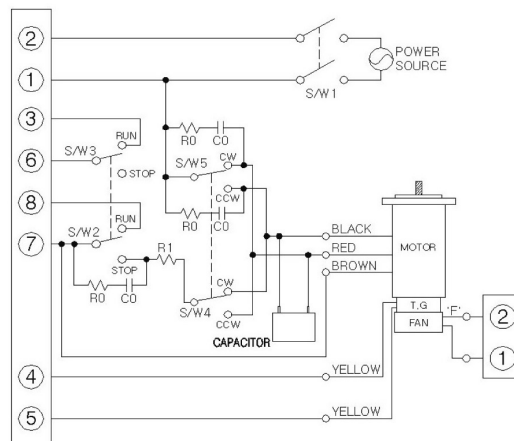


SOCKET PIN NO.

◆ Reverse + Variable Speed + Electric Brake(40W~120W)

S/W 1, S/W 2 S/W 4, S/W 5	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- When stopped from running the electric brake will function for 0.5sec and the motor stops immediately.
- During this 0.5sec, do not operate S/W4 or S/W5.
- Before S/W2 and S/W3 is switched to run, stop S/W2 and S/W3 and than convert S/W4 and S/W5.
- The wiring of fan motor is applicable for motors 60W and over.



SOCKET PIN NO.

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LSA-P SERIES CONTROLLERS

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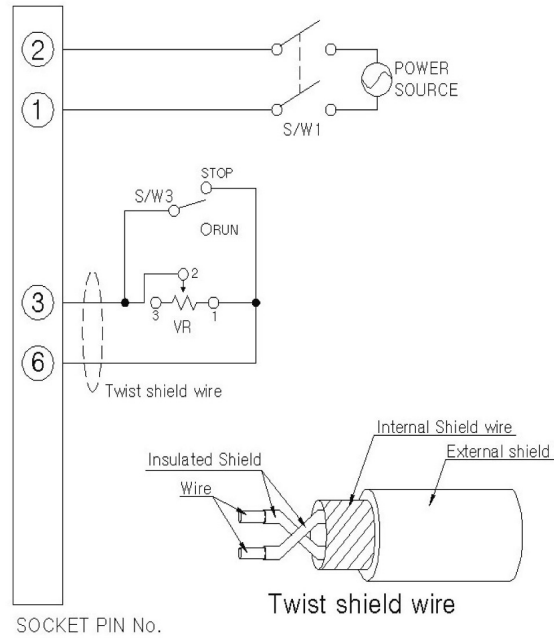
APPLICATION CONNECTION DIAGRAM

The following is the explanations of external speed setting device

◆ When long distance control is needed

VR	External speed setting device 20[$\text{k}\Omega$] 1/4W B Type
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- No.3 terminal of VR is not used.
- Set the controller scale to '0'.
- Wire connection should be in short distance. Otherwise may cause malfunction.
- Use twisted sealed wire.

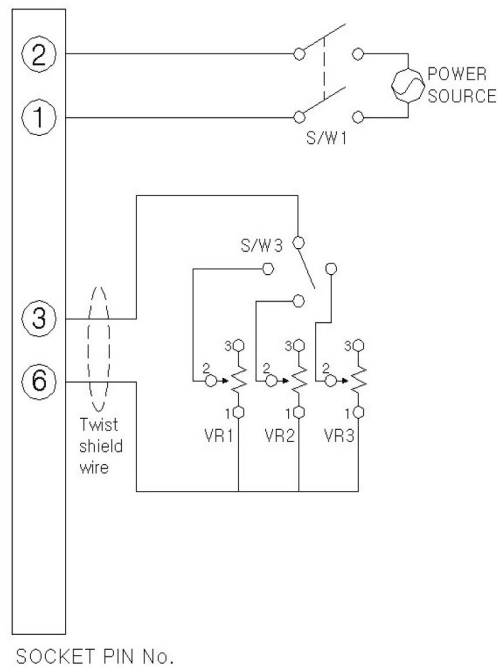


CONTROLLERS

◆ When multi-stage speed setting is needed

VR1, VR2, VR3	External speed setting device 20[$\text{k}\Omega$] 1/4W B Type
S/W 3	DC 10[V] 10[mA]

- Set the controller scale to '0'.
- Change the speed with external speed setting device VR1,VR2 and VR3 by using S/W3.
- Wire connection should be in short distance. Otherwise may cause malfunction.
- Use twisted sealed wire.





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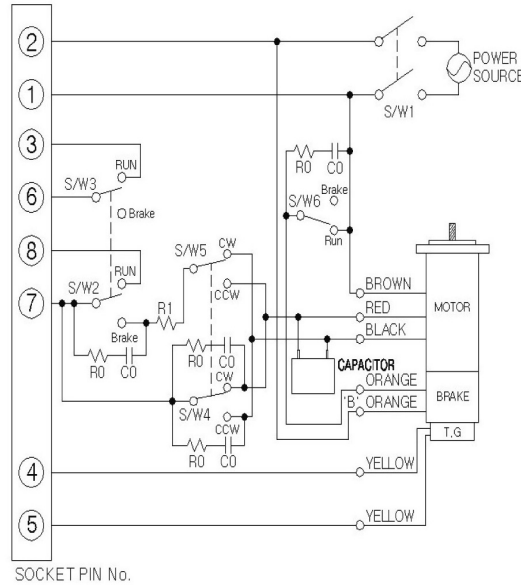
SPEED CONTROL & BRAKE REVERSIBLE MOTOR CONNECTION DIAGRAM

When electric brake of controller is used simultaneously

◆ Reverse + Variable Speed + Electric Brake + Electro magnetic brake motor (6W ~25W)

S/W 1, S/W 2 S/W 4, S/W 5, S/W 6	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- When changing from RUN to BRAKE the electric brake operates and the motor stops immediately.
- Operate S/W4 and S/W5 after motor stops.
- Before switching S/W2, S/W3 and S/W6 from BRAKE to RUN. Please convert S/W4 and S/W5 first.
- The power source S/W1 should be switched 0.5sec faster than the operation starting signal of S/W2, S/W3 and S/W6.
- When operating RUN-BRAKE, leave the S/W1 on, and operate with S/W2, S/W3 and S/W6.

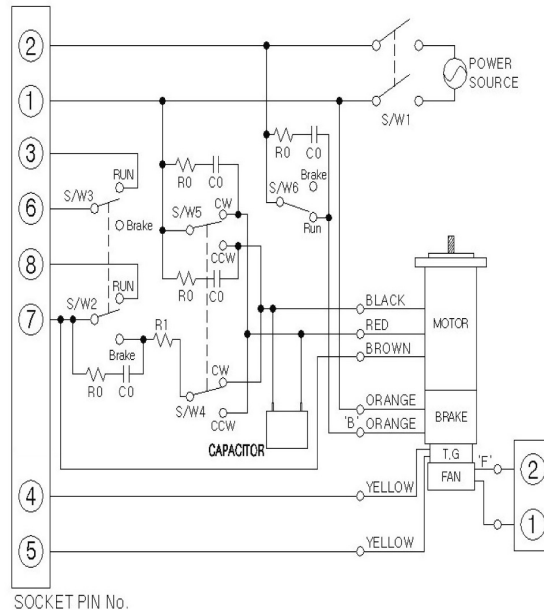


CONTROLLERS

◆ Reverse+Variable Speed+Electric Brake+Electro magnetic brake motor(40W+120W)

S/W 1, S/W 2 S/W 4, S/W 5, S/W 6	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])
R1	5.6 [Ω] Min. 10[W]

- When changing from RUN to BRAKE the electric brake operates and the motor stops immediately.
- Operate S/W4 and S/W5 after motor stops.
- Before switching S/W2, S/W3 and S/W6 from BRAKE to RUN. Please convert S/W4 and S/W5 first.
- The power source S/W1 should be switched 0.5sec faster than the operation starting signal of S/W2, S/W3 and S/W6.
- When operating RUN-BRAKE, leave the S/W1 on, and operate with S/W2, S/W3 and S/W6.
- The wiring of fan motor is applicable for motors 60W and over.





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SPEED CONTROL & BRAKE REVERSIBLE MOTOR CONNECTION DIAGRAM

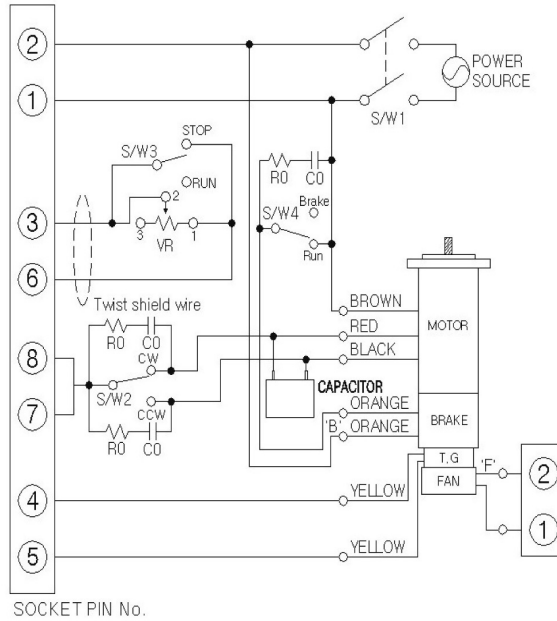
When electric brake of controller is used simultaneously

◆ Reverse + Variable Speed + Electro magnetic brake motor (6W ~120W)

CONTROLLERS

S/W 1, S/W 2	AC 125[V] or AC 250[V] Min. 5A
S/W 3	DC 10[V] 10[mA]
R0	10 ~ 200[Ω] Min. 1/4 [W]
C0	0.1 ~ 0.33[μF] (AC 125 [V] or AC 250[V])

- Leave a certain period until the motor stops, than switch S/W2.
- The power source S/W1 should be switched 0.5sec faster than the operation starting signal of S/W3 and S/W4.
- When operating RUN-STOP, leave the S/W1 'ON', and control with S/W3 and S/W4.
- Set the controller scale to '0'.
- The wiring of fan motor is applicable for motors 60W and over.



SOCKET PIN No.