

Configuring a Sequenced Barrier Arm and Slide or Swing Operator

Overview

Employing a barrier arm gate in a sequenced function with a security gate operator is an excellent solution for locations where security or preventing tailgating vehicles is of the utmost importance. Since a barrier arm gate is much faster than a sliding or swinging gate, they are far more effective in preventing unauthorized vehicles from following the first vehicle into a secured area. Another feature of this configuration is that the security gate can be locked open when guard personnel are present and the barrier arm can be used to efficiently and rapidly control the ingress or egress of vehicles. Menu and control features included with HySecurity's Smart Touch Controller support sequenced operation of an arm gate and a security gate as long as both gate operators are HySecurity products.

Layout

The barrier arm gate should be physically located approximately six feet distant from a swing or sliding gate to allow correct minimal spacing between the reset loop controlling the arm gate and the security gate. If the security gate is a swing gate, be certain to mount the arm gate on the side opposite the travel of the swinging gate.

Control logic sequence opening

The open cycle begins with the slower security gate opening first. When the security gate reaches full the open position, its Smart Touch controller generates a pulse output that triggers the barrier arm gate to open.

Control logic sequence closing

The closing cycle begins with the faster barrier arm gate closing first after the vehicle passes through. When the barrier arm gate reaches the full closed position, its Smart Touch controller generates a pulse output that triggers the security gate to close.

Vehicle detector loop layout

Detector loop layout and sizing is important to the proper function of a gate operator and the requirements of a sequenced barrier arm and security gate are basically the same as specified in HySecurity's operator manuals for the type of security gate used (slide or swing gate). The important additional consideration is that the detector loop under the barrier arm will be used both to close the barrier arm gate operator and to serve as an obstruction loop for the security gate, so the location of the operators and this loop is important to properly serve both functions.

Control wiring and Smart Touch Controller Menu Configuration for Opening

1. The wiring for open signals must be routed to the security gate operator (swing gate or slide gate). This means that the access control device(s), such as a card reader or free exit loop detector must be wired to the security gate, not to the barrier arm gate.
2. A User relay on the Smart Touch Controller in the security gate operator must be set to function #4 (open limit pulse output). That relay must have its Com and NO contacts wired to the common bus and input terminal #4 (remote open) of the Smart Touch Controller in the barrier arm gate operator.
3. If there is a guard operated push button and or a lock open selector switch for the security gate operator, those wires must be connected to the common bus and input terminal #2 (open button) of the security gate operator.

Control wiring and Smart Touch Controller Menu Configuration for Closing

Although there are two methods to initiate closure (timer to close and reset loop closure), the method that results in the most user convenience and the fastest closure of the barrier arm gate is with a reset loop located directly under the barrier arm. When the barrier arm is closed, it will generate a signal to close the security gate, provided the detector loops are clear of vehicles. As a backup, the close timer of the security gate should also be activated in case the close signal from the barrier arm gate is lost due to the security gate being held open longer for some reason.

1. Be certain that the detector loop used for the barrier arm gate is roughly centered under the barrier arm and if the barrier arm gate operator is within ten feet of the security gate, this same loop should extend to be within three feet of the security gate. The detector associated with this loop must be connected to the Smart Touch Controller of the barrier arm gate operator as a reset detector (lowest socket if a Hy-5A detector is used or input terminal #12 if a box detector is used).
2. If the barrier arm gate operator is located within ten feet of the security gate operator, the reset loop detector of the barrier arm gate must also be wired to serve as an obstruction loop detector for the security gate. A User relay on the Smart Touch Controller in the barrier arm gate operator must be set to function #2 (close limit pulse output). That relay must have its Com and NO contacts wired to the common bus and input terminal #3 (close button) of the Smart Touch Controller in the security gate operator.

Control wiring and Smart Touch Controller Menu Configuration for Vehicle Protection

To provide additional protection, which is especially important if there is semi-truck traffic, the output of the next loop detector closest to both the security gate and barrier arm gate must also be connected to the Smart Touch Controller in the barrier arm gate to serve an obstruction detector function. To do this, set a user relay in the security gate operator to activate when that detector is triggered. Depending upon configuration, the loop next to the reset loop of the barrier arm gate could be a Shadow loop of a swing gate or an inside obstruction detector of a sliding gate or perhaps an outside obstruction detector depending on where the barrier arm gate is mounted.

A User relay on the Smart Touch Controller in the security gate operator must be set to function #12 (Outside obstruction detector) or #21 (Inside obstruction detector) or #22 (Shadow detector if a swing gate) depending upon the type of gate and detector function used. That user relay must have its Com and NO contacts wired to the common bus and input terminal #10 (inside obstruction detector) of the Smart Touch Controller in the barrier arm gate operator.

Final reminder

As a backup, the close timer of the security gate should also be activated in case the close signal from the barrier arm gate is lost due to the security gate being held open longer for some reason.



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DESCRIPTION SEQUENTIAL OPERATORS EECDE-HY5A
SEQUENTIAL OPERATORS WITH BOX DETECTORS

ECN NO: D0008

REV

CHANGE DESCRIPTION

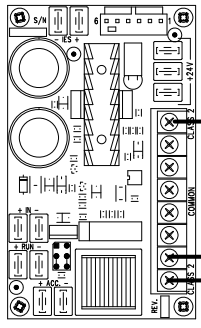
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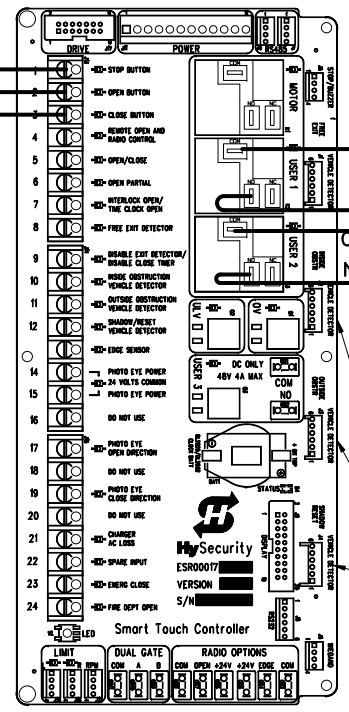
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SHEET 1 OF 2

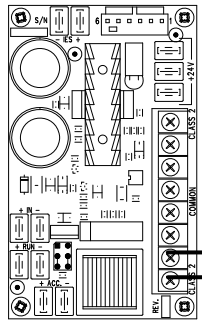
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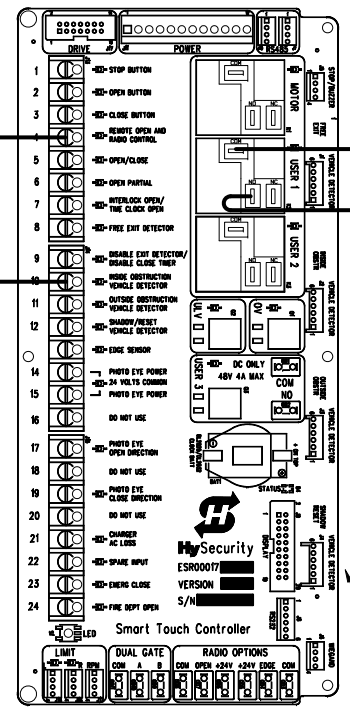
SECURITY GATE OPERATOR
(HYSECURITY SLIDER, VERTICAL OR SWINGER)



"STRONG ARM"
(HYSECURITY BARRIER ARM)



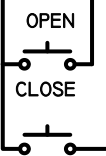
"STRONG ARM"



COMM.
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HY5A'S IN THE SECURITY GATE LOCATED HERE
DEPENDANT ON OPERATOR TYPE

HY5A'S IN THE BARRIER GATE LOCATE HERE
RESET LOOP



FOR FURTHER INSTRUCTIONS, SEE ATTACHED DOCUMENTATION
TITLED: "CONFIGURING A SEQUENCED BARRIER ARM AND SLIDE OR SWING OPERATOR".



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