EX-06/EX-16

Non-Sparking Tactile Switch

Installation Manual

ROSSLARE
SECURITY PRODUCTS

1. Introduction

Rosslare's EX-06/EX-16 electronic switches enable the access control of a magnetic lock or electric lock strike. The EX-06 and EX-16 are heavy duty, illuminated, vandal resistant, analog timed switches, designed for both indoor and outdoor use.

The piezoelectric switches generate a dry contact N.O. and N.C. relay pulse simply by placing your finger on it, with no physical movement or moving parts.

The EX-06 and EX-16 include features such as solid state Piezoelectric Switch Technology, an adjustable output time of 1 to 60 seconds, and field selectable illumination status, allowing you to select from a number of vibrant color options to show relay ON or relay OFF status.

Figure 1: EX-06

Figure 2: EX-16

2. Technical Specifications

2.1 Electrical Characteristics

Operating Voltage Range	10 to 24 VDC
Output	1x2 A relay with two isolated dry contacts: Normally Open (N.O.), Normally Closed (N.C.)
Jumper Selectable Relay	Normally ON or OFF
Input Current, Max	Less than 140 mA @ 24 VDC
Button Switch Life	1 billion cycles
Relay Life Expectancy	100,000 @ 2A 30 VDC
	500,000 @ 1A 30 VDC

2.2 Environmental Characteristics

Operating Environment	Indoor and outdoor (meets IP65)
Operating Temperature Range	-35°C to 66°C (-31°F to 151°F)
Operating Humidity Range	0 to 85% (non-condensing)

2.3 Physical Characteristics

Material	Stainless steel faceplate and button cap
Dimensions	EX-06: 11.4 x 7 x 3.2 cm (4.5 x 2.75 x 1.26 in.)
	EX-16: 11.4 x 4.4 x 3.2 cm (4.5 x 1.73 x 1.26 in.)
Weight	EX-06: 238 g (8.40 oz.)
	EX-16: 173 g (6.10 oz.)

3. General Features

The main features of the EX-06/EX-16 are:

- **Switch Technology:** Advanced Soft Touch Piezoelectric Switch
- **New Weatherproof Design:** Circuit assembly encapsulation
- **Vandal Resistant:** Stainless steel mounting plate and solid state button (Vandal was not verified by UL)

- **Adjustable Output Time:** The timer can be set from 1 to 60 seconds for the relay as well as for LED activation.
- **Field Selectable Illumination Status:** Jumper selected
- **Mounting Method:** Mounts directly to a single gang switchbox
- **Faceplate Graphics:** "EXIT", "PUSH TO EXIT" or no graphic, custom laser marked black graphics available

4. Installation

4.1 Selecting an Area for Installation

You need to select the best physical location to install the EX-06/EX-16. The EX-06/EX-16 switch has a face plate attached to an inlay that is imbedded in a wall with all of its wiring.

To select a physical location:

1. Select a flat wall in close proximity to the door or item the switch will control.
2. Ensure that there are no iron beams, door frames, or other obstructions that would prevent the insertion of the inlay in the wall.
3. Stick the mounting plate provided on the wall to ensure quick and easy installation of the product.
4. Mark the dimensions of the inlay on the wall:
   70 x 38 x 27 mm (2.75 x 1.47 x 1.06 in.)

4.2 Mounting the Switch

You need to make a hole slightly larger than the inlay and install the switch.
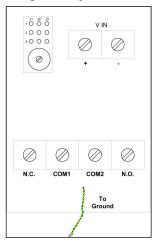
To mount the switch:

1. Make a hole in the wall measuring the required dimensions, adding ½ cm (1/8") on all sides for the gang box to slide in smoothly.

2. Unscrew the cover on the small box containing the jumpers and potentiometer.
3. Connect the wires as described in Section 4.3.
4. Set the jumper connections located on the upper left side of the inlay box (see Section 5).
5. Screw the sealed cover back on the small box containing the jumpers and potentiometer.
6. Test the switch before screwing the inlay to the gang box (see Section 6).
7. Place the inlay with face plate in the gang box, making sure the screw alignment is correct and the face plate lies flush against the wall.
8. Insert screws in the face plate and screw tightly to ensure a water tight seal that protects the inner wiring.

4.3   Wiring Information

EX-06/EX-16 is wired using a terminal block with binding posts.

Figure 3 provides a view of the back of the inlay.

Figure 3: Inlay Back View

To wire the unit:

1. Open the terminal blocks using a thin Philips head screwdriver or a flat head screwdriver.
2. Connect the power wires to the V IN relay for operation voltage, output between 10–24 VDC.
3. Connect the N.O. and/or N.C. outputs.

> **Note** The Normally Closed (N.C.) and Normally Open (N.O.) relays are not connected to each other. Each one can be used separately for different applications such as one operating a door lock and the other operating a light.

> **Note** COM1 must be connected to the adjacent N.C. relay and COM2 must be connected to the adjacent N.O. relay.
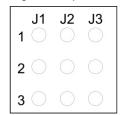
4. Connect the grounding wire to a ground.

5. Jumper Settings

The EX-06/EX-16 has 3 internal jumpers that can be connected to enable various features, including:

- Setting the LED color (Jumpers 1 and 3)
- Setting the mode and time duration of color change(Jumper 2)

Figure 4: Jumper Posts

5.1   LED Color Feature Jumper

You can set the base color of the LED and the color of the LED after pressing the button. Insert the jumper(s) according to Table 1 to activate the desired setting.

Table 1: LED Jumper Settings

Jumper 1 Setting	Jumper 3 Setting	LED Color Options	
		Base Color	Activated Color
*No Jumper	Connect 1-2	OFF	GREEN
*No Jumper	Connect 2-3	GREEN	OFF
Connect 1-2	*No Jumper	OFF	RED
Connect 1-2	Connect 1-2	OFF	YELLOW
Connect 1-2	Connect 2-3	GREEN	RED
Connect 2-3	*No Jumper	RED	OFF
Connect 2-3	Connect 1-2	RED	GREEN
Connect 2-3	Connect 2-3	YELLOW	OFF

> **Warning** When using only one jumper connection, put the second jumper connection in a safe place for future use.

> **Warning** Selecting yellow is not recommended as it causes a higher electrical expectancy and may cause the unit to malfunction.

5.2   Mode Feature Jumpers

You can set a timer determining how long the LED remains activated after button press or whether the LED toggles between two colors by setting Jumper 2 (J2), as follows:

Table 2: Mode Jumper Settings

Jumper 2 (J2) set between posts 1 and 2:	LED toggles between two colors
Jumper (J2) set between posts 2 and 3:	The timer feature is activated

> **Warning** If Jumper 2 is not set to either of these options, the switch will not work.

5.3   Toggle Feature

The toggle option allows you to toggle between two colors upon button press. The colors are determined by various jumper settings. The color remains the toggled color until the button is pressed again.

5.4   Timer Feature

When Jumper 2 (J2) is connected between posts 2 and 3, it sets the timer for the relay activation and for the LED to remain lit between 1 and 60 seconds after button press, depending on the setting. The default time is 4 seconds. The colors are determined by the various jumper settings.

The timer is a potentiometer located below the jumpers.

To set the timer:

1. Turn the potentiometer until the activated light stays lit for the desire amount of seconds.

> **Note** Turning the timer clockwise all the way sets the timer for one second. Turning the timer counter-clockwise all the way sets the timer for 60 seconds.

6. Testing the Switch

After connecting the wires and setting the jumpers, test the EX-06/EX-16 switch before screwing in the face plate.

To test the switch:

1. Press the button on the EX-06/EX-16.
2. Check to see if the electronic lock or lock strike opens and the desired light and timer settings activate.
3. Make sure the LED returns to its base color.

Limited Warranty

The full ROSSLARE Limited Warranty Statement is available in the Quick Links section on the ROSSLARE website at www.rosslaresecurity.com.

Rosslare considers any use of this product as agreement to the Warranty Terms even if you do not review them.

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