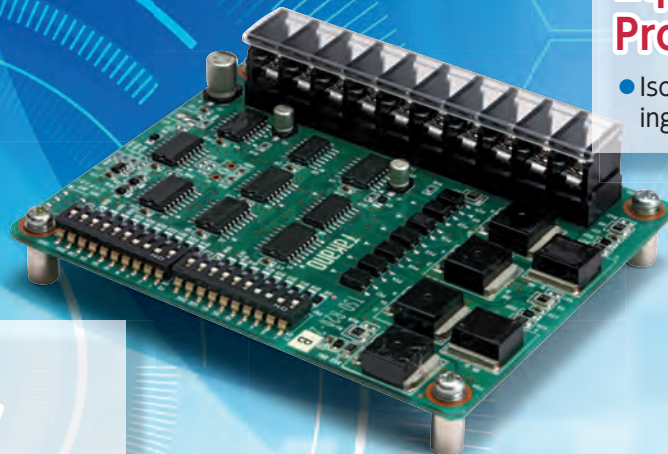


DRIVER BOARD FOR BI-STABLE ROTARY SOLENOIDS



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 1 msec steps for clockwise and counterclockwise rotation. The factory settings have T1 and T2 both set at 14msec.

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

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

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.

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: 12 V DC ~ 48 V DC
(Low) V2-GND 1: 12 V DC ~ 48 V DC

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

Circuit Power Supply Voltage: VCC-GND 2: 5 V DC $\pm$ 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
$12 \leq V1 \leq 24$ $12 \leq V2 < 24$ ($V1 > V2$)	$f < 1$	○	○	○
	$1 \leq f < 5$	○	○	×
	$f \geq 5$	○	○	×
$24 < V1 \leq 48$ $12 < V2 < 48$ ($V1 > V2$)	$f < 1$	○	○	×
	$1 \leq f < 5$	○	○	×
	$f \geq 5$	○	×	×
Duty Cycle		Max 80 %	Max 50 %	Max 20 %

Circuit Power Supply Current: under 30 mA (V_{CC} -GND 2) [when $V_{CC} = 5.0$ V DC]

Trigger Input Current: 7.5 mA DC (Typ) [when $V_{IH} = 48$ V DC]

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

High Level Input Voltage V_{IH} : 12 V DC ~ 48 V DC,

Low Level Input Voltage V_{IL} : 0 V DC ~ 1.2 V DC

④ Insulation Resistance 250 V DC MEGA, over 5 MΩ

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 1000 V AC 50/60 Hz 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)

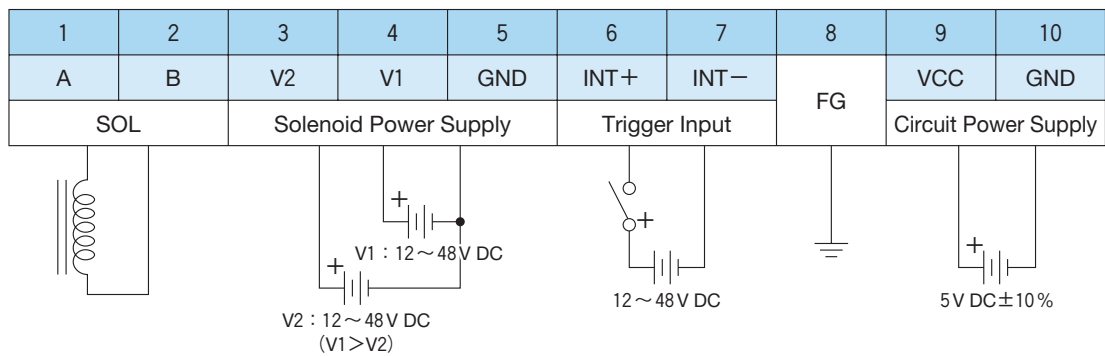
◆ How To Set Pulse Duration

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.

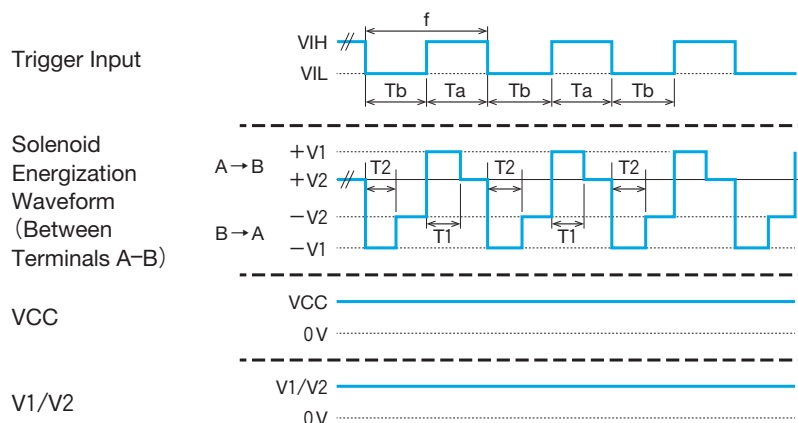
Duration of current supply	Dipswitch (SW1, SW2)									Note
	9	8	7	6	5	4	3	2	1	
1 msec	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	
2 msec	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	ON (1)	OFF (0)	
3 msec	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)	OFF (0)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

