SYSTEMS ELECTRONICS GROUP

SYSTEMS M4500 INDUSTRIAL CONTROLLER

S4560: 32-POINT DIGITAL INPUT BOARD

- **32 Digital Input Points**
- **Used In Conjunction with I4560 Interface Modules**
- **Removable I4560 Interface Cable Connector**
- **Standard M4500 I/O Form Factor**

General Description

The S4560 32-Point Input Board, for use with the M4500 series of modules, contains 32 identical solid-state input circuits which interface with the I4560 Interface Modules. The I4560 modules accept the on/off status of user devices such as push-buttons, limit switches, and proximity sensors and converts the respective field voltage for use by the S4560. The type of interface (AC or DC voltage, sourcing or sinking, etc) is defined by the I4560 Interface Module. Refer to the individual I4560 data sheets for details on these modules.

One S4560 interfaces with two I4560 modules. The S4560 is located in one of the I/O slots of the M4500 module while the I4560 modules are mounted within close proximity of the M4500 module on DIN compatible rail. Connection between the I4560s and S4560 is achieved using a split, round, shielded, ribbon cable using removable connectors on both the S4560 and I4560s.

The 32 input points are read in the four least significant bytes of the slot that the S4560 is addressed as. Inputs 0 thru 7 are mapped into bits 0 thru 7 of byte 0, inputs 10 thru 17 are mapped into bits 0 thru 7 of byte 1, inputs 20 thru 27 are mapped into bits 0 thru 7 of byte 2, while inputs 30 thru 37 are mapped in bits 0 thru 7 of byte 3.

Installation

Prior to installing the S4560, the I/O slot addressing dip switch on the board must be set for the slot the board will be addressed as.

Note: Geographical addressing is not used in the M4500. The slot the S4560 is addressed as is solely defined by the dip switch settings on the S4560 itself not by the slot in the M4500 chassis that the board is placed in. Two poles on the dip switch of the board set the binary slot address of the board as follows:

S4560 SW1 Dip Switch Slot Addressing

2	1	Slot Address
off	off	0
off	on	1
on	off	2
on	on	3

The SW1 Slot address dip switch is located in the lower left hand corner of the component side of the S4560. The respective switch pole is "on" when in either the "on" or "close" position and "off" when either in the "off" or "open" position depending on the type of dip switch used.

To install the S4560 in the M4500 chassis, turn power to the M4500 "off" and remove the cover plate of the M4500 by loosening the captive screws that retain it. Install the S4560 in the respective slot of the M4500, making sure the DIN connector on the S4560 fully mates with the DIN connector in the M4500 motherboard and that the top of the S4560 is seated correctly in the card guides at the top of the M4500. Install the M4500 cover back onto the M4500 making sure the ribbon cable connector protrudes through the respective opening in the cover. The M4500 cover will retain the S4560 both from the top and the front, holding the S4560 in place during normal operation. Tighten the captive screws that retain the cover on the M4500. Install the female field wiring connector to the corresponding male connector on the S4560. The S4560 is now installed and ready to run. To remove the S4560, simply perform the previous steps in reverse.

Specifications

Board Size:	
Length:	6.50"
Height:	4.25"
Width:	0.80"
Number of Inputs:	32
Input Filter Delay:	
typ delay:	0.50 milliseconds
min delay:	0.35 milliseconds
max delay:	0.80 milliseconds
Optical Isolation:	1500 Vrms
Power Requirements:	
Icc (typ - M4500 BUS):	50 milliamps
Temperature Ranges:	
Storage:	0 to 85 degrees C
Operating:	0 to 60 degrees C
Relative Humidity:	5 to 95% non-condensing

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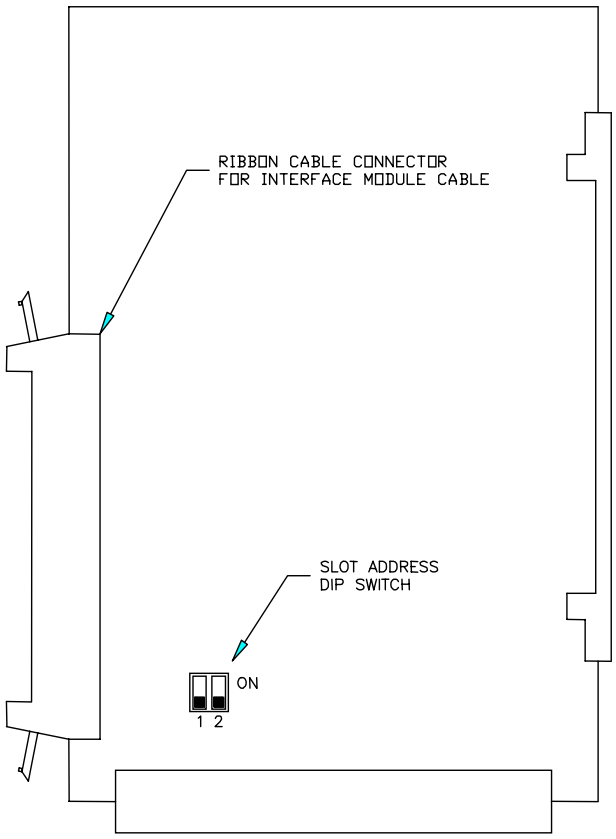

Figure 1
Board Outline