Opto-Touch Switches

Stock Nos. 730-408 (105-130V a.c.) and 730-414 (210-250V a.c.)

Optical touch buttons are touch-activated photoelectric switches designed to replace capacitive touch switches and mechanical push buttons. The opto-touch's SPDT electromechanical relay is activated for as long as a finger, introduced into the 'touch area' (yoke) of the switch, interrupts the infra-red sensing beam.
The switches are ergonomically designed to eliminate the hand, wrist and arm stresses associated with mechanical push buttons. They require absolutely no physical pressure to operate. LED indicators light for 'power on' and 'output activated'.
The switches are highly resistant to EMI, RFI, and ambient light interference, and are constructed from black polysulfone and VALOX® for reliability in industrial environments. The 30mm threaded base provides easy mounting, and are easily retrofitted to existing machines.

Technical specification

Supply voltage
105 to 130V a.c., 210 to 250V a.c.

Output configuration
All models SPDT electromechanical relay.

Output rating
Maximum voltage is 250V a.c. or 30V d.c. Maximum current is 7 amps (resistive load). Minimum load is 100mA at 24V. Mechanical life of relay is 50,000,000 operations (minimum). Electrical life of relay is 100,000 operations (minimum) at full resistive load. Transient suppression is recommended when switching inductive loads.

Ambient light immunity
120,000 lux (direct sunlight).

EMI/RFI immunity
The opto-touch is highly resistant to both single and mixed EMI and RFI noise sources.

Operating temperature range
-20°C to +50°C (-4 to +122°F).

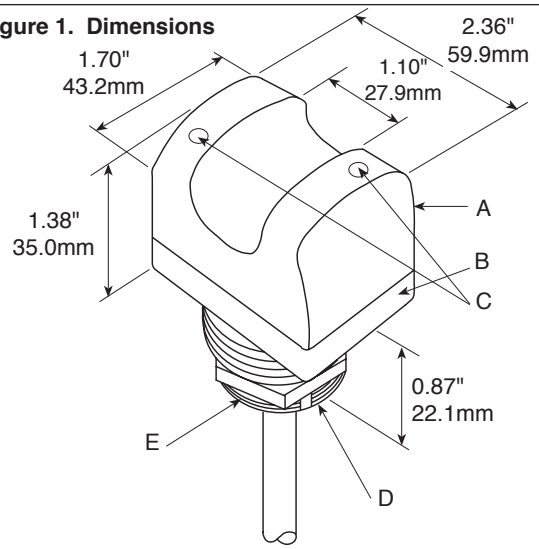
Indicator LED's
Two indicator LED's. One lights when power is 'on'; the other lights when the infra-red sensing beam is interrupted.

Construction
Black polysulfone and fibre-reinforced VALOX® housing. Electronics fully epoxy-encapsulated. Totally sealed, non-metallic enclosure. The switches threaded base has M30 x 1.5 external threads and $^1/_2$" NPSM internal threads. Base requires a 30.2mm diameter mounting hole (fits most standard automotive-size 'jumbo' legend plates and oiltight pushbutton holes). Opto-touch are rated NEMA 1, 3, 4, 4X, 12 and 13.

Environmental considerations
Prolonged exposure of the opto-touch to direct outdoor sunlight will cause embrittlement of the polysulfone housing. Window glass effectively filters longer wavelength ultraviolet and provides excellent protection from sunlight.

Opto-touch OTB mounting hole information
The opto-touch has a 30mm threaded base which fits directly into a standard mounting hole for an oiltight push button. A lock ring, supplied with each opto-touch, may be used to prevent switch rotation.
The mounting hole details shown on the right are used for the opto-touch and also for standard oiltight push buttons and their legend plates. Figure 2 shows how to approximate the keyway using a drill hole.

Figure 1. Dimensions



A. Cover: black polysulfone
B. Base: black fibre reinforced Valox
C. Indicator LED's are visible in these areas
D. M30 external threads, jam nut, lock ring and seal washers are supplied
E. $^1/_2$" NPSM internal threads

Indicator LED states:
LED 1 turns ON when the unit is powered up
LED 2 is ON when switch is activated (beam interrupted)

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Figure 2.

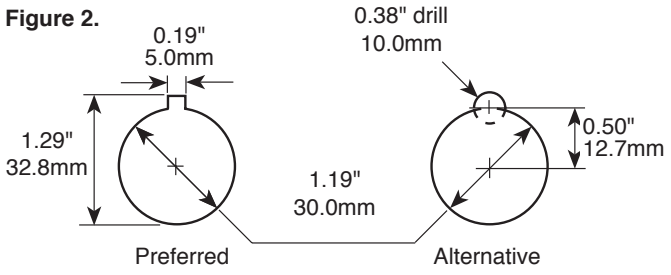


Figure 3.

