

EST. 1973



User Manual

DIGITAL PHASE SHIFTER

DPS[®]

www.myungyuon.com

- Purpose to correct use, please read the user manual carefully before using the DPS.
- Please ensure the user manual to be handed over to the end-user and the person in charge of maintenance.
- After reading and understanding the user manual, keep it in a place where the user can always find it.

MY-PS-15
MY-PS-20
MY-PS-25



Est. 1973

Variable speed motor specialty maker

MYUNG YOUN ELECTRONICS CO., LTD.

/ BE SURE TO READ AND FULLY UNDERSTAND THE FOLLOWINGS BEFORE USE.




CAUTION

- This product should be used only for 3 phase 220V motor.
- One DPS unit should be used only for one motor that meets DPS specifications.
- 3 phase voltages are output when the motor is running.
- Connecting only U, W lines for control wires of electronic switch, brake, magnetic contactor, etc.
- Only 1 phase of motor brake is allowed. (3 phase brake does not work.)
- If the motor overheats, check the current indicated on the motor nameplate.
(Use motor load less than 80% of rated capacity of the motor.)
- Never use DPS model that does not meet motor capacity. (causes motor overheating)
 - ※ **Never use DPS capacity 2 levels higher than rated motor capacity.**
It may cause overheating or trouble.
 - ex) Motor 15HP : DPS MY-PS-20 model(o)
DPS MY-PS-25 model(x)
- If you find smoke, strange smell or noise, turn off the switch immediately, disconnect the plug from the power socket, and contact our service center.
Continued use may cause fire or electric shock.



WARNING

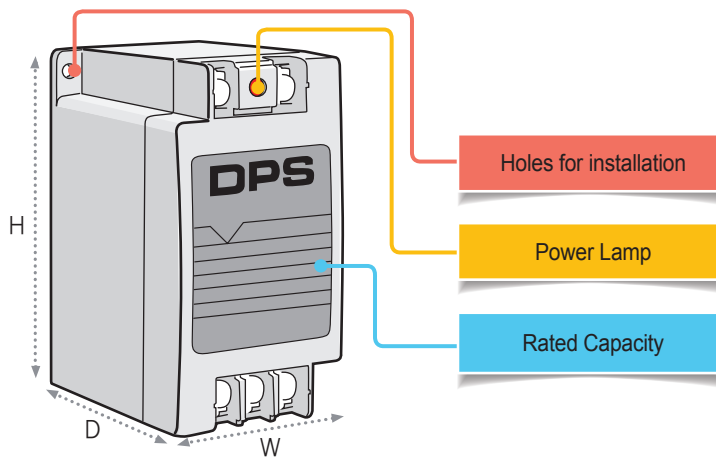
- 
- Use this DPS only for operation 3 phase motor(220V) from single phase power(220V) supply.
 - As the DPS has no protection device, install safety circuit breaker at the input terminal to use it
 - In the event of abnormality, cut off the power immediately.
(There is a danger of electric shock.)
 - Do not move or install the product in the condition with the current flowing or exposed. (There is a danger of fire or electric shock.)
 - Be sure to cut off the power switch in the event of power failure during operation.
(When the power is restored, it restarts automatically, which may cause an unexpected accident.)
 - Do not disassemble, assemble, or modify the DPS.

Model Name Indication Guide

CHECKING MODEL NAME



APPEARANCE AND DIMENSIONS



For 3 phase 220V motor only

Model	Rated Capacity (HP)	Current (A)	Frequency (Hz)	Dimension (W×H×D)	Holes for installation (Ø)
MY-PS-15	15	45	50/60	145×227×126	5
MY-PS-20	20	60	50/60	145×227×126	5
MY-PS-25	25	76	50/60	145×227×126	5

※ Product specifications are subject to change without prior notice purpose to improve the quality.



If you use a DPS that is one step above your motor capacity, you can get 90 to 95% efficiency. (65 to 70% efficiency when using DPS with the same capacity)

ex) In the case of 15HP motor :

If you use MY-PS-15 model : **65 to 70% efficiency**

If you use MY-PS-20 model : **90 to 95% efficiency**

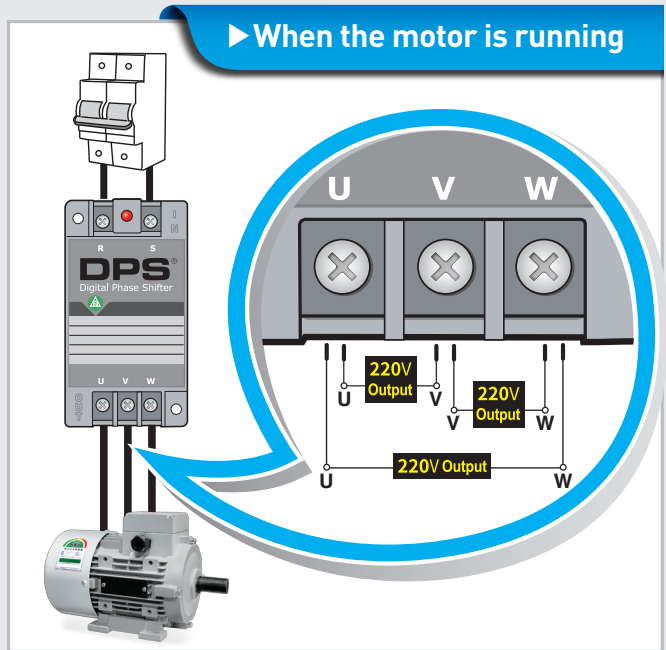
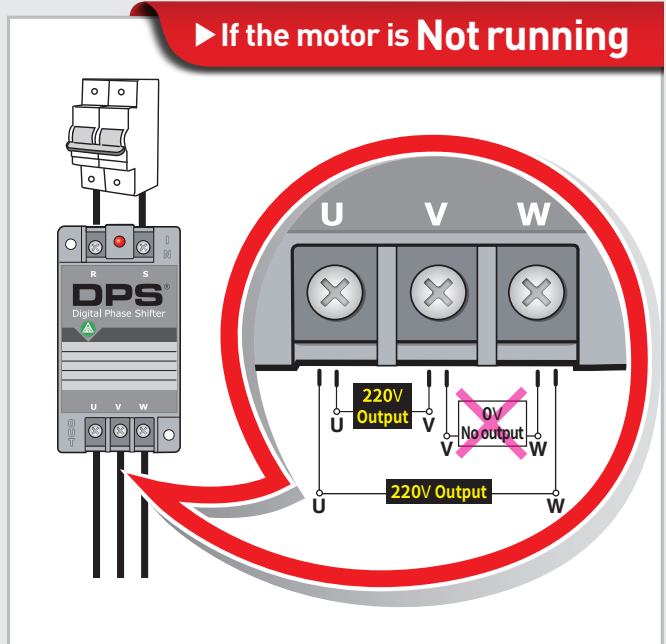
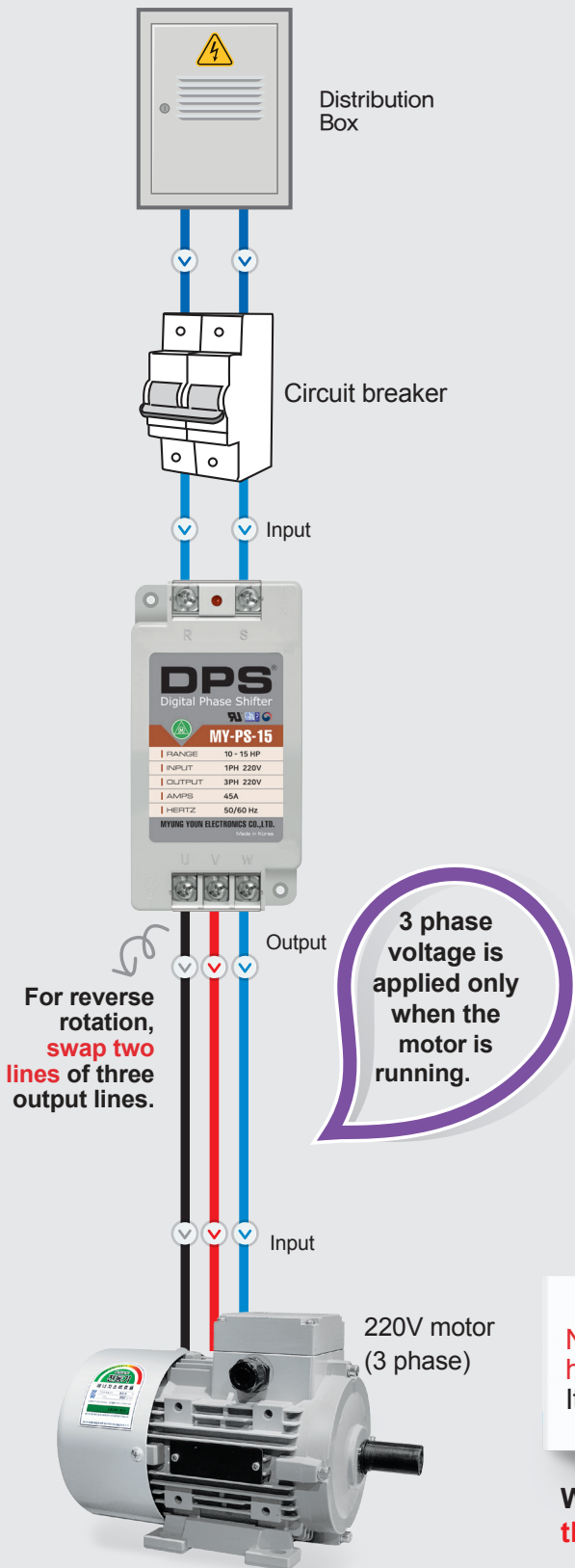


Q/A USING FOR DPS

Question	Answer
1 Only 2 phases come out from the DPS's output voltage.	3 phase voltages are output only when the motor is running. When the motor is not running, it is normal for only single phase output to come out.
2 DPS output voltage and current are irregular.	Initially, there may be voltage and current imbalances, but when the load take more than 50%, the voltage and current will soon balance. This phenomenon occurs in the process of making three phases from single phase.
3 The motor runs well at first, then suddenly the breaker was tripped.	Check the capacity of the breaker. You need to select twice the capacity of the motor rated current. e.g. Motor 15A : Breaker 30A
4 The power of the DPS is checked, but the motor is not running.	Check the DPS and motor connections (check whether the magnetic control lines are connected to U and W of DPS's output).
5 Connected the DPS to the motor and running the motor, but the voltages and current value are too high.	Check the capacity of the DPS and motor. If the DPS capacity is too large for the motor capacity, that happens. Or, please check whether two motors are installed in the machine. It should be used only for one DPS per one motor.
6 Is DPS available when the machine has 2~3 motors?	Originally, you should use one DPS for only one motor. However, if the start and stop times of the motor are the same, you could use one DPS for multiple motors.
7 The DPS LED power does not come on in spite of entering power.	Please contact the head office after checking the input power.
8 The motor runs well by connecting the DPS, but suddenly it doesn't work well.	Check the magnet switch connection, overload capacity, and breaker capacity (twice the motor rated current). And check for the overload.
9 The motor is operated too weak.	Check if the input voltage and power volume are normal and check the motor load. Also, make sure that the magnetic control line is connected to the U and W positions of the DPS output.
10 How should the magnet switch, overload, and breaker capacities be selected?	When using the above products, it should be selected as twice the capacity of the rated current of the motor.
11 The motor slows down and does not run smoothly.	Please check the load volume of the motor and use the load less than 85% (overcurrent phenomenon caused by overloading).
12 There's a lot of noise when the motor is running.	Check the DPS and motor capacity (The motor is noisy and generates heat when using a DPS with a specification higher than the appropriate capacity).
13 The current of Motor output is too high and overheating occurs.	Please check if the motor capacity and DPS capacity are properly selected. e.g. MY-PS-15 model : Used for 10HP motor MY-PS-20 mode I: Used for 15HP motor
14 Is DPS available for sunbeds, welders, ovens, and tanning machines?	You can use it after contacting our head office. However, it is slightly less efficient than when used in motors. (approximately 70%)

DPS CONNECTION DIAGRAM

VOLTAGE CHECK DIAGRAM



Never use DPS capacity 2 levels higher than rated motor capacity. It may cause overheating or trouble.

When the motor is reversed, please change the two lines of U and W of the output line.

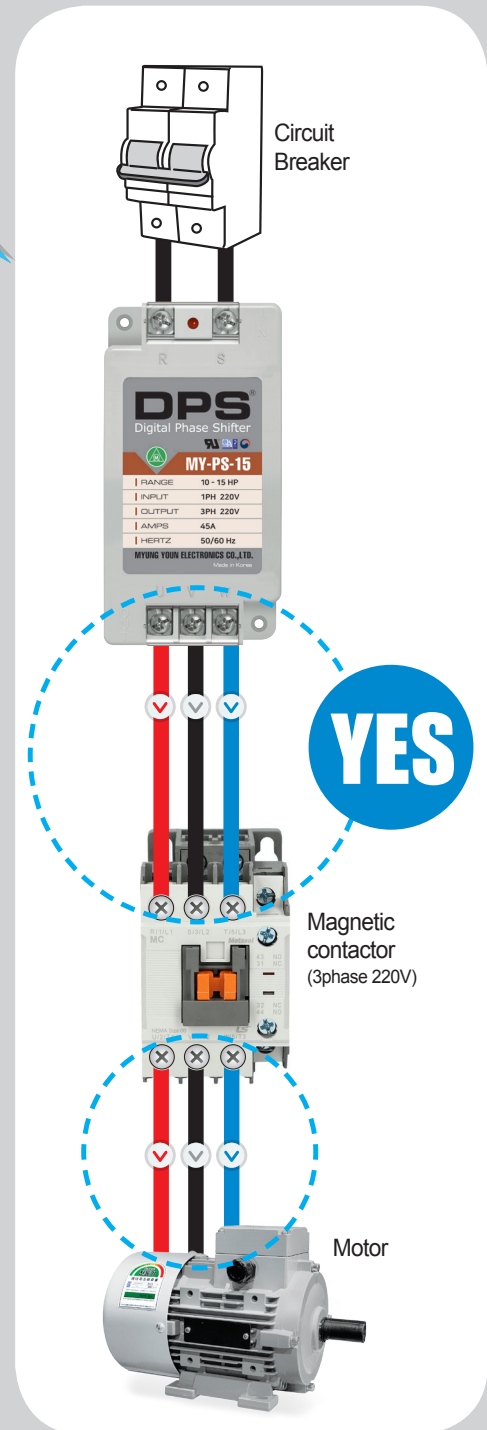
Example of a connection between a DPS and a magnetic contactor

Case of **Correct Connection**
between a magnetic contactor
(3phase 220V) and a DPS




Please check if the connection location is the same according to the color of the control wires.

- The magnetic contactor must be for 3 phase 220V.
- The control wires of a magnetic contactor must be connected to “U”, “W” positions purpose to work well motor.

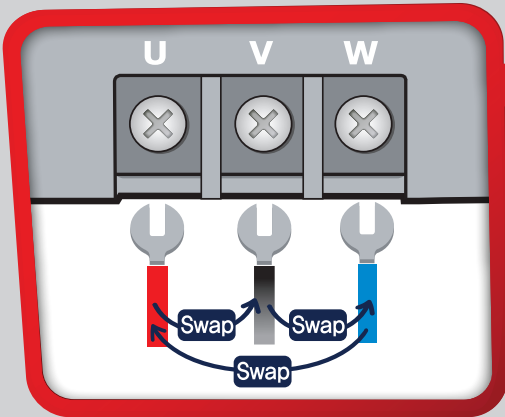




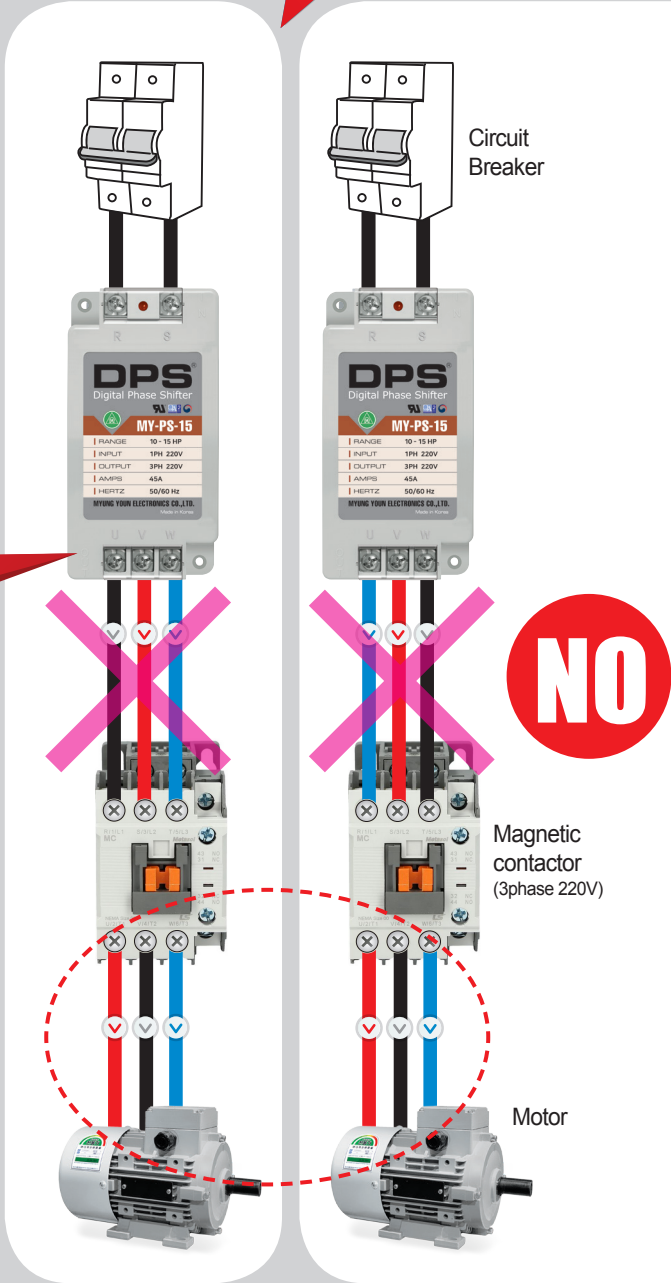
Case of incorrect connection between a magnetic contactor (3phase 220V) and a DPS

 Please check the location of the control wires and swap the wires correctly.

- If you don't know how to connect the control wires to a magnetic contactor, you can swap the wires of DPS's output referring to the picture below, and then your motor will be working well.



- Try swapping the positions of the wires one time as shown in the picture above, and if your motor is still not working well, you have to swap the positions of the wires again more than one time or two times.
- Also, if your motor is reverse working, you should swap the positions of wires of "U" and "W" from DPS's output.



/ APPLICATION

- All appliances driven by 3 phase motor
- All industrial or household motors
- Hoists
- Compressors
- Conveyor motors
- Agitators
- Food processing machines
- For hydraulic motors
- Document shredders
- The product can be connected quickly and easily everywhere for use.
- Meat cutters
- Agricultural machinery
- Woodworking machines
- Portable air conditioner
- Pumps
- Air blowers
- Machines for ceramic use
- Fan motors
- Portable packing machines
- Cutters

/ WARRANTY

Warranty is guaranteed for one year from the date of purchase if the product fails while in use.

Also, we will repair or replace the product for free.

However, even if the failure is caused by the customer's negligence or natural disasters, it is charged to customer.

/ THE FOLLOWING CASES ARE NOT COVERED BY THE WARRANTY.

- Careless handling of users (submergence, external impact, overload, etc.)
- Natural disasters (fire, earthquakes, floods, etc.)
- Product has been disassembled or modified by user
- Failure caused by abnormal working environment
- Excessive voltage application out of range
- Failure or damage due to unreasonable operation or user error



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MYUNG YOUN ELECTRONICS CO., LTD.

59, Pyeongcheon-ro, Bupyeong-gu, Incheon,
21302, Republic of Korea

A/S Center. +82-32-330-1510

Fax. +82-32-330-1514

Whats App. +82-10-5695-1514

E-mail. my2641504@daum.net