

# AeGIS Satellite Card Reader (SCR9)

## Installation and Operation Manual



### INTRODUCTION

Pach & Company thanks and congratulates you on the purchase of your AeGIS Satellite Card Reader (SCR9).

The manual is designed to guide you through the proper installation and operation of the SCR9. It is important for you to read and follow the manual completely.

The AeGIS SCR9 comes with **two years warranty**, but we are so confident in our product and our dealer's ability to install them properly, we will include lightning and power surges in our two years warranty if Pach and Company surge protection (ASP1) is installed with the systems.

### SYSTEM DESCRIPTIONS

AeGIS SCR9 utilizes microprocessor technology to provide security as well as convenience to you. The SCR9 must interface with the AeGIS 9000 Series via an RS-485. The SCR9 only allows access to tenants or visitors via a 26-bit card or keyfob code programmed on the AeGIS 9000 Series. There is no audio intercom capability.

### SYSTEM SPECIFICATIONS

**Power Input:** 12 VAC/DC 40VA UL Listed Transformer (12 VAC is supplied by Pach & Company) or 12 VDC Power Supply (not supplied, power supply output voltage must be 13.5-14.5 VDC).

**Current Consumption:** 350 mA Idle, 475 mA operation.

**Emergency Battery:** 12 VDC, 4 Ahr rechargeable with 12 VDC power supply (customer supplied).  
Power Supply Output voltage must be 13.5-14.5 VDC.

**Communication:** RS-485 (maximum distance between the AeGIS 9000 Series and the SCR9 not exceeded 4000 Ft., a maximum 32 of SCR9 can be interfaced with the AeGIS 9000 Series).

**Night Light:** 14 VAC 200 mA Incandescent Lamp.

**Operating Environment:** Temp. 0° F to +140° F. Relative Humidity 0% to 95%.

**Relay Output:** From C Dry Contact 120 VAC 10A/ 24 VDC 10 A/ 250 VAC 7A.

**Mounting:** Surface (accessories **APM1**, **APM2**, **APM3**, **APM4 (indoor application only)** and **APM5**).

**Construction:** 16 Gauge Cold Rolled Steel with Brushed Stainless Steel Faceplate.

**Dimension:** 6 3/4" (H) x 5 3/4" (W), Depth 3 1/2" to 2 1/2".

**Shipping Weight:** 4 Lbs.

### UNPACKING THE SYSTEM

Check the serial number on the printed circuit board and cabinet, they must be matched. If they do not match, please contact Pach & Company toll free number at 1-888-678-7224. All the items listed below come with the AeGIS SCR9.

- AeGIS SCR9 Satellite Card Reader.
- 12 VAC Transformer.
- 6-pins, 5-pins and 3-pins terminal connector (inside the system).
- Key sets (2 keys per set).
- Installation and operation manual.
- Warranty Card with system's serial number.
- Two of 100 Ohm 1/4 Watt resistor.
- Allen wrench, inside the cabinet.



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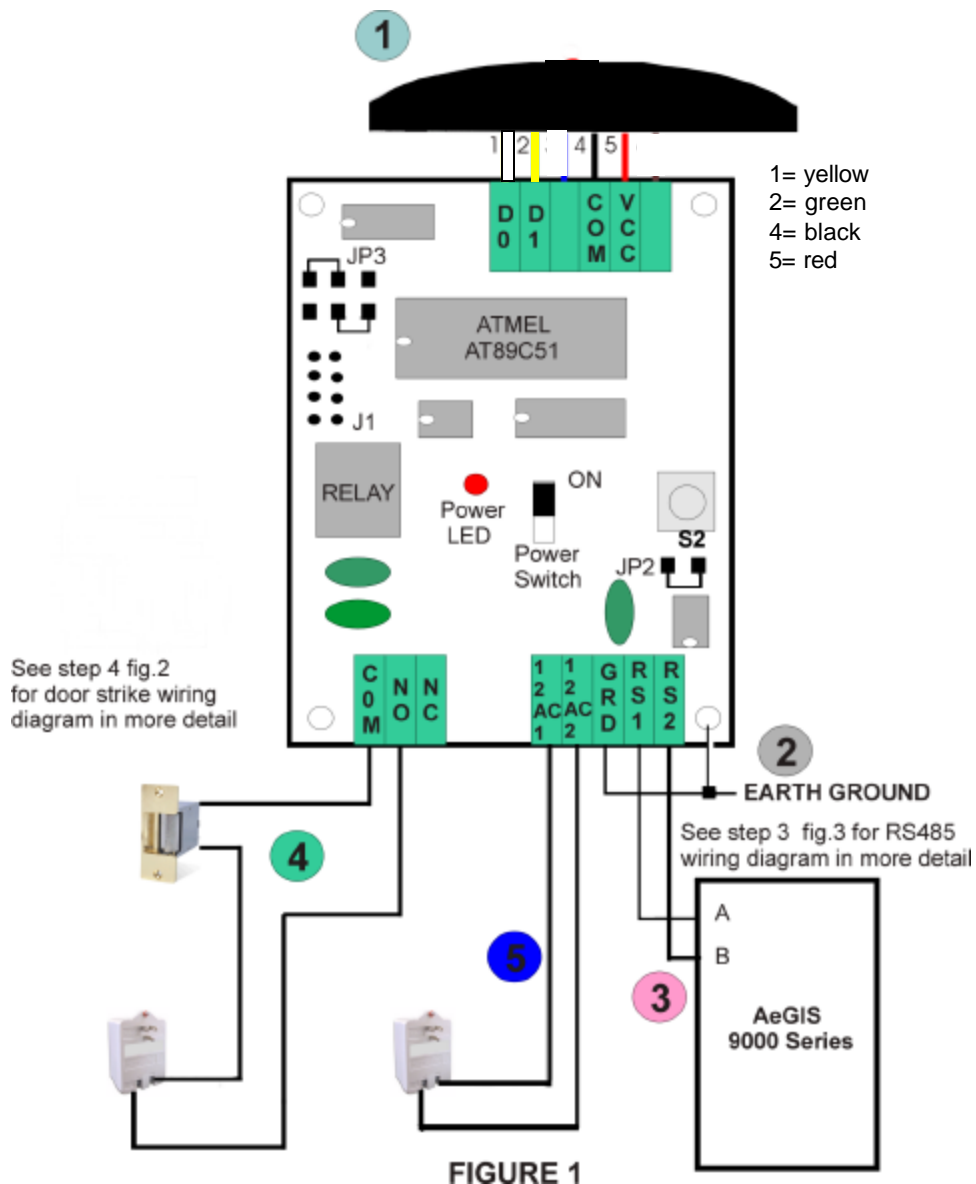
Phone: 1-888-678-7224  
Fax: 949-498-6879

## WARRANTY

The AeGIS SCR9 comes with a two years warranty for parts and labor. We will include lightning strikes and power surge on our two years warranty if surge protector (ASP1) is installed with the system.

- The serial number on the printed circuit board must match the serial number on the cabinet.
- The system's failure is not caused by vandalism, improper installation, misuse or abuse.
- Physically damaged product is not acceptable for repair or exchange within or after warranty.
- The warranty will be void and null if the product has been repaired or modified by unauthorized party without authorization of Pach and Company Technical Department.
- If for some reason your system cannot be repaired, Pach and Company will replace it with an identical product of equal value.
- You must obtain a Return Merchandise Authorization (RMA) number from Pach and Company Technical Department before you can send back the product to factory for repair.
- You are responsible for all transportation and insurance charges for the products shipped to the Pach and Company repair center.

## INSTALLATION



Follow the step number 1-5 on figure 1 to wire the system.

1

**CARD READER.**

The 26-bit wiegand card reader is factory prewired. The wiring connection shows on figure 1 in case the wires are disconnected.

2

**EARTH GROUND.**

Use 16-18 gauge solid wire for the earth ground. The best earth ground is the water pipe.

3

**RS-485.**

A maximum of 32 SCR9 can be interfaced with the AeGIS 9000 series via RS-485. See figure 2.

- Two conductors 18 gauge Shielded stranded wires are required. Do not use wires on the same jacket to power the system or the door strike.
- Two 200 Ohm resistor for balancing the RS-485 (supplied by Pach and Company).

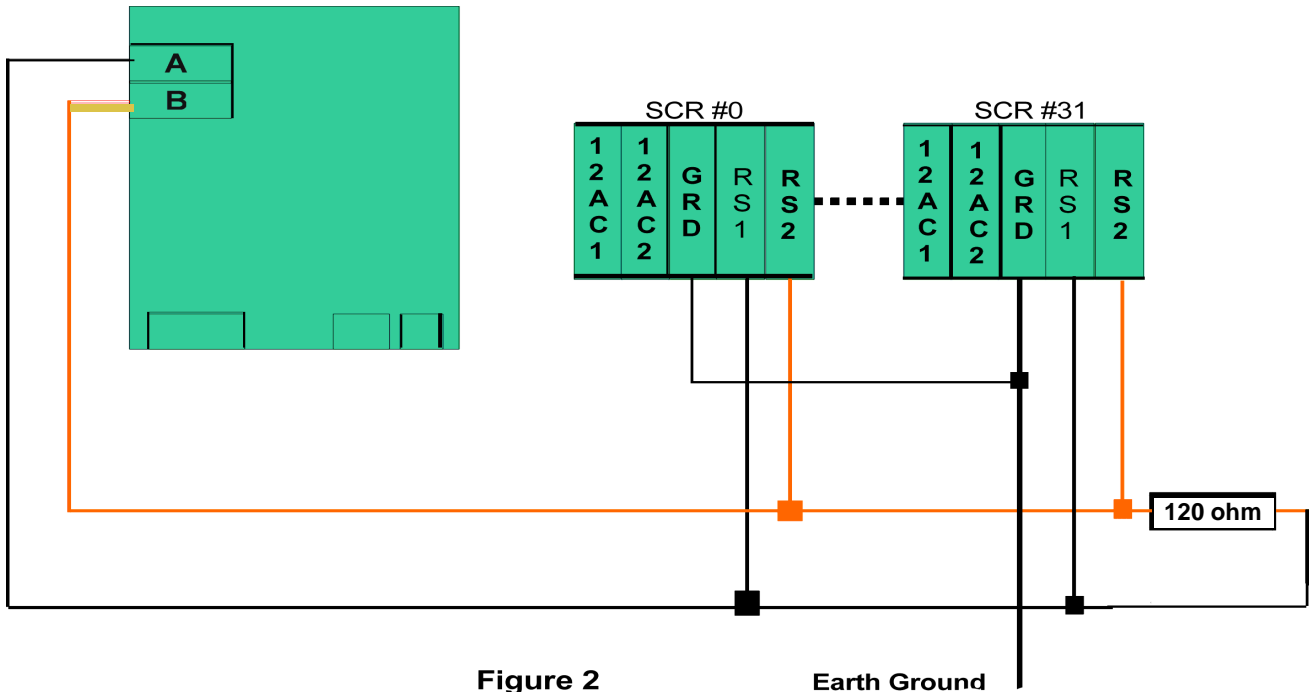


Figure 2

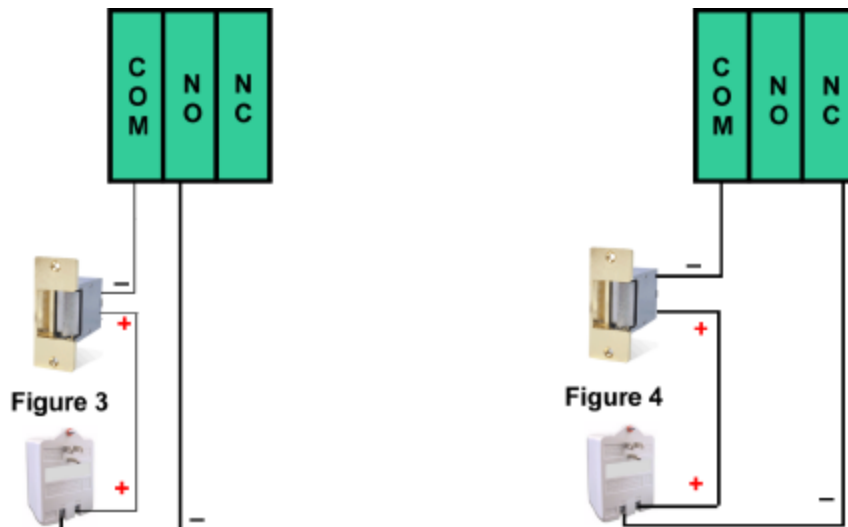
Earth Ground

4

**DOOR STRIKE OR GATE OPERATOR.**

See installation manual for wires requirement for your door strike or gate operator.

Figure 3 and 4 are typical door strike wiring diagram. Consult the door strike or gate operator technical support for technical help. **SEPARATE TRANSFORMER OR POWER SUPPLY MUST BE USED TO POWER THE DOOR STRIKE, OTHERWISE THE SYSTEM WILL NOT WORK PROPERLY AND YOUR WARRANTY WILL BE VOID.**



Relay output is Form C Dry Contact, 125VAC/25A, 28VDC/10A or 250VAC/7A. Two conductors 16-18 gauge solid wires are recommended. See the door strike manufacturer wiring requirements.

**Figure 3 is Normally Opened DC Door Strike** (polarity sensitive). Normally Opened Door Strike means the door is locked if the door strike is not energized/powerd and the door is unlocked if the door is energized/powerd. If AC door strike is used, polarity is not necessary.

Figure 4 is **Normally Closed DC Door Strike** (polarity sensitive). Normally Closed Door Strike means the door is locked if the door strike is energized/powerd and the door is unlocked if the door is not energized/powerd. If AC door strike is used, polarity is not necessary.

**5**

**POWER**

12VAC/40VA(supplied) or 12DC/40VA, see figure 1 for wiring diagram.

- Two conductors 16-18 gauge solid or stranded wires are required. Do not use the system’s transformer to power other equipment.
- Measuring the input voltage, it must be read between 12.5-14 VAC if AC transformer is used under load (system is on) or 13.5-14.5 VDC under load (system is on) if DC power supply is used.

If 12 VDC/40VA power supply is used with battery back-up, see figure 5 for wiring diagram.

**TURN THE POWER SWITCH (S1) TO ON (UP POSITION) AFTER THE POWER WIRES ARE CONNECTED.**

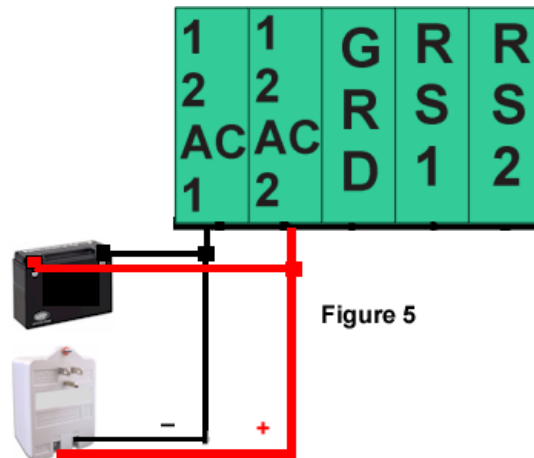


Figure 5

**SYSTEM’S OPERATIONS**

**System’s ID Number and Jumper Setting**

- A maximum 32 of SCR9 can be interfaced with the AeGIS 9000 Series. Each of the SCR9 must have a unique ID number (0-31). The ID number is selected using the S2 (rotary switch) and JP2, see table below.

Rotary Switch Setting with JP2 is ON			
HEX	DECIMAL	HEX	DECIMAL
0	0	8	8
1	1	9	9
2	2	A	10
3	3	B	11
4	4	C	12
5	5	D	13
6	6	E	14
7	7	F	15

Rotary Switch Setting with JP2 is OFF			
HEX	DECIMAL	HEX	DECIMAL
0	16	8	24
1	17	9	25
2	18	A	26
3	19	B	27
4	20	C	28
5	21	D	29
6	22	E	30
7	23	F	31

- JP3 = left position JP4= right position for wiegand card reader.

**Relay Output Duration Time** (door open interval) always set for 5 seconds. Install an isolation relay with built-in timer or door strike with built-in timer if you need less or more output duration time.

**To Access Door or Gate** using the Wiegand Proximity Card Reader. The red LED on the card reader must be ON if the power is ON. Place the card or keyfob about an inch from the RED LED. The LED will change status to flickering green and the SCR9 will make one beep then

**ONE LONG TONE** if access is granted.

**TWO LONG TONE** if access is denied.

## **TROUBLE SHOOTING GUIDE**

**The red LED on Card reader is not ON.**

- Solution:**
- Check the voltage across 12AC1 and 12AC2, it should read 12.5 - 13.5 VAC or 13.5 - 14.5 VDC.
  - The power switch (S1) must be ON (up position).

**The card reader does not communicate with the AeGIS 9000 Series.**

- Solution:**
- Check the RS485 wiring, see figure 2 for wiring diagram.
  - If more than one SCR9 involved on the installation, check the RS485 wiring as shown on figure 2. Some SCR9 RS485 wiring may be fine but the others may be reversed.
  - Check the voltage across 12AC1 and 12AC2, it should read 12.5 - 13.5 VAC or 13.5 - 14.5 VDC.