

Microstep Drive

2 Phase Bipolar Stepping Motor Drive MB450 series

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COMPLIANT

■ Feature

- 3 Different Line up to Fulfill Diverse Needs
- Maximum 50,000 Resolution/Rotation Micro-Step Operation
- Realize Low Vibration by Setting Inductance Value of Motor
- Electronic Brake Control Circuitry Embedded
- Variety of Alarm Output and Monitoring is Possible
- Adopt Casing Suitable for Heat Dissipation

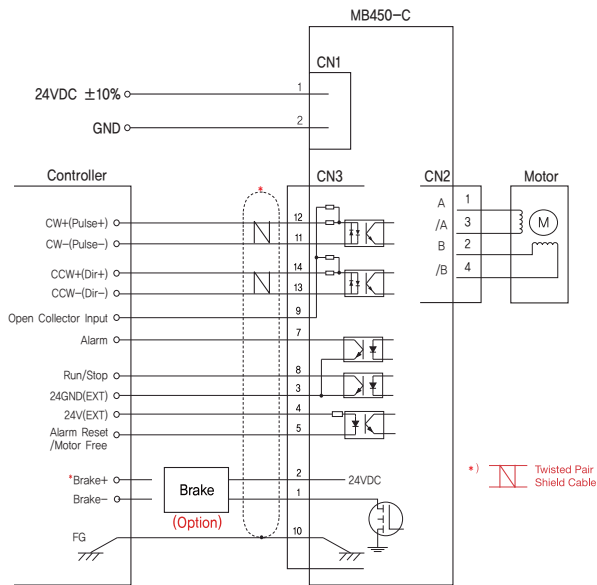


■ Drive Specification

*Picture of Model : From left to right MB450-C, MB450-T, MB450-MINI

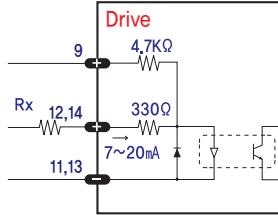
Specification/ Form	MB450-C	MB450-T	MB450-MINI
Input Voltage	DC24V ±10%		
Current Consumption	Maximum 500mA (Except motor current)		
Control Method	PWM operation method (By-polar operation)		
Motor Operation Current	0.5~4A	0.5~4A	0.5~3A
RUN Current	0.5A~4.0A (Selected by DIP switch), set the rated current of motor that is connected to drive, *Default : 0.5A		
STOP Current	10%~100% (Selected by DIP switch), When motor stop operation, after 0.1second the motor current will be set to STOP current value, *Default : 50%		
Speed/Position Control Command	Pulse input (Photo-coupler input)		
Maximum Input	500kHz (Duty 50%)		
Resolution (P/R)	500 1,000 1,600 2,000 3,200 3,600 4,000 5,000 6,400 8,000 10,000 20,000 25,000 36,000 40,000 50,000 (Selected by DIP switch) *Default : 10,000		
Pulse Input Method	1 Pulse/2 Pulse (Selected by DIP switch), 1 Pulse : Pulse/Direction, 2 Pulse : CW/CCW *Default : 2 Pulse		
Rotation Direction	CW/CCW (Selected by DIP switch), Used for changing rotation direction of the motor. *Default : CW		
Inductance Setting	0.7mH~12mH (Selected by DIP switch), Set the inductance value of motor that is connected to drive. *Default : 0.7mH ~1.4mH		
Protection Functions	Over Current error, Over speed error, Over temperature error, Over regenerated voltage error, Motor connection error, Motor voltage error, System error, ROM error, Input voltage error.		
LED Display	Power(Green), Alarm(Red), CW rotation(Yellow), CCW rotation (Orange)		
Input Signal	Motor Free/Alarm Reset (Photo-coupler input)		
Output Signal	Alarm, Run/Stop (Photo-coupler output), Brake control		
Ambient Temperature	0~50°C (Non-condensing)		
Storage Temperature	-20~70°C (Non-condensing)		
Humidity	35~85%RH (Non-condensing)		
Storage Humidity	10~90%RH (Non-condensing)		
Surrounding Environment	There should be no direct contact with corrosive gas, dust, water and oil		
Vib. Resist	0.5G		
Dimension (mm)	115.5 (W)×66 (D)×25.3 (H)	115.5 (W)×66 (D)×25.3 (H)	82.8 (W)×53.9 (D)×21.5 (H)
Weight(Except attachments)	179g	179.5g	89g

■ Example of Connection. (*When Using MB450-C)

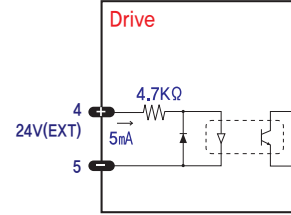


▪ Input Signal

CW(Pin:11,12), CCW(Pin:13,14)
Open Collector Input(Pin:9)

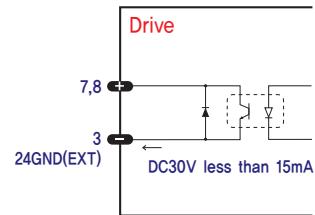


Alarm Reset(Pin:5)



▪ Output Signal

Alarm(Pin:7), Run/Stop(Pin:8)



◎ Accessories

- Power Connector
- I/O Signal Connector
- Motor Connector

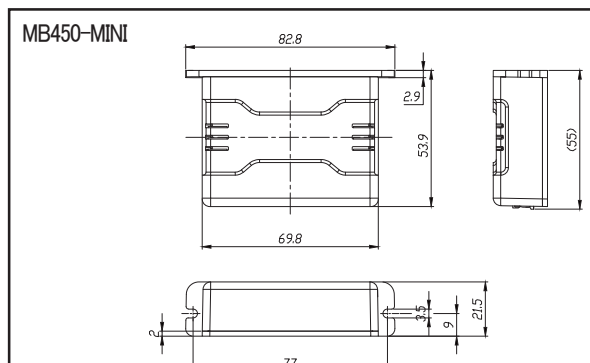
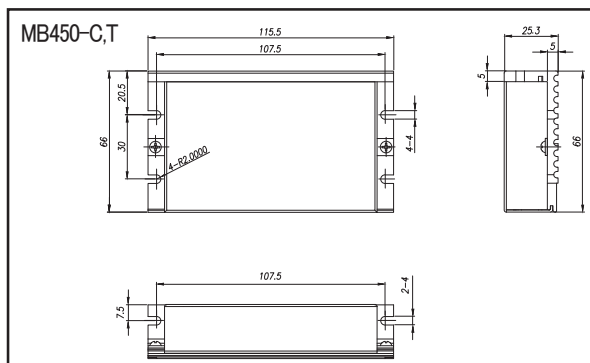
■ LED Display

Indication	Color	Function	Flash Condition
PWR	Green	Power input indication	Lights when power is ON Flashes when motor is Free status
ALM	Red	Alarm indication	Flash when protection function is activated (Identifiable which protection mode is activated by counting the flash times)
CW	Yellow	Motor rotation direction	Lights when motor rotate CW direction
CCW	Orange	Motor rotation direction	Lights when motor rotate CCW direction

■ Protection Functions

Times	Protection Functions	Conditions
1	Over current	Excessive current flowed into a motor
2	Over speed	Motor speed exceeded 3000 rpm
5	Over temperature	Internal temperature of a motor drive exceeded 55°C
6	Over regenerative voltage	Back EMF more than 50V
7	Motor connect error	Power is ON without connection of motor cable to drive
9	Motor voltage error	Motor voltage is below 20V
11	System error	Error occurs in drive system
12	ROM error	Error occurs in parameter storage device(ROM)
14	Input voltage error	Power source voltage is out of limited value [20V~28V]

■ Drive Dimension



* Product information in this catalog based on date of May 2013.

The specification of product can be changed without pre-notification due to enhancements and improvements of product.



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