

MODEL 1790-1014 STROBE SWITCH

ACCESS GATE AND DOOR OPERATOR

EMERGENCY VEHICLE OPTICAL CONTROL DEVICE



INSTRUCTION SHEET

SAFETY NOTICES

WARNING

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

SAFETY MESSAGE TO INSTALLERS, USERS, AND MAINTENANCE PERSONNEL

It is important to follow all instructions shipped with this product. This device is to be installed by a trained installer who is thoroughly familiar with all the national and local electrical codes.

The selection of the mounting location for the device, its controls and the routing of the wiring is to be accomplished under the direction of the facilities engineer. In addition, listed below are some other important safety instructions and precautions that should be followed:

- Read and understand all instructions before installing or operating this equipment.
- DO NOT connect this device to the system when power is turned on.
- After installation, ensure that all screws and thread joints are properly tightened.
- After installation, test the system regularly to ensure that it is operating properly.
- After installation and testing is complete, provide a copy of this instruction sheet to all operating personnel.

PRODUCT DESCRIPTION

The Tomar Strobe Switch is an optical device which detects the special strobe light signal that fire department emergency vehicles use to control traffic lights on their way to an emergency. Most fire departments use a 10 or 14HZ optical signal and the 1790-1014-SYS is programmed to respond to either of these standard frequencies. However, some municipalities may use other frequencies. Please verify the frequency that your local emergency service uses prior to installing the unit. The Strobe Switch is sealed and non-adjustable. There are no replacement parts.

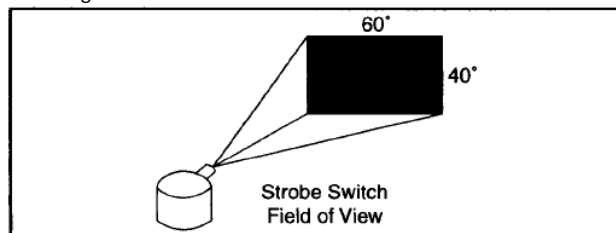
INSTALLATION

1. UNPACKING

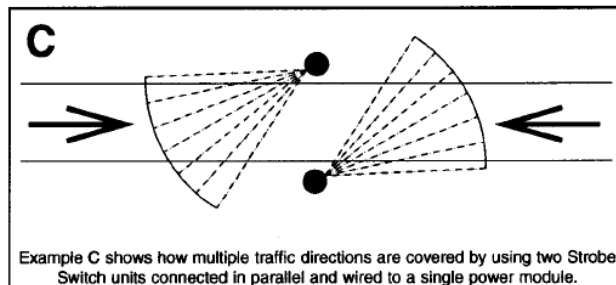
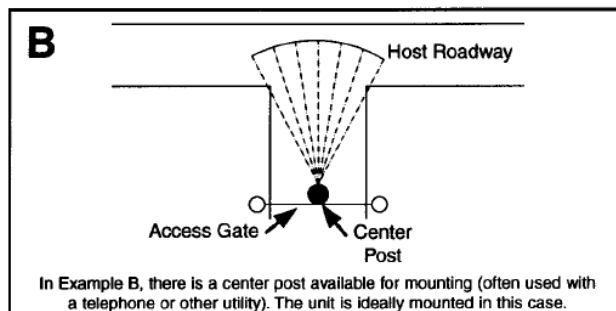
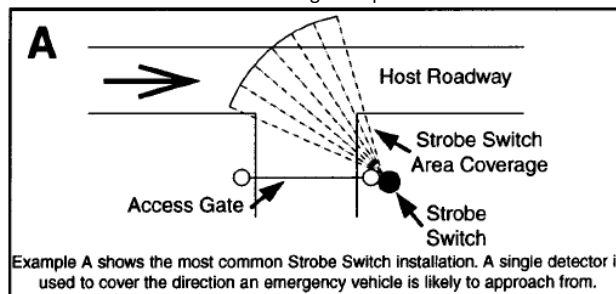
After unpacking the equipment, examine it for damage that may have occurred in transit. If the equipment has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them.

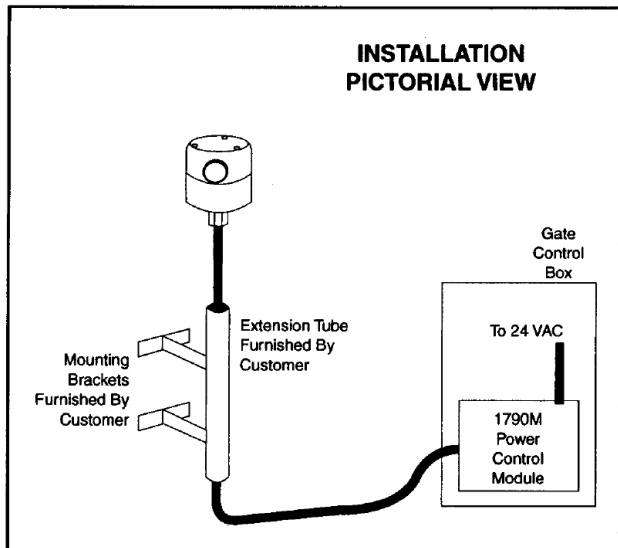
The Model 1790-1014 Detector is designed for mounting on a ½" NPT pipe. It may be installed on gates posts, building walls or any place where pipe mounting is required. If larger pipe is used, a user-supplied reducer is required.

Mounting hardware and installation details are left to the installer.



Mount the Strobe Switch (Detector) in a location that will allow it to be aimed to view the access roadway leading to the gate or door to be controlled as shown in the following examples:





The Model 1790-1014 is mounted on a 1/2" conduit fitting. The lead wires are fed into the bottom of the Detector and attached to the terminal block located inside of the Detector.

Installation cable is run from the 1790M Power Module, located in the gate opener control box, through the extension tube and into the bottom of the Detector.

Connections to the 1790M Power Module are made within the gate control box as per the following, using customer supplied cable and wiring (see Detector and Power Module label for more information):

- Red fused #18 AWG To 24 VAC
- Black #18 AWG To 24 VAC
- Orange #20 AWG From Detector PWR terminal to Pwr Module
- Blue #20 AWG From Detector GND terminal to Pwr Module
- Yellow #20 AWG From Detector SW terminal to Pwr Module
- Yellow #18 AWG Output Relay Common
- Red #18 AWG Output relay Normally Closed
- Blue #18 AWG Output Relay Normally Open

STROBE SWITCH OPERATION

Once the Strobe Switch is mounted, aimed and 24 VAC power is applied to the power module, it is fully operational. There are no adjustments of any kind required. The only maintenance required is to keep the sight tube clear of debris and the glass window clear.

TESTING

The Strobe Switch may be tested for proper operation by using a portable TOMAR Strobe Tester (Model 1760-14). The tester has a range of about 1 foot and must be aimed directly into the sight tube of the Strobe Switch. The Strobe Switch has a red signal confirmation light which is visible in the sight tube and will illuminate when a proper optical signal is received by the Strobe Switch.

TROUBLE SHOOTING

If the Strobe Switch fails to operate when tested with a TOMAR Model 1760-14 Strobe Switch Tester, check to make sure that the 9 Volt battery in the tester is good and that the LED on the tester blinks on and off when the button is pressed.

Check the tester on a known good Strobe Switch to verify its operation.

If the confirmation LED in the Strobe Switch turns on when the tester is operated, but the Strobe Switch fails to operate the gate or door being controlled, check the wiring to the controller for integrity.

INSTALLATION IS NOW COMPLETE

STROBE SWITCH SPECIFICATIONS

- Range: 600 foot line of sight with TOMAR FAST-FLASH Emitter, but depends on the intensity of the emergency vehicle emitter.
- Field of View: 40° vertical by 60° horizontal.
- Signal Acquisition Time: <2 seconds
- Function Indicator: The unit has a red LED that illuminates whenever a proper optical is received. The LED is visible through the sight tube and can be seen for 25 feet or more. This feature can be used with the hand held tester to verify operation.
- Frequency: 14.00 HZ to 14.10 HZ and 9.6 HZ to 9.70 HZ.
- Frequency Detector: Sharp cutoff, crystal locked, digital bandpass filter.
- Power Requirements: 24 VAC 50/60HZ, 3 Watts maximum
- Power Module Output Relay: SPDT 0.6 Amps resistive load 125VAC.
- Size: 2-3/4" dia. X 3-3/8" tall with side mounted sight tube.
- Weight: 0.66 lbs.
- Construction: The Strobe Switch enclosure is black glass reinforced Lexan, fully gasketed, sealed and suitable for outdoor operation. All electrical circuitry is potted in polyurethane for stability.

STROBE SWITCH WARRANTY

Tomar Electronics, Inc. warrants the product described herein for a period of 2 years under normal use and service from the date of manufacture as marked on the product, that the product will be free of defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser connecting the unit to wrong voltage or polarity, or lightning damage.

THERE IS NO WARRANTY OF MERCHANTABILITY; THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. THERE NO WARRANTIES EXPRESSED OR IMPLIED OR ANY AFFIRMATION OF THE FACT OR REPRESENTATION EXECPT AS SET FORTH HEREIN.

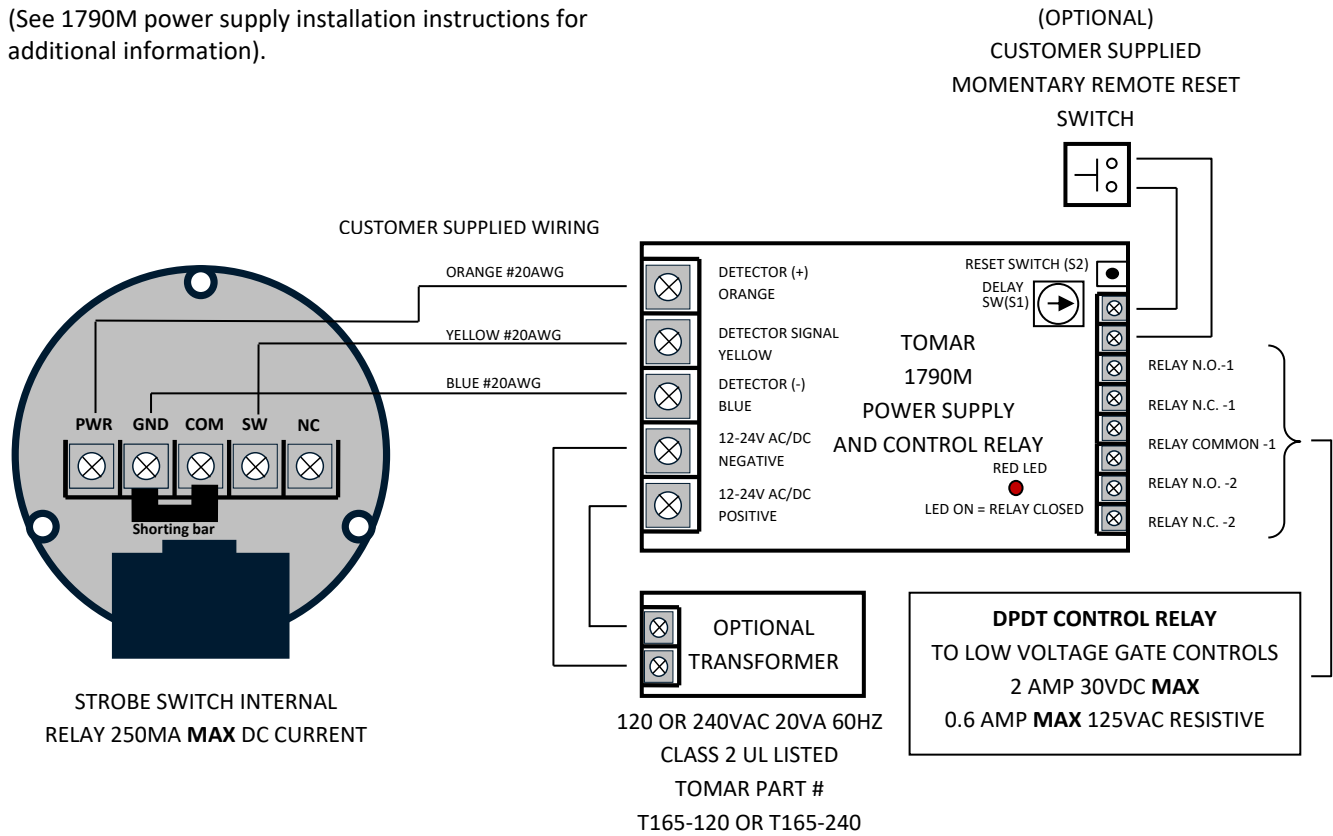
TOMAR Electronics, Inc.'s sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at TOMAR's option, of a part or parts not so conforming to the warranty. All products requiring warrant service shall be returned to TOMAR within 2 years of manufacture, shipping prepaid. Tomar will return repaired or replaced products to the purchaser via prepaid ground transportation. In no event shall TOMAR be liable for damages of any nature, including incidental or consequential damages, including but not limited to any damage resulting from non-conformity, defect in material or workmanship.

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STROBE SWITCH

BASIC WIRING INSTRUCTIONS:

(See 1790M power supply installation instructions for additional information).



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