BLDC SPEED CONTROL UNIT

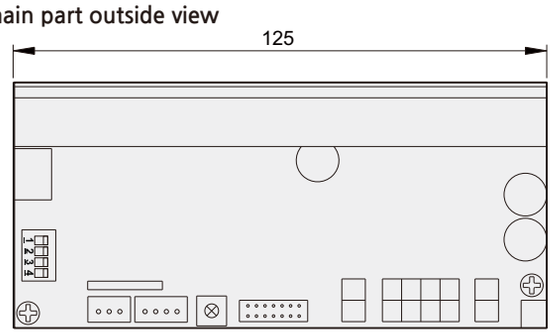
GUX-B

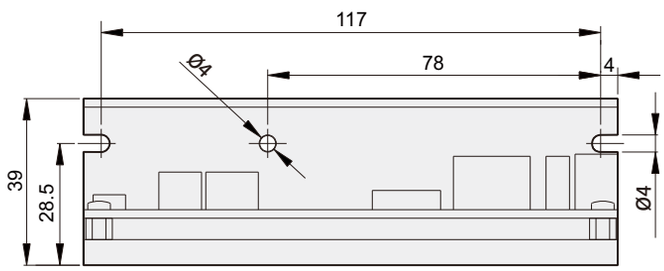
GUX-2-30-B
GUX-2-50-B
GUX-2-100-B

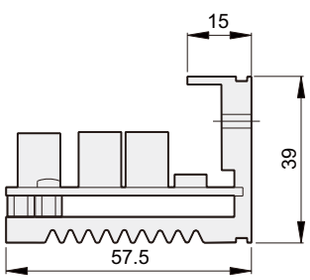
X Series motor applied product

Product appearance

■ Driver main part outside view

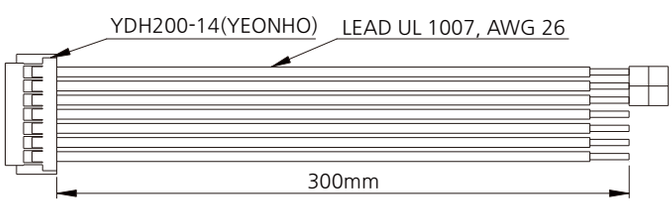




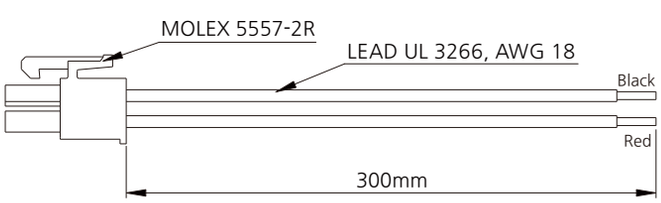


[Accessory]

■ Driver input signal cable, External volume



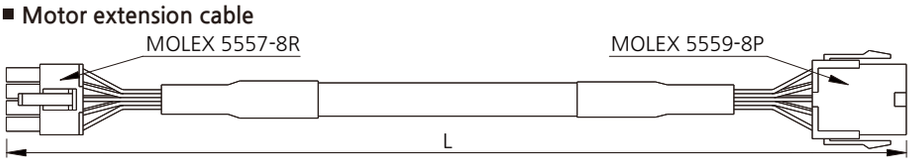
■ Driver power cable



[Optional Parts]

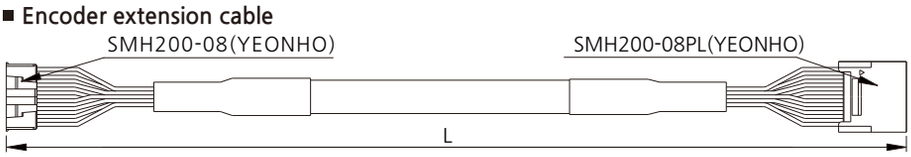
Please Buy extension cable additionally for extending between motor and control(optional)

■ Motor extension cable



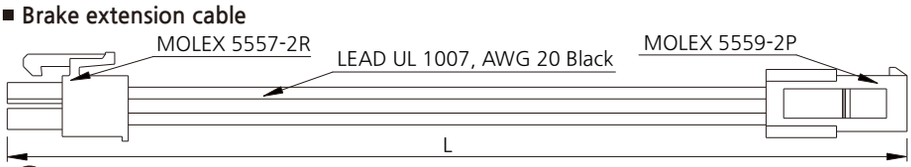
MODEL	L (extension cable length)
KXEW-1	1m
KXEW-1.5	1.5m
KXEW-2	2m

■ Encoder extension cable



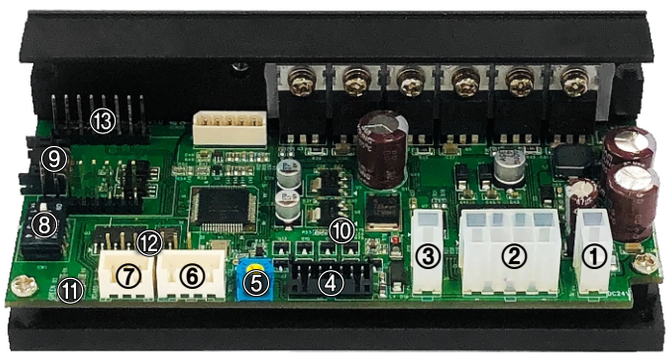
MODEL	L
KEEW-1	1m
KEEW-1.5	1.5m
KEEW-2	2m

■ Brake extension cable



MODEL	L
KXEW(B)-1	1m
KXEW(B)-1.5	1.5m
KXEW(B)-2	2m

Name and functions of each part



①	Power 1:+24VDC 2:GND 5566-2P(MOLEX)	⑦	RS485	⑫	Communication board (option)
		⑧	DIP switch		
②	Motor & Hall sensor	⑨	Encoder output & Position pulse input		
③	Electronic brake 1:+24VDC 2:GND 5566-2P(MOLEX)	⑩	LED1	⑬	Encoder Board (option)
④	In / Output IO	⑪	LED2 / LED3		
⑤	Volume				
⑥	OP-500(option)				

1. Specifications

Item	GUX-2-30-B	GUX-2-50-B	GUX-2-100-B	Note
Rated output[W]	30W	50W	100W	
Input power[V]	DC 24V (±10%)			
Rated current[A]	2.1	3.1	6	
Max current[A]	3.7	5.4	9.8	
External size (mm)	125 X 58 X 39			
Communication	RS485 Communication board (option)			
Encoder	Encoder Board (option) 1,000 ppr			
Velocity control range	Speed control	100~3,000r/min (Velocity variation±1% or under)		
	Position control	1~3,000r/min (Velocity variation±1% or under)		Encoder type (when controlling pulse input)
Operating Environment	Termperature	Use : 0 ~ 40℃, Storage : -20 ~ 70℃		Non-freezing
	Humidity	Use : 85% below, Storage : 85% below		Non-condensing
	Environment	No corrosive gas and dust, No splashing water and oil		

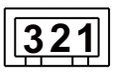
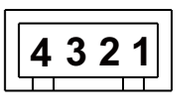
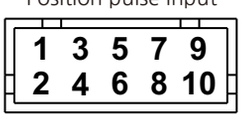
2. DIP switch & internal volume specifications

Item	Pin no.	Contents							Note
DIP switch ON 1 2 3 4	1	OFF	30W	ON	50W	OFF	50W	100W fixed	
	2	OFF		OFF		ON			
	3	OFF	Hall sensor dirve mode			ON	Encoder drive mode		Applicable for Encoder option
	4	OFF	Speed control			ON	Position control		
Internal volume		Ac/deceleration adjustment / Velocity Adjustment of SPEED INT							

3. LED specifications

Item		LED sign	Note
LED 1	Power ON / OFF	Power ON : Orange light on, Power OFF : Orange light off	
LED 2	Control ON / OFF	Control ON : Green light on, Control OFF : Green light off	
LED 3 [alarm]	Hall sensor alarm	Flickering once at intervals of 6 seconds (Red)	Motor stop
	Low voltage alarm	Flickering twice at intervals of 6 seconds (Red)	
	Over load alarm	Flickering 3 times at intervals of 6 seconds (Red)	
	Parameter alarm	Flickering 4 times at intervals of 6 seconds (Red)	
	Over heat alarm	Flickering 5 times at intervals of 6 seconds (Red)	
	Over voltage alarm	Flickering 6 times at intervals of 6 seconds (Red)	
	Over speed alarm	Flickering 7 times at intervals of 6 seconds (Red)	
	Over current alarm	Flickering 8 times at intervals of 6 seconds (Red)	

4. Communication or Encoder output & Position pulse input (option)

Item	Pin no.	Contents			Note	
RS485  (YEONHO, SMW 250-03)	1	A+ (RS-485)			Communication option (Separate purchse of communication board)	
	2	B- (RS-485)				
	3	GND				
OP-500  (YEONHO, SMW 250-04)	1	+5VDC			Separate purchase of OP-500 OP-500 Function - Speed indication - setting the parameter (communication ID, Highest speed, etc)	
	2	RX (RS-232)				
	3	TX (RS-232)				
	4	GND				
Encoder output & Position pulse input  (YEONHO, YDAW 200-10)	1	ENC_A-	2	ENC_A+	A phase output	Separate purchase of encoder board
	3	ENC_B-	4	ENC_B+	B phase output	
	5	OUT_Z-	6	OUT_Z+	Z phase output	
	7	POS_IN-	8	POS_IN+	Position pulse	
	9	DIR_IN-	10	DIR_IN+	Direction pulse	

5. Input and output I/O specification

Pin no.	Name of signal	Color	Contents
1	SPEED_+5V	Red	Direct current power for speed setting (+5V) / This is used as the power input of variable resistance for receiving this power supply from the external source and entering the speed, and it is prohibited to use it for any other purpose. 10KΩ (1/4W or higher) is used when the external variable resistance is used.
2	SPEED_IN	Orange	Direct current power input for speed setting/ Change the motor speed up to the maximum speed in proportion to (0~5VDC).
3	SPEED_GND	Black	GND
4	CW / CCW	Yellow	Decides the motor direction. CW direction if the input is “Low" (GND connection). CCW direction if the input is “High" (GND not connected).
5	START	White	If the input is “Low" (GND connection), the motor control function is enabled(Motor rotation ready). If the input is “High" (GND not connected) during motor rotation, the motor will stop automatically.
6	STOP	Blue	If the input is “Low" (GND connection) during motor rotation, the motor is stopped by the deceleration brake.
7	SPEED_IN	Brown	If the input is “Low" (GND connection), the speed is set using the internal volume. If the input is “High" (GND not connected), the speed is set using the external volume.
8	GND	Black	GND
9	Inpos Out	Green	Position movement completion output (when encoder type control the position) "Low" (0V) changing.
10	GND	Black	GND
11	Alarm Reset	Gray	This eliminates the cause of an alarm and forcibly resets the alarm. If the input is “Low" (GND connection), the alarm is reset.
12	SPEED_OUT	Pink	Motor speed pulseoutput (Open Collector) _ 15 pulseoutput a rotation.
13	Alarm Out	Purple	In the event of an alarm by alarm signal output (Open Collector), output changes to “Low" (0V).
14	N.C		

6. Features

■ **Speed control**

If I/O #7inputis"High" (GND not connected), motor speed changes up to the max speed in proportion to the external volume (I/O#2) input voltage (0~5VDC).
In the event of utilizing external adjustable resistance, use the value of 10KΩ (1/4W or over).
If I/O #7input is "Low" (GND connection), motor speed changes up to the max speed in proportion to the internal volume input voltage (0~3.3VDC)

■ **Motor direction control**

If I/O #4input is "Low" (GND connected), the motor rotates toward CW (to motor axis).
If I/O #4input is "High" (GND not connected), the motor rotates toward CCW (to motor axis).

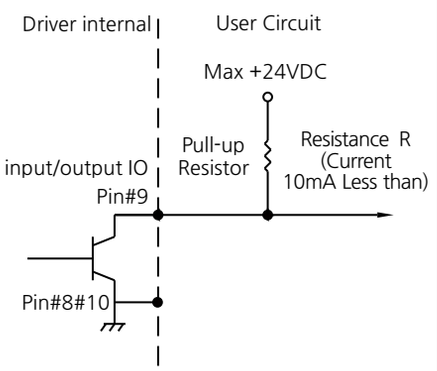
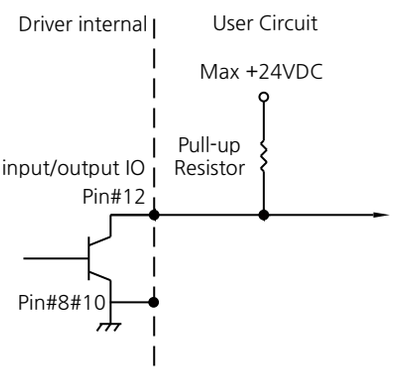
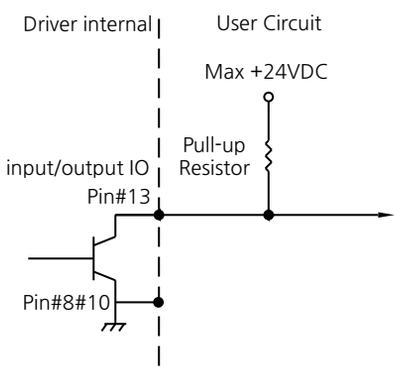
■ **Controller ON/OFF control**

If I/O#5input is"Low" (GND connected), motor control function is activated. (green LED light on) (ready for motor rotation)
Motor operation starts according to an external volume input value. If input is "High" (GND not connected) while motor rotation, the motor stops naturally.

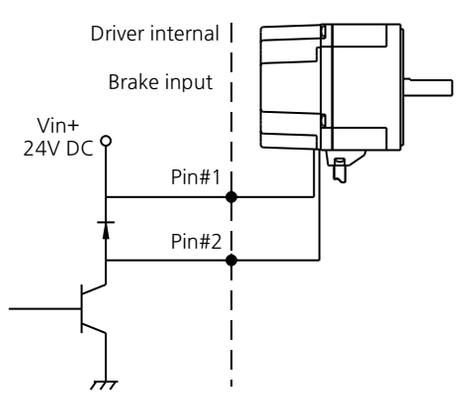
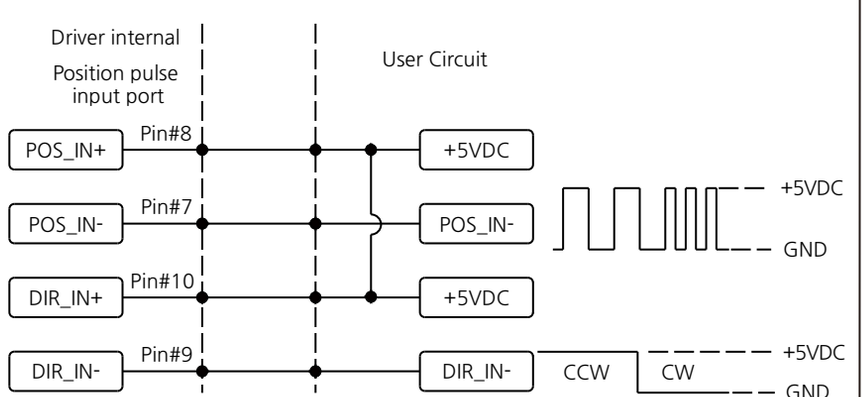
■ **Motor stop control**

If I/O#6inputis "Low" (GND connected) while motor rotation, the motor stops. [deceleration - brake (no maintaining)]

■ **Output signal**

Inpos Signal output	Motor speed pulse output	Alarm sign output
		
I/O signal output "Low" when position movement is completed (encoder type is position control mode)	I/O #12 outputs signal pulse while motor rotation. (outputs 15 pulses of signal per 1 motor rotation)	In the event of an alarm, I/O #13 output changes to "Low" (0V).

■ **Electric brake control / position & direction instruction signal**

Electric brake control	Position & Direction instruction signal input (Position control mode)
	
Electric brake is released automatically when motor is run Electric brake works automatically after the motor stop (Brake type motor)	- Counts Per Revolution (CPR) = 1000 pulse - Pulse frequency(Hz) = (Control Speed rpm/60)*1000 (Signal permitted frequency 100KHz)