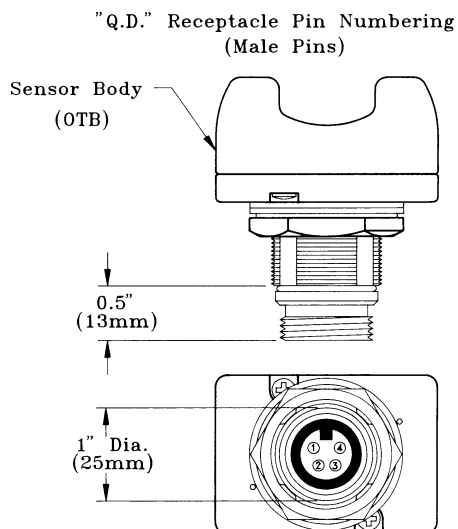


# OTB Series *Momentary Action* OPTO-TOUCH

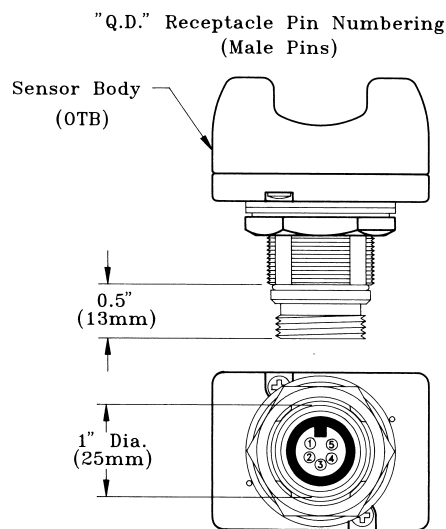
## OPTO-TOUCH base

4-pin QD base (dc models)

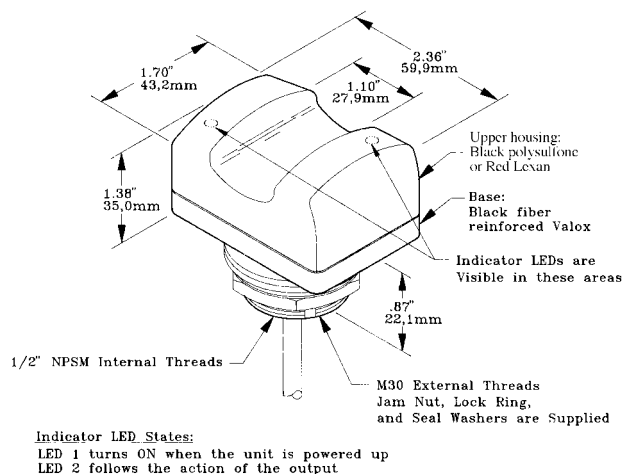


## OPTO-TOUCH base

5-pin QD base (ac and ac/dc models)



## Dimensions (see also QD base, shown above)



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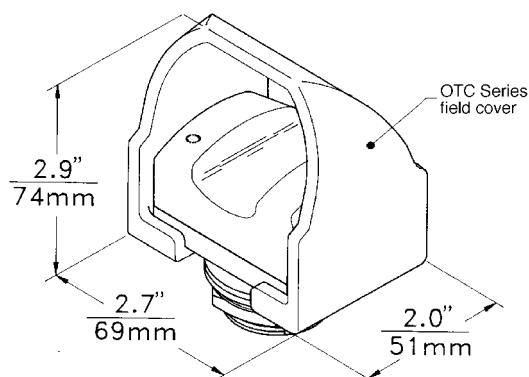
## OPTO-TOUCH Field Covers

OPTO-TOUCH Field Covers (see drawing, below) are designed to prevent inadvertent activation of OPTO-TOUCHs due to objects (loose clothing, debris, etc.) which might accidentally block their sensing beam.

Field covers are constructed of rugged polycarbonate-PET polyester blend, which is capable of absorbing high impacts (even at low temperatures). This material is highly resistant to abrasion and to damage by most chemicals.

Every OPTO-TOUCH is supplied with a black field cover, as standard. Field covers are available separately in four colors, which can be used to differentiate touch button functions when several touch buttons are in use:

**Black** model OTC-1-BK, p/n 30221  
**Red** model OTC-1-RD, p/n 30977  
**Yellow** model OTC-1-YW, p/n 30978  
**Green** model OTC-1-GN, p/n 30979



## Safety Instruction

A field cover has been supplied with this OPTO-TOUCH. It should be installed, as shown in the drawing at the right, to minimize the possibility of unintended switch operation. If this cover is missing or has become lost or damaged, contact Banner immediately at (612) 544-3164 for a no-charge replacement.

## Important Application Information

### Use of OPTO-TOUCH Optical Touch Buttons for Two-hand Machine Trip Controls Requirements for Anti-tiedown Circuitry

Two-hand trip control has been a popular means for actuation of single-stroke presses and other single-cycle machinery for many years. Optical touch buttons (OTBs) provide an ergonomic (stress-free) alternative to conventional mechanical push buttons used as actuators in two-hand trip controls.

#### OSHA Requirement for Anti-tiedown Control

Use of OTBs for two-hand trip machine actuation must include "anti-tiedown" control to prevent any means of defeating one or both actuators to create a one-hand trip. Federal law mandates the use of anti-tiedown control when two-hand trip actuators are used for cycle initiation of a single stroke part revolution clutched mechanical power press. OSHA Code of Federal Regulation, 7-1-92 Edition, CFR Title 29, Part 1910.217 (b) (6) (i) states:

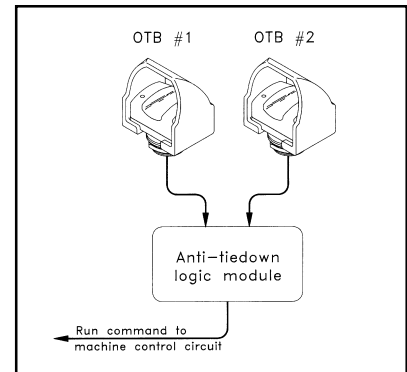
*"A two-hand trip shall have the individual operator's hand controls protected against unintentional operation and have the individual operator's hand controls arranged by design and construction and/or separation to require the use of both hands to trip the press **and use a control arrangement requiring concurrent operation of the individual operator's hand controls.**"*

Concurrent or "synchronous" actuation of two-hand trips is the most popular approach to anti-tiedown control. European Standard prEN 574, titled "Safety of Machinery - Two-handed Control Device", defines synchronous actuation as follows:

*"6.7 Synchronous actuations*

*In synchronous actuation an output signal shall be generated only when both control actuating devices are actuated - in a time which is less than or equal to 0.5 seconds...*

*... If the control actuating devices are not actuated synchronously the output signal shall be prevented and it shall be necessary to release both control actuating devices and to reinitiate both input signals."*



#### WARNING !

In the United States, the functions that a two-hand control device is intended to perform are regulated by the Occupational Safety and Health Administration (OSHA). Whether or not any particular two-hand control system installation meets all applicable OSHA requirements depends upon the details of how the two-hand control device is applied, installed, operated, and maintained.

When properly installed, a two-hand control device using OPTO-TOUCH OTB Series Optical Touch Buttons can provide protection only for the hands of the machine operator, and is not a point of operation personnel guarding device, as defined by OSHA regulations. It is necessary to install point of operation guarding devices, such as safety light curtains and/or hard guards, to protect personnel from dangerous machine motion.



#### WARNING!

**Never use an OPTO-TOUCH Optical Touch Button as an actuator in an emergency stop (E-Stop) circuit.** E-Stop actuators must be purely mechanical devices that require no power to operate. OPTO-TOUCH Optical Touch Buttons require power to operate and **must not be used as E-Stop actuators under any circumstances.**

**NOTE:** In addition to the standards and regulations mentioned above, there are numerous regulations and machine safety standards that apply to specific industries. For assistance in obtaining copies of any of these standards, contact Banner at the address or numbers listed at the bottom of page 6.