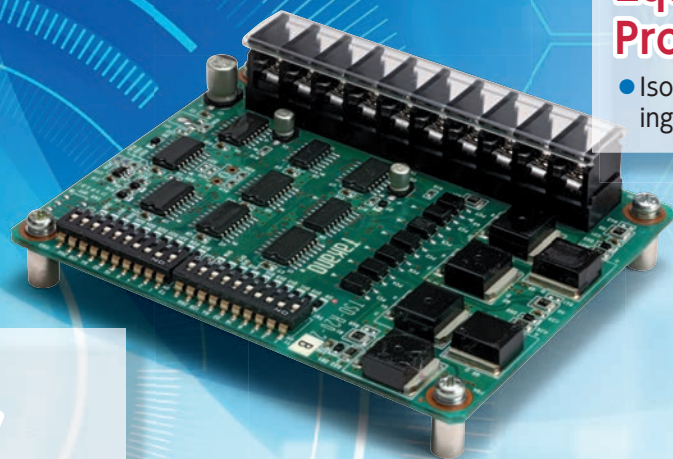


DRIVER BOARD FOR BI-STABLE ROTARY SOLENOIDS



Equipped with a Protective Cover

- Isolates the wire-connecting terminal of the board.

Dip Switch Functionality

- Set the duration of each pulse with just the flip of a switch!

FEATURES

1 User-Specified Conduction Time

You can set the duration of energization from 1 to 511 milliseconds in 1ms steps for clockwise and counterclockwise rotation. The factory settings have T1 and T2 both set at 14ms.

2 Easy Interface With Exterior Equipment

Since the input trigger circuit is insulated by a photocoupler, and since the solenoid power supply (V1 & V2) is independent of the circuit-board power supply, interfacing with exterior equipment is simple and easy.

3 Humidity-Resistant/Impact-Resistant/Vibration-Resistant

The board is fully coated from front to back with acrylic coating.

4 Power-Saving

Since we use CMOS integrated circuit technology in the logic and counter circuits, the driver board is energy-efficient. It can obtain a large noise margin, and takes a wide range of power supplies.

PRODUCT SPECIFICATIONS

◆ Electrical Characteristics

① Rated Voltage

Solenoid Power Supply Voltage: (High) V1 – GND 1: 12V DC ~ 48V DC
(Low) V2 – GND 1: 12V DC ~ 48V DC

[please keep the voltage of V2 lower than that of V1]

Circuit Power Supply Voltage: VCC – GND 2: 5V DC ± 10 %

2 Rated Current

Solenoid Output Current
(when operating with continuous pulse) :

V1, V2 Voltage (V DC)	Trigger Pulse Frequency f (Hz)	Current (A)		
		2	5	8
12 ≤ V1 ≤ 24 12 ≤ V2 < 24 (V1 > V2)	f < 1	○	○	○
	1 ≤ f < 5	○	○	×
	f ≥ 5	○	○	×
24 < V1 ≤ 48 12 < V2 < 48 (V1 > V2)	f < 1	○	○	×
	1 ≤ f < 5	○	○	×
	f ≥ 5	○	×	×
Duty Cycle		Max 80 %	Max 50 %	Max 20 %

Circuit Power Supply Current: under 30 mA (VCC-GND 2) [when VCC = 5.0V DC]
Trigger Input Current: 7.5 mA DC (Typ) [when VIH = 48V DC]

3 Operating Voltage Trigger Input Voltage IN+ - IN- :

High Level Input Voltage VIH : 12V DC ~ 48V DC,

Low Level Input Voltage VIL : 0V DC ~ 1.2V DC

4 Insulation Resistance 250V DC MEGA, over 5MΩ

between (V1, V2, GND 1) and (VCC, GND 2), between (IN+, IN-) and (VCC, GND 2)

between (IN+, IN-) and (V1, V2, GND 1)

5 Dielectric Strength 1000V AC 50/60Hz 1 minute

between (V1, V2, GND 1) and (VCC, GND 2), between (IN+, IN-) and (VCC, GND 2)

between (IN+, IN-) and (V1, V2, GND 1)

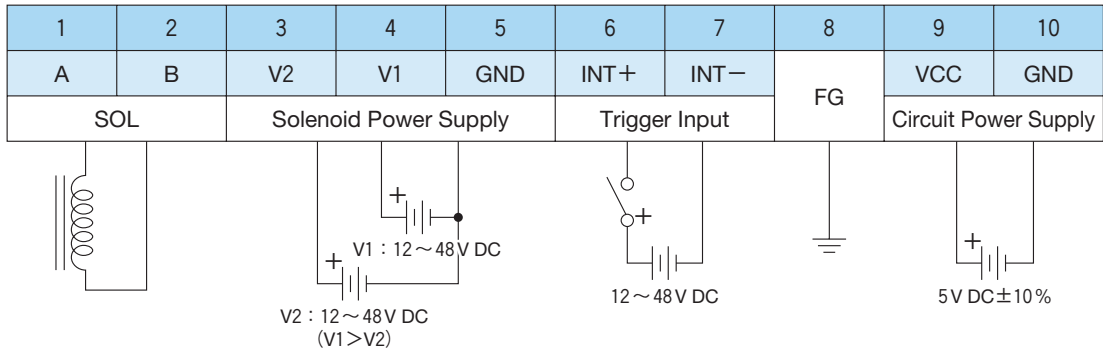
◆ How To Set Pulse Duration

By setting the ON-OFF switches on the 9-bit dip switches, you can set the duration of current supply according to the pattern shown in the table below.

Dipswitch SW 1 controls clockwise rotation, and SW 2 controls counterclockwise rotation.

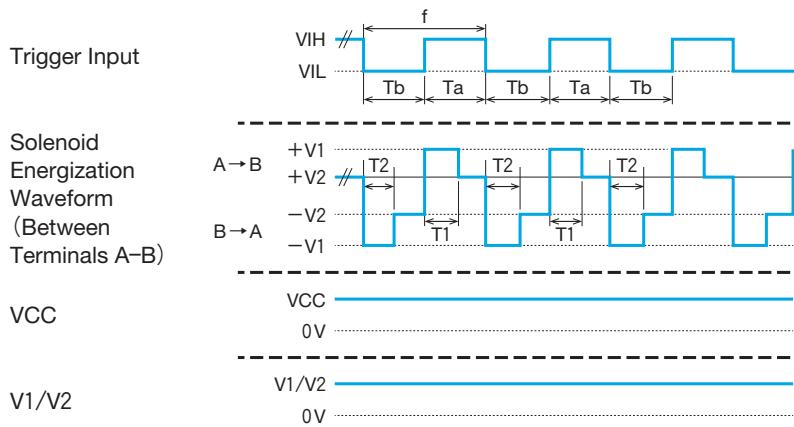
Duration of current supply	Dipswitch (SW1, SW2)									Note
	9	8	7	6	5	4	3	2	1	
1 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	
2 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	OFF (0)
3 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)
4 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	OFF (0)	OFF (0)	OFF (0)
5 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	OFF (0)	ON (1)	
6 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)	OFF (0)	
7 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)	ON (1)	
⋮										
13 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)	OFF (0)	ON (1)	
14 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)	ON (1)	OFF (0)	(standard)
15 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	ON (1)	ON (1)	ON (1)	
16 ms	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	
⋮										
200 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	OFF (0)	OFF (0)	OFF (0)	
201 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	OFF (0)	OFF (0)	ON (1)	
202 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	OFF (0)	ON (1)	OFF (0)	
203 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	OFF (0)	ON (1)	ON (1)	
204 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	
205 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	ON (1)	OFF (0)	ON (1)	
206 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	ON (1)	ON (1)	OFF (0)	
207 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	OFF (0)	ON (1)	ON (1)	ON (1)	ON (1)	
208 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	ON (1)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	
209 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	ON (1)	OFF (0)	OFF (0)	OFF (0)	ON (1)	
210 ms	OFF (0)	ON (1)	ON (1)	OFF (0)	ON (1)	OFF (0)	OFF (0)	ON (1)	OFF (0)	
⋮										
510 ms	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	OFF (0)	
511 ms	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	ON (1)	

◆ How to Connect



* Terminal Block : OTB-754-B-10P (OSADA Co., Ltd.)

◆ Operation Timing



◆ External Dimensions (mm)

