



# SYSTEMS

## ELECTRONICS GROUP

### SYSTEMS S3000

### INDUSTRIAL CONTROLLER

#### **S3065: DIGITAL AC INPUT BOARD** **16-POINT 120VAC**

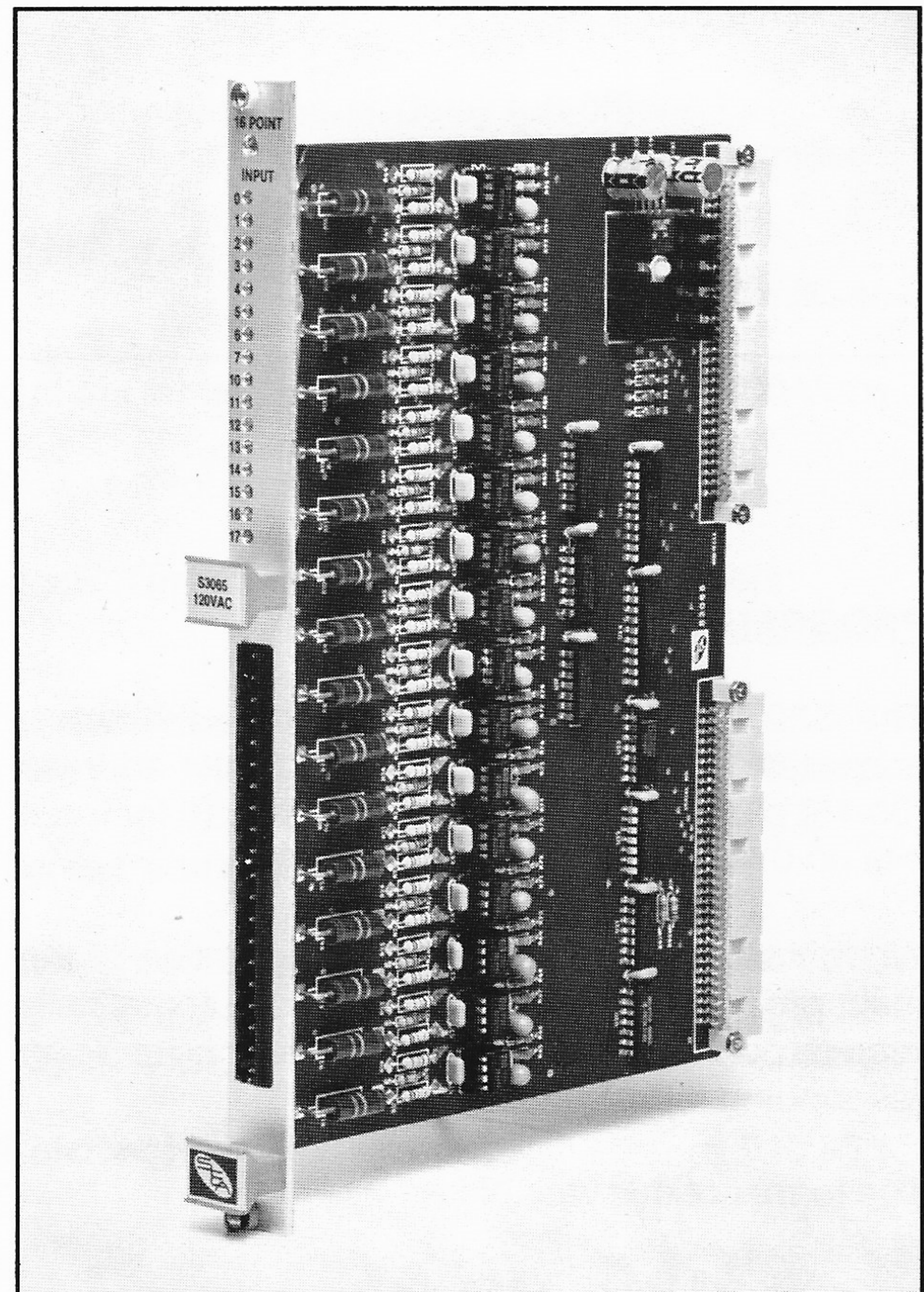
#### **FEATURES:**

- 16 DIGITAL INPUT POINTS
- 2 INDIVIDUALLY ISOLATED SECTIONS OF 8 POINTS EACH
- 16 INDIVIDUAL STATUS LAMPS (1 LAMP PER INPUT POINT)
- REMOVABLE FIELD WIRING CONNECTOR
- OPTICAL ISOLATION
- STANDARD DOUBLE HEIGHT EUROCARD

#### **GENERAL DESCRIPTION:**

The S3065 120VAC Input Board contains 16 identical solid state input circuits which accept the on/off status of user devices such as push-buttons, limit switches, and proximity sensors. The inputs sense the voltage levels of digital AC input signals. When the voltage at an input is greater than 80Vrms, the input is read as a "1". When the voltage at an input is less than 80Vrms, the input is read as a "0".

The 16 inputs are split into two separate, isolated sections of eight points each. This allows two



different user voltage sources (HOT and NEUTRAL) to be connected to the same input board.

The on/off status of each input is indicated with individual neon lamps located on the faceplate. The lamps provide the status of the actual input points (field side) rather than the internal logic status.

Input and user power wiring is implemented with a removable 20-pin field wiring connector which allows easy board replacement. Refer to Figure 2 for typical field wiring connections.



## INSTALLATION:

The S3065 may be installed in any I/O slot of the S3000 rack. Install the S3065 by aligning the board with the card guides and sliding in until firmly seated. The board is held in the rack via captive screws located on the S3065 faceplate. To remove the S3065, loosen the captive screws and gently

pull the board out of the rack using the handles located on the S3065 faceplate.

NOTE: When installing or removing an S3065, the System should be in power-down (PS3007 power supply "off").

---

## PROGRAM INTERFACE

The S3065 contains two input bytes, these are accessed by specifying the two digit slot address (00-15) plus the one digit byte address (0 for input bits 00-07 and 1 for input bits 10-17).

When included in the system configuration of the main processor board, the S3065 is automatically read as part of the I/O update and mapped to a corresponding Input variable.

The format of this variable is:

Input byte: Xaab  
Input bit: Xaab.c

Where: X = input variable type (X)

aa = two digit slot address  
(00 - 15)

b = byte address  
(0 for inputs 00 - 07,  
1 for inputs 10 - 17)

c = bit address (0 - 7)

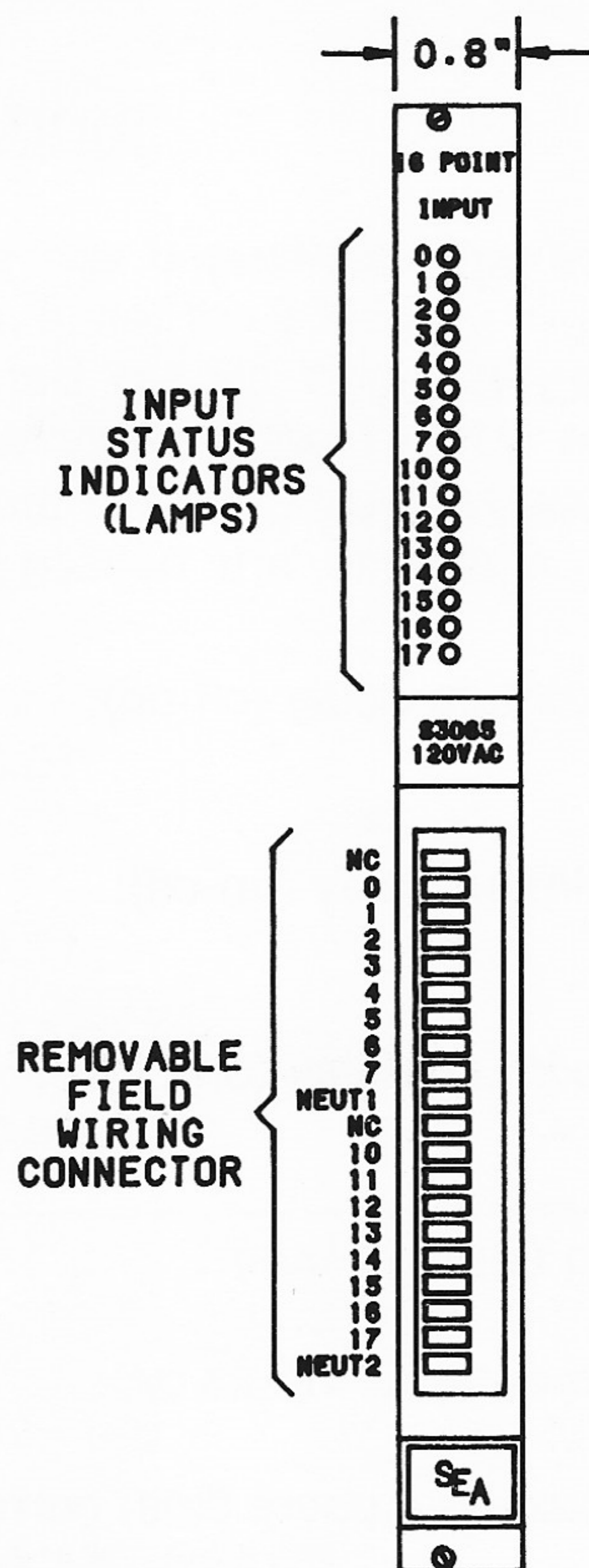
These variables represent the input status of the S3065 at the last I/O update performed at the beginning of the main program scan.



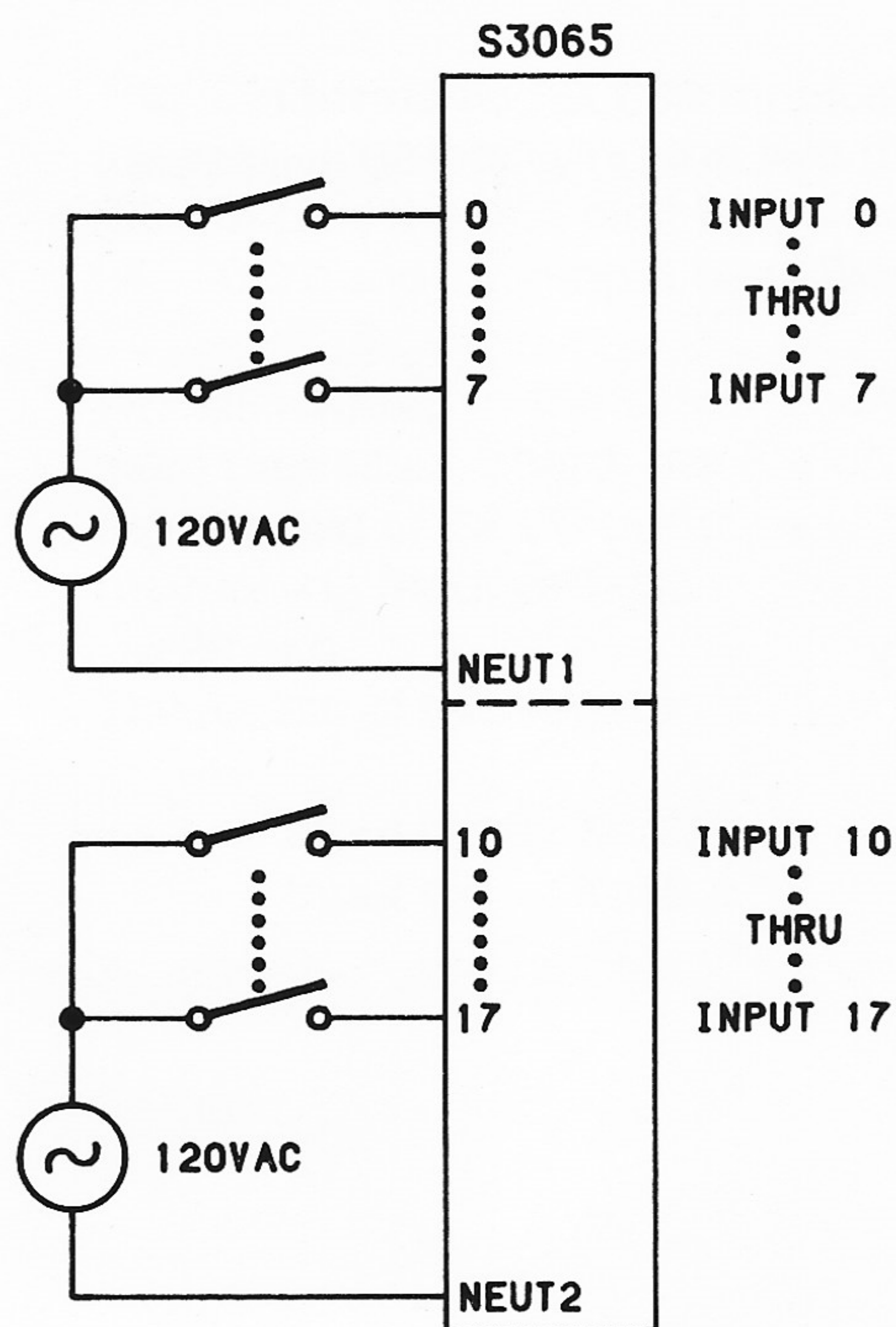
## SPECIFICATIONS:

<b>Number Of I/O Slots Required:</b>	1	<b>Input Impedance (approximate):</b>	14K ohms
<b>Board Size:</b>		<b>Input Propagation Delay:</b>	
Length:	9.15"	Tplhs(min)-minimum delay (off-on):	10.0 milliseC
Height:	6.30"	Tplhs(max)-maximum delay (off-on):	15.0 milliseC
Width:	0.80"		
<b>Number Of I/O Points:</b>	16	Tphls(min)-minimum delay (on-off):	12.0 milliseC
<b>Number Of Isolated Sections:</b>	2	Tphls(max)-maximum delay (on-off):	18.0 milliseC
<b>Input Voltage:</b>		<b>Optical Isolation (input to bus):</b>	1500 Vrms
Voltage Range:	120 volts rms	<b>Power Requirements (all inputs on):</b>	
Vin(on) -minimum guaranteed turn on:	80 volts rms	IccEXT(max)-maximum users (line) current:	140 milliamps
Vin(off)-maximum guaranteed turn off:	40 volts rms	IccBUS(max)-maximum S3000 bus current:	150 milliamps
Vin(max)-maximum continuous on voltage:	135 volts rms	<b>Temperature Ranges:</b>	
Vin(pul)-maximum pulsed (10msec):	1000 volts	Storage:	0 to 85° C
<b>Input Current:</b>		Operating:	0 to 60° C
Iin(max)-maximum input current (Vin=120vrms)	8.6 milliamps	<b>Relative Humidity:</b>	0 to 95%
Iin(min)-minimum allowed input current for guaranteed off state:	2.8 milliamps		

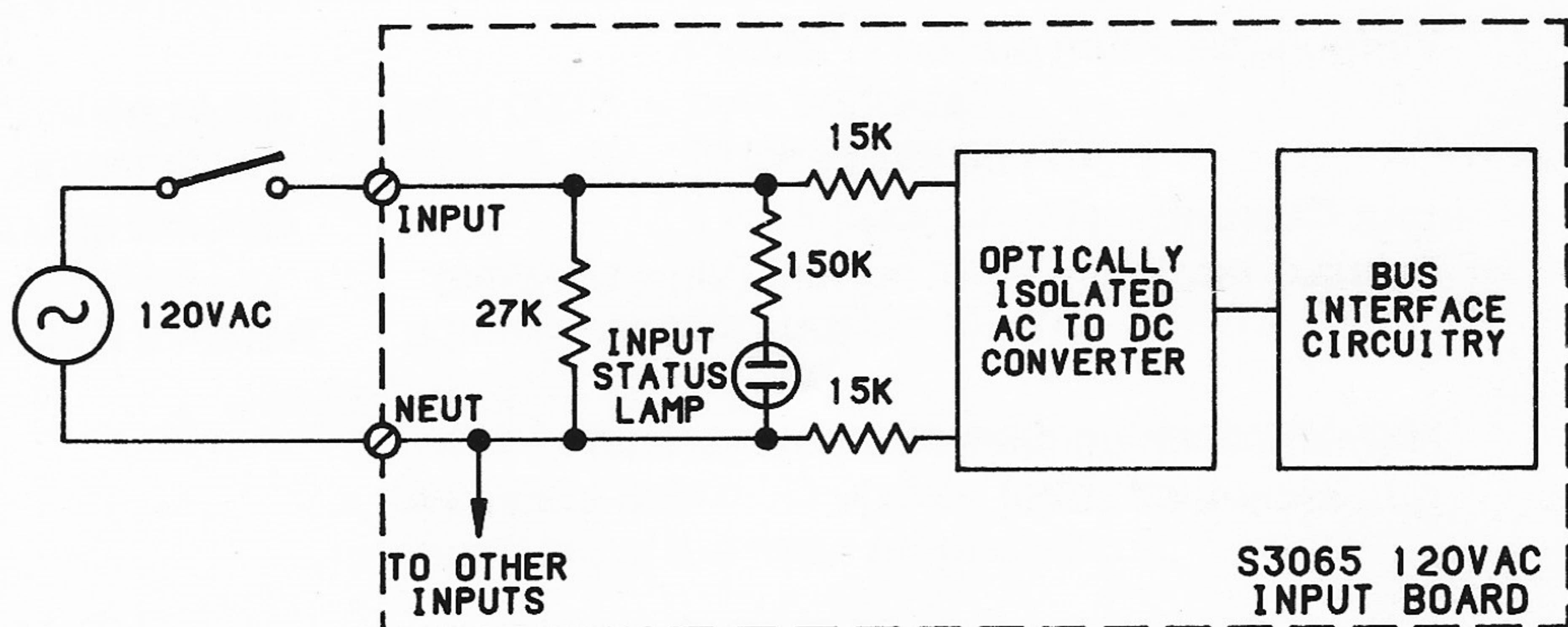




**FIGURE 3**  
BOARD OUTLINE



**FIGURE 2**  
TYPICAL USER WIRING



**FIGURE 1**  
TYPICAL INPUT CIRCUIT



# SYSTEMS ELECTRONICS GROUP

DIVISION OF SYSTEMS ENGINEERING ASSOCIATES, INC.  
14989 W. 69TH AVE, ARVADA, COLORADO, P.O. BOX 750 80001  
(303) 421-0233 FAX (303) 421-8108