

FLICKER click



PID: MIKROE-2481

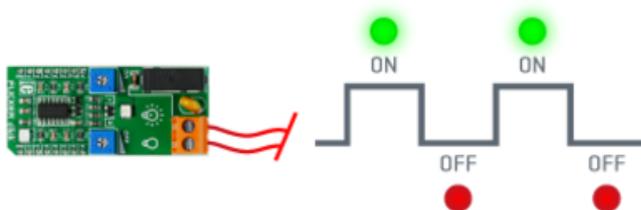
RS product Code: [136-0861](#)

FLICKER click is the perfect, simple solution if you need to turn a device on and off at specific time intervals, like blinking LED commercials, alarm system lights, or any other signalling lights.

FLICKER click

Thanks to the on board NA556 dual precision timer from Texas Instruments and the G6D-ASI power PCB relay from Omron, the FLICKER click can control loads up to 5A, 250 VAC/30 VDC at a predefined time interval.

The on/off period can last from 0.1 to 6 seconds, that can be set by the two ON/OFF on board potentiometers. The external load can be connected to the board through the screw terminal. FLICKER click runs on 5V power supply and it communicates with the MCU over RST pin.



Applications

FLICKER click is the perfect, simple solution if you need to turn a device on and off at specific time intervals, like blinking LED commercials, alarm system lights, or any other signalling lights.

Key features

- NA556 dual precision timer
- G6D-ASI power PCB relay
- Max. loads up to 5 A, 250 VAC/30 VDC
- Min. permissible load 10 mA at 5 VDC
- Contact resistance 100 mΩ max
- Screw terminal for external load
- RST pin interface
- Operates on a 5V power supply

Specification

Product Type	Relay
Applications	FLICKER click is the perfect, simple solution if you need to turn a device on and off at specific time intervals, like blinking LED commercials, alarm system lights, or any other signalling lights
On-board modules	NA556 dual precision timer from Texas Instruments and the G6D-ASI power PCB relay from Omron
Key Features	G6D-ASI power PCB relay, Max. loads up to 5 A, 250 VAC/30 VDC, Min. permissible load 10 mA at 5 VDC, Contact resistance 100 mΩ max
Key Benefits	Screw terminal for external load
Interface	GPIO
Power Supply	5V
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)
Weight	34g

Features and usage notes

On board PCB relay

Maximum switching capacity of the G6D-ASI PCB relay is 1250VA at 150W. Maximum contact resistance is 100 mΩ.

Potentiometers

The two potentiometers (P1 and P2) set the switching on and off time.

Designator	Name	Type	Description
P1		Potentiometer	Adjusting T _{on}
P2		Potentiometer	Adjusting T _{off}
CN1	Terminal block	Connector	for connecting the device

Maximum ratings

Description	Min	Typ	Max	Unit
Contact resistance			100m	Ω
Operate time			10m	s
Ambient temperature	-25		70	C
Operating current			5	A
Operating voltage			250	VAC

Application

Turning devices on and off at specific time intervals.

Pinout diagram

This table shows how the pinout on FLICKER click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	 mikroBUS™				Pin	Notes
		1	AN	PWM	16		
	NC	1	AN	PWM	16	NC	
Turns the NE556 on and off	FON	2	RST	INT	15	NC	
	NC	3	CS	RX	14	NC	
	NC	4	SCK	TX	13	NC	
	NC	5	MISO	SCL	12	NC	
	NC	6	MOSI	SDA	11	NC	
<i>This click has 5V power supply only</i>	NC	7	+3.3V	+5V	10	+5V	+5V power supply
Ground	GND	8	GND	GND	9	GND	

Programming

This code snippet configures required port E as digital, sets pins 1 and 2 as input and enters an infinite loop. While in an infinite loop, use potentiometers P1 and P2 to adjust the ON / OFF time period.

- Supply voltage within range of 5 – 15 V.
- Maximum output current detected: 225 mA.
- Usable on: ARM, PIC, PIC32, AVR and FTDI compilers.

```
1
2 void main()
3 {
4     ANSELE = 0;           // Configure PORTE pins as digital
5     TRISE2_bit = 1;      // Set RE2 pin as input
6     PORTE = 0;
7     while(1);           // Endless loop
8                           // While Button is held, the onboard LED will blink according to ON/OFF timer
9                           // For example, connect beeper from digital multimeter on terminal
10 }
```

Downloads

[FLICKER click Examples](#)

[FLICKER click Schematic](#)