

BLDC SPEED CONTROL UNIT

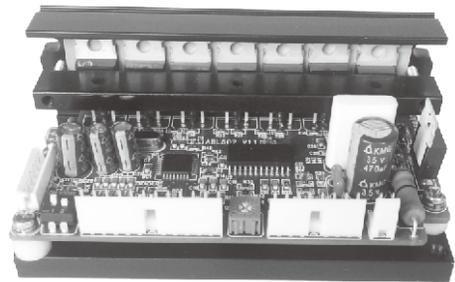
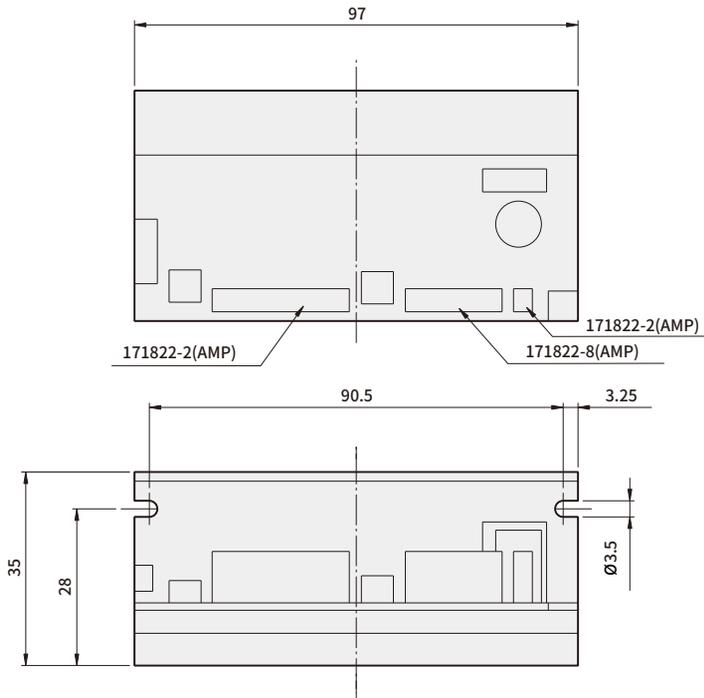


GUL-2-30
GUL-2-50

L Series motor applied product

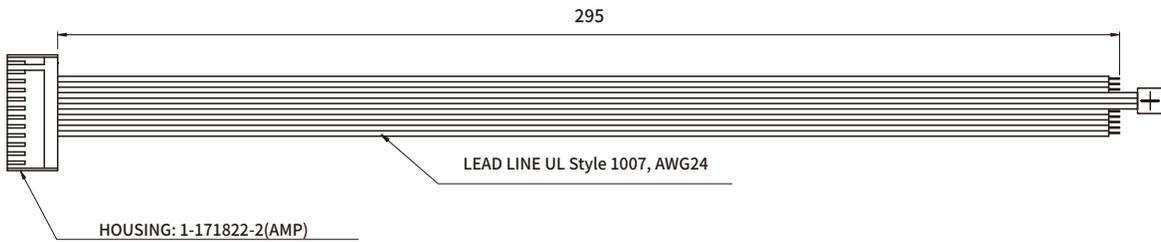
→ Product appearance

■ Driver main part outside view

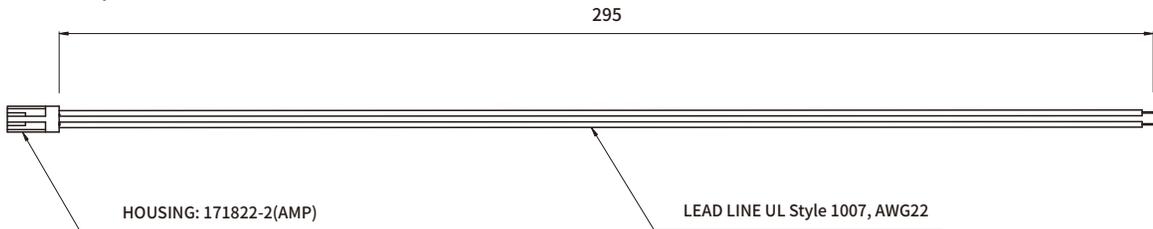


[Accessory]

■ Driver input signal cable, External volume



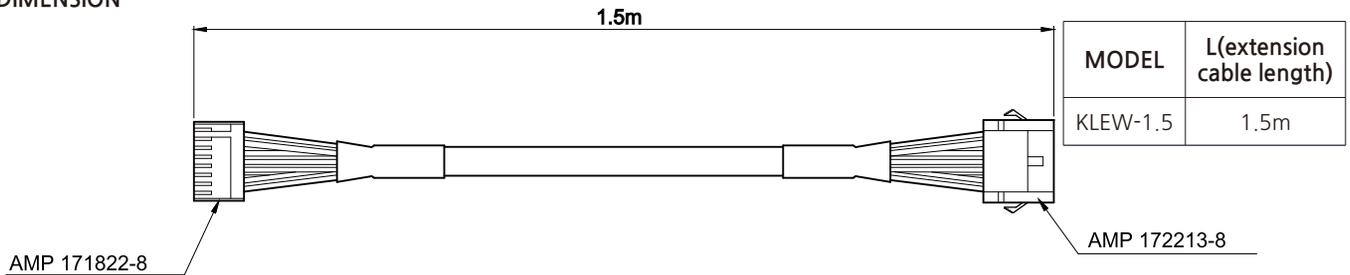
■ Driver power cable



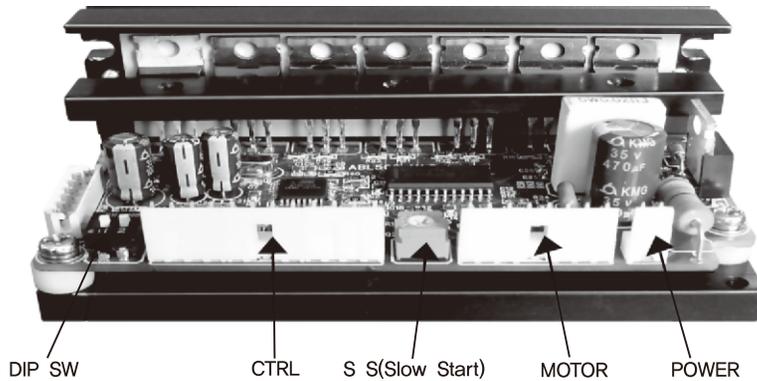
■ Extension cable

Buy extension cable to additionally extend between motor and control (optional)

-DIMENSION



→ Name and functions of each part



1. Input /output specification

Items	Details	Note
External size	97 × 50 × 42	
Power input, Controller output	DC24V rated current 2A, Maximum current 5A	
Operation object	DC24V, BLDC Motor	
Control	Input signal type : Pull-Up, Output signal type : Open-Collector	PLC connected control

2. LED specification

No.	Sign	Color	Details
1	STATUS	GREEN	It flickers every 1 second under normal condition.
2	ALARM	RED	It flickers if system is overloaded. If there is problem with motor whole sensor, then it turns on.

3. DIP switch specification

Pin No.	Status	Details	Model name	Applied motor
1	OFF	Maximum limit current 3.5A	GUL-2-30	K6L□30N2
	ON	Maximum limit current 5A	GUL-2-50	K8L□50N2

4. Input / output signals CTRL (AMP, 171825-12)

Pin No.	Signal name	Direction	Color	Explanation
1	ALARM	OUT	Brown	If control unit is under alarm or overload, then the signal line becomes H(5V) and LED turns on. If there is problem with motor connection, LED turns on. Under the normal condition, it is turned off (Gnd) and LED gets turned off also.
2	SPEED_OUT	OUT	Red	Pulse gets released according to the image changes in the motor in response to BLDC motor speed. Output 30pulse signals per motor one rotation.
3	GND	Ground	Orange	
4	GND	Ground	Yellow	
5	SPEED_IN	IN	Green	It is direct power input for speed control. The range is between 0V and 5V. Within this range, motor gets controlled proportionally.
6	5V	OUT	Blue	Supplying direct power (DC5V) should be used as variable resistant Vcc to input speed with support from outside. It should not be used for any other purposes.
7	ALM_RESET	IN	Purple	If control unit stops due to overload, then remove the source of alarm and forcefully restart. ON→OFF then RESTART.
8	CHG	-	Brown	If it is on, then internal S_S volume is used to control speed. If it is off, then S_S volume is used to set acceleration and deceleration times.
9	CW/CCW	IN	Gray	If you look at from the axis. When the signal wire is connected with GND, then it rotates CW. In other cases, it rotates CCW.
10	RUN/BRAKE	IN	White	If it is on (L), then the motor operates. If you turn it to off during motor operation, then it stops instantaneously. (Brake on) If signal wire is off, then the motor does not operate. Wait a few minutes before restarting (after brake on).
11	START/STOP	IN	Black	If it is on, then the motor is ready to rotate. If you turn it to off during motor operation, then it stops automatically.
12	NC			

5. START/STOP and RUN/BRAKE

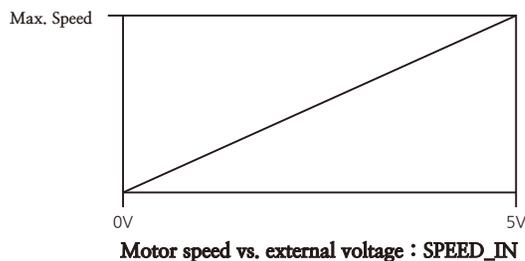
START/STOP	RUN/BRAKE	Operation status
ON(L)	ON(L)	Normal operation
ON(L)	OFF(H)	Instant stop
OFF(H)	ON(L)	Automatic stop due to inertia of motor and load

6. Variable resistance

■ Setting acceleration and deceleration speeds : S_S (SLOW START)

Slope of motor's acceleration and deceleration is decided. Acceleration and deceleration are possible in parallel with variable resistance, VR2's output voltage. If the variable resistance is at minimum, then the time it takes motor to reach the maximum speed from the stop is 10 seconds. If variable resistance at maximum (at maximum value, greater than 90%, greater than 9 markings), then it takes about 0.1 sec to reach the maximum speed. If you need to rapidly accelerate or decelerate, then you should keep the resistance marking at 9 (at maximum).

■ External variable resistance for speed control (SPEED_IN)



7. SPEED output (SPEED_OUT)

30pulses per one revolution.

