‘SMART READER’ SAC-4159

Product Specification

The SAC-4159 is a programmable card access system for on-line or off-line operation. Card readers can be pedestal or wall mounted. Total card capacity is 8000. Two readers can be connected to one controller. The units is programmed through a PC. Once programmed, the Smart Reader can function on its own. All data is maintained in the units non-volatile memory. When on-line, all data is reported back to a central computer. Anti-passback for parking applications is provided. Insert and proximity readers with a range of up to 3’ are available.

A. OPERATION

The system shall consist of a stand-alone card reader/memory unit capable of recognizing individually coded plastic cards at up to two card readers. Each card, by its code number, shall be granted access or denied access as determined by the card reader/memory units programming. Programming shall be downloaded to the reader/memory unit from a PC. Once programmed, the reader shall operate independently without further intervention (off-line mode). In an on-line mode, all activity shall be reported to a central computer. A unit equipped with 2 readers shall be capable of prohibiting the use of a valid card at an entrance without first being used at an exit or visa versa (hard anti-passback). Single read-head units shall be capable of barring the use of a card for a pre-set amount of time after it is used initially (soft anti-passback).

B. CARD READER / MEMORY UNIT MODEL 4154

The Card Reader/Memory Unit shall be a self-contained device capable of storing a minimum of 8000 card numbers.

The Smart Reader shall include the following features:

Stand-alone capability. No connection to a central computer shall be necessary.

The unit shall be capable of supporting 2 card readers. Readers can be of the insert, slide through, or proximity type.

32 time zones shall be provided for time oriented operation.

32 access levels shall be provided for flexible control of card usage.
Four isolated relay outputs shall be provided for the activation of doors, gates, etc.

The Card Reader/Memory unit shall perform all code reading. It shall read a code from a card and check it for the proper bit pattern. If a card is recognized as valid, the micro-processor circuitry shall open the door, gate, etc.

The Card Reader/Memory unit shall be immune to weather, moisture and any environmental hazards. It shall be housed in a structure of high impact material for complete protection against weather or tampering. It shall be possible to place the associated electronics in a protected location preventing exposure of sensitive components to the elements and preventing tampering or vandalism.

It shall be possible to prohibit the use of any card at one access point (entrance) without first having been used at another point (exit). This feature (anti-passback) shall make it mandatory for card holders to move in sequence from one point to the next. In the event it becomes necessary to allow the use of cards in an "out of sequence" condition, it shall be possible through the units programming to reset the anti-passback thereby permitting access to valid cards which would be denied access as a result of being out of sequence.

During a power failure, data shall remain in non-volatile flash memory. The time and date shall be stored in a battery backed clock.

In off-line mode, programming shall be accomplished through an RS-232 serial link to a PC. Once programmed, the unit shall capable of operating on its own without further intervention.

In on-line mode, readers will be linked to a PC via an RS-485 network. Programming and reporting shall be in real time.

C. ACCESS CARD

The access cards shall be constructed of laminated vinyl with no visible coding, holes, raised lettering or magnetic stripes.

It shall be impossible to change or erase the information contained in the card by exposing the card to an electro-magnetic field of any kind, or physically alter the code without destroying the card.

The card size shall be 2 1/8" by 3 3/8" (standard credit card size).

It shall be possible to add pictures and other identification to the card for company ID systems.

D. TECHNICAL DATA

Card Reader / Memory Unit:

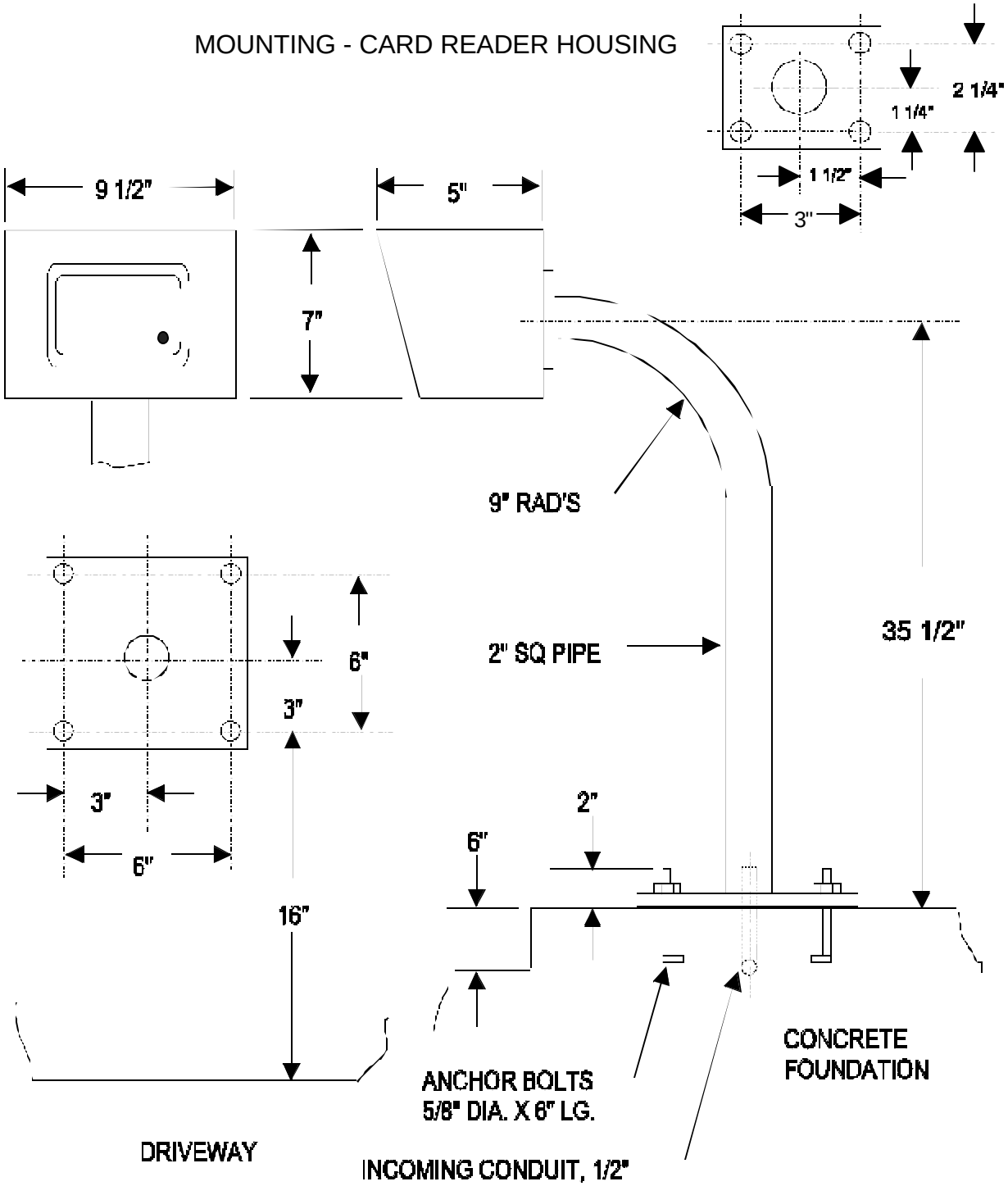
Microprocessor	68H series 8 bit microprocessor
Memory	256 K of RAM, 256 K of Flash memory
Clock	14 MHz crystal controlled
Card Capacity	8000 individually numbered cards
Card Readers Supported	2 read heads supported. Read heads can be of the insert, slide through or proximity type.
Reader Module	Passive code reading - no active elements or mechanical parts. Read heads are unaffected by environmental conditions.
Adjustments	None.
Outputs	Four independent Form C relay outputs to operate door or gate. Contact rating: 2 amps at 28VDC each.
Field Wiring	All field wiring connected to pluggable screw terminals for quick replacement.
Battery Backup	Removable and replaceable battery provides power to maintain memory. Automatic restart after power restoration.
Power Requirements	12-30V AC or DC, 0.5Amps

Operating Temperature	0 deg F to 110 deg F (-20 deg C to 45 deg C) Humidity: 90% hot condensing at +40 degrees C
Mounting	Wall or pedestal mount enclosure: 5'' H X 8 1/2'' W X 8 1/4'' D. (Contact factory for other mounting options.)
Time Zones	32
Access Levels	32
Anti-Passback	Programmable. Each read head can be set as an in or out reader for determining anti-passback requirements (hard anit-passback) or variable time-out (soft anti-passback).
Dimensions	7'' H X 9 1/2'' W X 6'' D (177mm x 214mm x 152mm)
Weight	4 lbs (1.8 kg)

Access Card:

Card Material	Highly durable plastic compound
Coding Method	Wiegand or Proximity technology, no visible coding, non-erasable
Coding Capacity	26-36 bits per card
Dimensions	2 1/8'' X 3 3/8'' (credit card size)
Options	Pictures or custom imprinting on cards

Smart Reader pedestal mounting diagram:



E. VERSIONS OF THE SAC-4159

All versions of the SAC-4159 function in the same manner and include all of the features above. The 3 available versions differ mainly in their read ranges.

The base *SAC-4159* has a maximum read range of 4”.

The *SAC-4159 Long Range* has a range of 24”. This unit utilizes a larger 12” X 12” proximity sensor.

The *SAC-4159 MaxiProx* has a range of 8’. This unit also utilizes the 12” X 12” proximity sensor. However, this unit requires the use of *MaxiProx* proximity cards. These differ only from the standard proximity cards in that the card thickness is 5mm. Standard proximity cards are 2mm thick.

