S2000-2051 Single Door Access Controller

Summary
The controller is designed for the access control system, which integrates card identification technology and the modern safety control system into a whole. S2000-2051 controller makes configuration according to central management computer and it can make time zone setting, vacation setting, and settling of the system of checking work attendance. You can define the induction card as the common card, advanced card. The capacities in two accesses are respectively 4,032 pieces of common cards, 12,288 pieces of advanced cards. The common card has double limitations—time and authority; but the advanced card has only one limitation, authority.

Interface

- Input on/off input (DI): 5 DIs are available.
- Output on/off output (DO): 2 DIs are available

Interface

<table>
<thead>
<tr>
<th>Basic layout</th>
<th>Wiegand26 interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door-magnetism switch</td>
<td>Any manufacturer’s product</td>
</tr>
<tr>
<td>Door button</td>
<td>Any manufacturer’s product</td>
</tr>
<tr>
<td>Electric lock</td>
<td>Power supply: DC 12V/5V</td>
</tr>
<tr>
<td>Affiliated safety area</td>
<td>Programmable alarm input (can link manual alarm, burglar alarm etc.)</td>
</tr>
<tr>
<td>Alarm output</td>
<td>Alarm output (can link alarm bell and alarm pilot)</td>
</tr>
<tr>
<td>Processor</td>
<td>Philips microprocessor</td>
</tr>
<tr>
<td>Power supply</td>
<td>AC 220V 50/60Hz</td>
</tr>
<tr>
<td>Size</td>
<td>210 (L) X 130 (W) X 36 (H) mm</td>
</tr>
<tr>
<td>Communication</td>
<td>The photo-isolated CAN network, and the velocity is 10 ~ 200Kbps.</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall open, in a clean room. Ambient temperature -10 ~ 50℃ RH 10% ~ 90%</td>
</tr>
</tbody>
</table>
S2000-2052 Double Door Access Controller

**Summary**

This controller is designed for the access control system. The configures according to the upper machine to make time zone setting, vacation setting, and settling of the system of checking work attendance. Moreover, you can define the induction card as the common card, advanced card or priority card. The capacities in two accesses are respectively 50 pieces of common cards, 20 pieces of advanced cards and 10 pieces of priority cards totally in two accesses. The common card has double limitations – time and authority; but the advanced card has only authority limitation; the priority card does not have any limitation.

**Interface**

<table>
<thead>
<tr>
<th>Basic layout</th>
<th>The interface of the card reader</th>
<th>Door-magnetism switch</th>
<th>Door button</th>
<th>Electric lock</th>
<th>Wiegand26 interface</th>
<th>Any manufacturer's product is OK</th>
<th>Any manufacturer's product is OK</th>
<th>Power supply: DC 12V/5V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affiliated</strong></td>
<td>Programmable alarm input (can link manual alarm, burglar alarm etc.)</td>
<td>Alarm output (can link alarm bell and alarm pilot)</td>
<td>ATML microprocessor</td>
<td>AC 24V</td>
<td>210 (L) X 130 (W) X 36 (H) mm</td>
<td>The photo-isolated CAN network, and the velocity is 10 ~ 200Kbps.</td>
<td>Wall open, in a clean room.</td>
<td>Ambient temperature -10 ~ 50℃ RH 10% ~ 90%</td>
</tr>
</tbody>
</table>

- **Input**
  - On/off input (DI): 6 DI s are available.
- **Output**
  - On/off output (DO): 2 DI s are available.
S2000-2071 Video Matrix Controller

**Summary**

The video matrix controller S2000-2071 is used to collect multiple video signals and send them to the specified output equipment so as to the switch of all monitoring area and make the real time record through a video recorder. The result is to realize the safety supervision and control.

**Specifications**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>AC24V±10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>434(L)×204(W)×88(H)mm</td>
</tr>
<tr>
<td>Communication</td>
<td>The photo-isolated CAN network with a velocity of 10−200Kbps.</td>
</tr>
<tr>
<td>Environment</td>
<td>Temperature -10℃−50℃ RH 10%−90% In a clean room</td>
</tr>
<tr>
<td></td>
<td>Video freq. input 32 (max)</td>
</tr>
<tr>
<td></td>
<td>Video freq. output 8 (max)</td>
</tr>
</tbody>
</table>

**Mounting**

S2000-2071 can be mounted into a standard control cabinet in the central room. Please refer to the related design manual. The mounting environment ranges from 10℃ to 50℃ and relative humidity from 10% to 90%. It should be in a clean room.

**Head Controller**

**Summary**

The pick-up head controller controls the oriental, vertical rotation of pick-up head and modifies the focus, diaphragm and zoom to monitor spot so that it realizes the intelligent security and supervisory function.

**Specifications**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>AC24V±10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>196(L)×120(W)×31(H)mm</td>
</tr>
<tr>
<td>Communication</td>
<td>The photo-isolated CAN network with a velocity of 10−200Kbps.</td>
</tr>
<tr>
<td>Environment</td>
<td>Temperature -10℃−50℃ Humidity 10%−90% In a clean room</td>
</tr>
</tbody>
</table>
S6070 — 6075 Standard Control Cabinets
The cabinets are used for DDC, DDC expanded board, LCD control module and PI controller mounting and fixing etc.

**Dimensions**

<table>
<thead>
<tr>
<th>Models</th>
<th>Capacity</th>
<th>Overall size(mm)</th>
<th>Mounting type</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2000-6070</td>
<td>1 PC DDC (S2011/12)</td>
<td>600 (H) x 420 (W) x 150 (T)</td>
<td>Open wall</td>
</tr>
<tr>
<td>S2000-6071</td>
<td>1PC DDC (S2011/12)</td>
<td>600 (H) x 420 (W) x 150 (T)</td>
<td>Built in wall</td>
</tr>
<tr>
<td>S2000-6072</td>
<td>Fixed a: 2 PCS DDC (S2011/12)</td>
<td>800 (H) x 500 (W) x 180 (T)</td>
<td>Open wall</td>
</tr>
<tr>
<td></td>
<td>Fixed b: 1 PC DDC (S2011/12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 2 PCS DDC extended boards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2000-6073</td>
<td>Fixed a: 2 PCS DDC (S2011/12)</td>
<td>800 (H) x 500 (W) x 180 (T)</td>
<td>Built in wall</td>
</tr>
<tr>
<td></td>
<td>Fixed b: 1 PC DDC (S2011/12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 2 PCS DDC extended boards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2000-6074</td>
<td>3 PCS DDC (S2011/12)</td>
<td>1850 (H) x 600 (W) x 400 (T)</td>
<td>Floor</td>
</tr>
<tr>
<td>S2000-6075</td>
<td>1PC PI controller</td>
<td>250 (H) x 360 (W) x 70 (T)</td>
<td>Open wall</td>
</tr>
</tbody>
</table>

*Note:* Minimum distance of 1.3m to the ground is necessary when wall mounting.
Product Application Reference

Controller

S203X Intelligent Pioneer System

Summary

S203X Intelligent Pioneer system link the area intelligent stations to supervise and manage the electromechanical equipment in the building through international advanced CAN network. This system is the collecting and distributing control system and Pentium III computer work station is its core. Its features are "collecting manage, distributing control". The software interface is the Windows NT 4.0/ Windows 2000. The main object is to ensure all equipment to operate with high efficiency, energy-saving and reasonable status through scientific management and control.

Characteristics

- Follow the open and distribution control principle
- Reliability, easy to maintain and manage
- Take advantage of multi-function of windows NT/2000
- Using the Ethernet to realize the informationshare, meanwhile managing this system by right user
- Operating right management basing on supervisory point
- Offer multi-type chart
- Auto-record the operated contents to judge the necessary for operator

CRT (indicator) output contents

- Analogical flow chart of technical process（mark the important data, control parameters and real-time status of equipment）
- Alarm window（include extra-limit data and unusual status and so on）
- Important data content display（fixed position display）
- Display of real-time trend（trend curve）
- Test and analogic display of control apparatus
- Multi-window display（display multi-relevant process in the window）
- Flexible switch of picture, page-turning

Feature of system software:

- This soft ware is developed by ore company and possess the followed functions:
- Multi-tasks: operator supervises the systems status continuously by all dynamic windows, meanwhile other truncations still work. So it improve the work efficiency.
- Confidential secrecy, six classes password control to meet the user's different demands
- Convenient management, select the authority contents awarding to different operator's authority
- Easy to update the system
- Can report dynamic trend picture of multi-position at the same time
- Do allocation and configuration for distribution control system. It offers the rich calculate and control module and realise the "dialog" between operator and computer. In generally, adapting the windows menu to take CRT module to screen, then fill in the table and create the expected function scheme, For only configuration and needn’t change the wiring

Features of management function

- Any workstation manages the controller through network. It auto-record the system's change by operator
- Quickly seek the location, analyse the data through other dynamic software
- Share the data and file among work stations share the data and file among work stations
- Fast planning application
- Auto-create the report forms and sent it to the printer of Ethernet; hand with the historical data and historical trend curve and so on. Picture display, update the dynamic data, alarm display, trend display, store the historical data, printing the reports.
- Advance version through increasing the application apparatus
- Using site wide licensing agreement to increase the multi-advanced work stations
- Give every user the different name and password as the special visiting rights
- Multi-class system alarm signals
Product Application Reference

Controller

S203X Intelligent Pioneer System Interface

- Integrate the third part equipment to the floor network, the third part system is integrated into one module through open processor
- Integrated equipment and system fully utilize the S203X advantages, for instance, picture control, historical records, dynamic drawing, affair arrange, alarm and remote visit and so on
- The basic function of S203X can be update to advance version through increasing the application apparatus
- Using site wide licensing agreement to increase the multi-advanced work stations
- Give every user the different name and password as the special visiting rights
- Multi-class system alarm signals
- Integrate the third part equipment to the floor network, the third part system is integrated into one module through open processor
- Integrated equipment and system fully utilize the S203X advantages, for instance, picture control, historical records, dynamic drawing affair arrange, alarm and remote visit and so on

Feature of visiting function

- At the same time visit the far position of network
- Visit multi far position simultaneously
- Far position can send the alarm or load the data
- Far position can call site wide licensing agreement or building network
- Development features:
  - Each network supports 128 controllers and multi work stations
  - Each modeled controller can be used with 3 extended modules
  - Extended memorizer and advanced programming store the big programs and important data
- Through updating the program to improve S203X intelligent pioneer system functions
- Safety system of supervision and control
- The safety system of supervision and control that integrates passageway control system, supervisory system, alarm system and keep watch system etc, is one kind of flexible, common and simple safety system, meanwhile it can meet the safe demands of work spot and resident environment. It can be used to either small area with only one building, or large area with many buildings.

1. Passageway control system (entrance guard system)
   S203X entrance guard system can meet control demands of different spots. It is convenient to supervise and control to employee in building and add or delete the card number anytime. Through efficient automatic management to public facilities, it guarantees the safety of important spots, meanwhile it records the situation.

2. Image supervision system
   Image supervision system can control multi-camera. The image converting, angle changing, diaphragm, focal length and zoom of camera are all controlled by this system. It uses both colorful image and black and white image.

3. Alarm system
   The alarm system has the linked control function for alarm, and set cancel the alarm different area apparatus quickly. It may control multi-kind of alarm apparatus, for example, emergent hand alarm, burglar alarm, alarm lamp and alarm bell and so on, to meet various demands, while record the alarm contents.

4. Keep watch system
   Keep watch system is used to set the different keep watch route that may start at regular-line and hands operate. Each route has multi-points of keeping watch, and it may set the reading time of every point. The guards can watch the situation through central control computer, and support and protect the guards of keeping watch. There are records of keeping watch to regulate the work of keeping watch.

Description table

<table>
<thead>
<tr>
<th>No.</th>
<th>Software name</th>
<th>type</th>
<th>Quantity of I/O points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S203X intelligent pioneer software</td>
<td>S2030</td>
<td>1~100 points</td>
</tr>
<tr>
<td>2</td>
<td>S203X intelligent pioneer software</td>
<td>S2031</td>
<td>101~300 points</td>
</tr>
<tr>
<td>3</td>
<td>S203X intelligent pioneer software</td>
<td>S2032</td>
<td>301~500 points</td>
</tr>
<tr>
<td>4</td>
<td>S203X intelligent pioneer software</td>
<td>S2033</td>
<td>Over 500 points</td>
</tr>
<tr>
<td>5</td>
<td>Gate-entrance management software</td>
<td>S2036</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Management software of Video supervisory system</td>
<td>S2037</td>
<td></td>
</tr>
</tbody>
</table>
Product Application Reference

Controller

Summary of S2000 Control System

The differential pressure switch is used to measure flow of air, single or differential air pressure. Typical application includes detecting clogged filter, detecting frost or ice build-up on air conditioning coils, detecting blocked flue or vent, and monitor fan operation etc.

This system includes fresh air system, air-conditioning system, water supply and drainage system, illuminating system and elevator-monitoring system etc. It can measure and display the operating parameter, monitor and control operating system. According to the outside environments and other factors, the system can auto-adjust the equipments to the best operation condition. Furthermore, auto-realize the adjustment and management to ventilation, electricity, heat supply and water supply etc. As a result, this system provides a safe, comfortable and highly effective circumstance.

S2000 system feature

1. CAN BUS communication mode

CAN BUS, serial communication is one of spot BUS, which originated in automobile industry. The number of the networking nodes reaches 110. The reasonable structure shortens the transmit time reducing the outside interfering. Communication medium: pair line, coaxial cable or fiber. Automatically breaks off when CAN nodes error occurs heavily. Realize node-to-node, one node to multi nodes data-transmitting and whole broadcasting. It only can be achieved through message filtration. Communicating distance is up to 10 Km and the communicating velocity reaches 1M bps maximally.

2. High integrated level and expandable capacity

Based on the distribution of system software and hardware, the system connects all related systems (e.g. air-conditioning system, fresh air system, water supply and drainage system, heat-exchanging system and so on,) and integrates them into a big control system.

3. Advanced calculation, accurate control

DDC use 3-byte floating-points operation. The advanced PID operation meets various users' demands. The fuzzy segment control calculation meets complicated demands. Timing, event trigger, chain reaction

4. High stability

In this system, DDC can supervise independently the whole system operation. You can achieve man-machine exchange through the upper machine. Thus, the whole control system shall minimize the possibility to be damaged or interfered with. Users' control program is saved in the EEPROM of DDC and the program shall not be damaged.

5. Flexible configuration, super function

Complete project management system
Abundant configuration management tool
Powerful reliable data-record and inquiry system
Complete networking functions
Support double-machine system

S2000 system organization

![Diagram of S2000 system organization](image)
Intelligent Pioneer Software Platform

"Intelligent Pioneer", based on the Windows platform, is configuration software used to create quickly upper monitoring system. The software provides complete schemes of data-collecting, man-machine interface, alarm-processing, and report forms etc. for users. Meanwhile, the software form a whole intelligent upper-and-lower-machine-control system together with DDC. So, "Intelligent Pioneer" software is the best supporter for the factory-level data-collecting and management system.

Powerful window-making system supports 32-byte real-color, transition color and texture, and supports multi-graphic formats. It has a complete toolbox and abundant map storage.

Reliable data-record and inquiry system including history curve and built-in report forms.
Super alarm management system supports multiple alarm modes and it has reliable alarm record and convinced inquiry.
Abides by the principle of system reliability and management convenience.
Exerts multi-task feature of Windows platform and multi-user management function.
Through Ethernet, shares the information between workstations. Meanwhile, with the help of sever or other users with high rights, it manages the system and network.
Based on the operation right management of supervision, the multi-level code limits the withdrawal of data or other important message from the database. It adopts 999-level cryptographic control to meet multiple users' various demands.
Built-in SQL Server system supports Open Database Connectivity (ODBC), and controls freely all kinds of standard databases.
Supports OPC interface, and can communicate with any hardware that supports this interface.
Powerful and complete networking functions support distribution history data inquiry and distribution real-time alarm. Through any networking computer, inspect spot and browse history record.
The Design Principle and features of S2000 Control System

The Building Automation System (BAS) often adopts the network controller of intelligent centralizing and distributing, and it consists of central control computer, network controller and DDC of spot equipment.

**Central control computer**

The central control computer is connected with spot DDC through network controller in central control room, and it supervises and controls the whole on-line equipment in building through special control software. The supervisor is often PC or IC, and it adopts WIN9X, the dialogue adopts GUI picture surface between cooperator and computer.

**Features**

1. S2000 system is designed for the sake of supervising and managing the equipment inside the building in order to improve the management efficiency and save the energy. It not only offers the overall plan of building control, but also includes the powerful function of managing housing estate.
2. On the aspect of system integration and software design, it absorbed in the international experience, and developed the supervisory system software of "intelligent pioneer". But it adopted GUI surface, tree configuration auto handling data. Network data dynamic state exchanging and possessed the advanced design, flexible set and safe operation. The some parts of application program can be adjusted according to the customer's demands.
3. The main hardware equipment and components are purchased from the foreign famous manufacturers. For example, CPU from Intel of U.S.A., Phillips of Holland.
4. S2000 control system is a kind of open network basing on CAN bus control protocol. Its flexible construction can comprise the network from one degree to three degree in order to meet the various projects. Meanwhile it possesses the good expandability and be reliable to connecting other network and remote communication.
5. S2000 control system is a real and distribution control system, and anyone DDC among the system may become leader DDC through promotion.
6. It takes the great convenience for the operator as its English/Chinese display.
7. It realized the principle of "near wiring". The scattered control points inside the build can be connected with the network system according to the principle of "near wiring" whatever I/O points. Then the software will automatically handle with the information, so it simplified the spot wiring and construction and saves the cost of engineering, while it improves the hardware equipment efficiency.
8. Direct Digital Control (DDC) structure can coordinate with the equipment of strong power to constitute the cabinet of electromechanical integration. This only saves not only the cost, but the space.
9. Adopted the intelligent and control

The SD2000 system that has the characters of high automation high reliability high precision, unmanned control multi-kind alarm system and automatic and continual operation for the whole year.

**Network controller**

The network controller is the bridge between central control computer and spot DDC communication and it can exchange the data any time. so it is equal to the network card of CAN.

**Direct Digital controller (DDC)**

The DDC is the core of whole control system, and it is connected with the central control computer, through network controller, meanwhile it is also connected with equipment supervised directly, it collects the information of equipment supervised, and handles with the data, then sends the commands. At the same time, it conveys the data to the central control computer and download the data from central control computer to supervise and control the one-line equipment of central control computer.

The contents that BAS includes are very extensive, and the auto-supervisory of building equipment can almost be brought into the BAS we recommend that design should accord with the followed instruction in the practical project.

1. **The principle of meeting customer's demands**
   According to the present customer's demands to decide the allocation of every sub-system and supervisory equipment.

2. **The principle of advanced characters.**
   The characters of system network are flexible, expandable with advanced technology and it can be connected with other network.

3. **The principle of safety and reliability**
   The network structure and composition of equipment must guarantee the normal and safe utilization, and it must also have the capability of handling with the accidents and offering all kinds of alarm signal.

4. **The principle of combination property**
   Subsidiary system's surface and system integrated application, construction, equipment management, system, maintenance and technical service all are considered.

5. **The economical**
   Max investment-saving based on the above principles including earlier investment, later maintenance, renews equipment and cost of system expansion.