



## ES520 Interlock Module Overview

### *Electronic Solutions Inc.*

The Electronic Solutions ES520 is a versatile microprocessor-controlled interlock module which may be used for a variety of door applications. In its factory default configuration, the ES520 has four basic functions:

Function 0 is a memory interlock for up to four doors. Only one door may be open at any time, and requests from other unavailable doors are memorized and are serviced in the order received. Duplicate requests are ignored. An additional input is provided for an optional contact to override the interlock function and allow each door to be serviced in real time.

Function 1 is an interlock combined with latch (ratchet) relay for up to four doors. Provided that a door is available to open, momentarily triggering its input will latch it open, and all other doors will be inhibited until the door that is busy is unlatched by again momentarily triggering its input. When Function 1 is in use, the ES520 may be programmed to wait indefinitely for another actuating signal before closing the door that is busy, or to cancel the latch request and close the door after a time delay. The delay may be adjusted from 1-99 minutes. The override feature may also be used with Function 1, allowing each door to function as a standalone unit with a latch relay attached.

Function 2 is identical to Function 1, but adds an “auto-cancel” feature. If a door has been latched open and another door is requested, the first door is automatically unlatched to close, and the requested door will be latched open at the earliest available opportunity. The optional “time out” of Function 1 that automatically resets all latches is also available in Function 2 operation, if desired.

Function 3 is a sequencing interlock for two doors in a vestibule situation. When Door 1 is requested, it is immediately triggered to open, and a request for Door 2 is stored automatically. The sequence is mirror imaged if Door 2 is requested first. A memory feature is implemented such that if Door 2 is actuated while Door 1 is busy, Door 2 will be opened at the first available opportunity, then Door 1 will be opened again to allow the second individual to exit. This possibility is also mirror imaged.

Upon request, the ES520 can be supplied with semi-custom firmware to allow it to function as a simple two door public vestibule sequencer *without* the interlocking function.

The input burden for each actuating signal is 24VDC at 15 milliamperes maximum. An input LED offers visual confirmation that the module is being activated by the external switch. Each output contact is rated for 1A at 30VDC maximum. Input, output, and power connections are made via removable terminal blocks.

The power requirement for the ES520 is 24 volts AC or DC at 500 milliamperes maximum. The unit includes a two-digit display and pushbuttons for setting the various parameters and operating modes, as well as for testing. The display also shows the current status of the ES520 during normal operation. Module size is 3” x 5”, allowing convenient installation inside the door header.

In addition to the factory standard versions, the ES520 may be programmed for a wide variety of other door related functions through the use of custom firmware. Contact Electronic Solutions, Inc. for a quote.