Partners



























































KEBODA





















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DECOWELL

Decowell product family

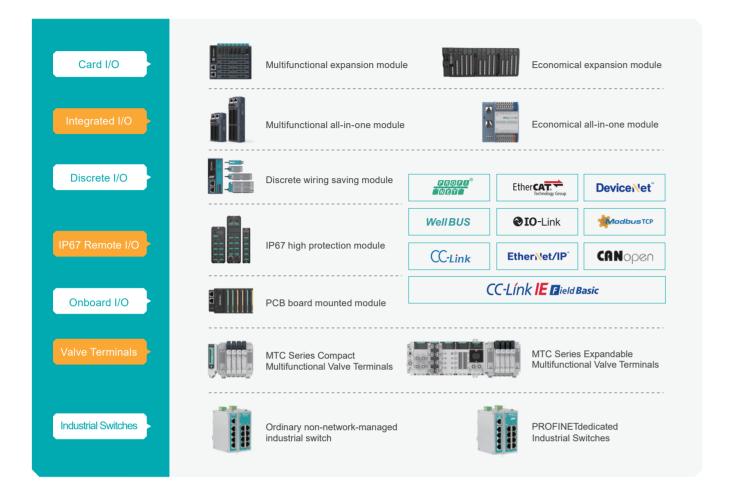
PRODUCT FAMILY

Focus on industrial bus solutions



^{*} The above are some of our partner customers. To date, we have served over 5,000 domestic and international clients, with no particular ranking order (data as of 2023).

Product Family



Industrial Applications

















Professionally provide bus customized solutions



Customized according to your needs

Customized products not only shorten the selection cycle and reduce costs but also ensure equipment efficiency.

Stable operation, improving the production efficiency

ISO9001, ISO14001, ISO45001

certifications



Complete service system

Ensure quick response to the user's needs



With extensive project experience and a senior R&D team, we provide customized, efficient, and

Product Certification



















Worldwide after-sales support

Our 24/7 support team ensures global response within 24 hours

Our global service network ensures that on-site support is available within 48 hours in most visa-free countries and regions for China.

We provide remote diagnostics and virtual support to quickly identify and resolve issues, minimizing downtime.



The EX series card-type I/O system consists of an adapter module, I/O module, power module, and terminal module. The adapter supports multiple communication buses and is compatible with mainstream PLC manufacturers, enabling seamless integration with leading protocols. Users can select configurations based on specific site requirements. With its compact, high-integration design, the system saves valuable space in control cabinets, making it ideal for applications where space is at a premium. The module's card-type locking mechanism enhances stability, providing twice the reliability compared to traditional patch designs. A wide range of I/O module options is available, supporting various signal types, including digital, analog, functional, and communication modules. The system has passed rigorous EMC and extreme temperature testing, ensuring stable and reliable operation. This makes it the optimal choice for automation solutions



Rich variety of modules

Meet various scenarios and applications, supporting up to 32 I/O modules



Stable and Reliable

- Stable data transmission
- Strong anti-interference ability
- Rigorous EMC and high/low temperaturetesting



Push-in terminal, quick installation

- Push-in terminal
- Quick wiring

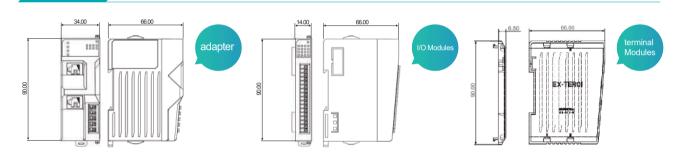


IO Tester Tool Easy Debugging

- Power consumption calculation, quick selection
- Firmware upgrade for easy iteration
- Output forced, quick debugging
- Module parameter settings to simplify operations



Product size



Application Cases

Photovoltaic - I/O device application on cleaning machine

Solution P

Main site:Mitsubishi Q series

Project I/O configuration: about 300 digital points, 50 analog channels

Application advantages

Improved the intelligent manag ement level of the cleaning process, enhanced cleaning efficiency and quality

Project Overview: This project is used to flush pollutants generated or invaded during manufacturing, assembly, use, and maintenance. Through the EX series card based remote I/O module, remote monitoring of the status of cleaning equipment can be achieved, including real-time monitoring of parameters such as the operating status of the cleaning machine, water flow pressure, and cleaning solution concentration. This helps to detect equipment abnormalities or malfunctions in a timely manner and enables remote diagnosis and handling, ensuring the smooth progress of the cleaning process.

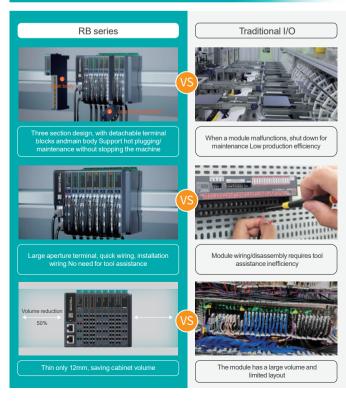




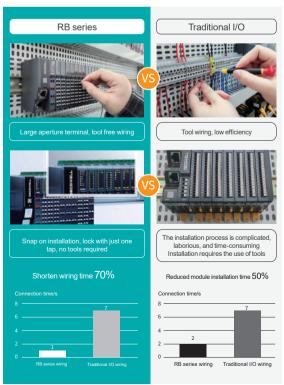
The RB series ultra-thin I/O is a new generation three-section card module that supports mainstream fieldbus protocols, including PROFINET, EtherCAT, and EtherNet/IP. With a single module thickness of just 12mm, it saves cabinet space. The three-section structural design features detachable terminals and supports hot swapping, making on-site maintenance and replacement convenient. During module replacement, the system continues to operate normally without interruption. The module responds quickly and reliably, efficiently collecting input signals and transmitting output signals. It also offers module-level diagnostics, enabling rapid identification of problem modules. A variety of module types are available, including digital input/output, analog input/output, temperature acquisition, encoder modules, and communication modules, catering to customers' needs for diverse solution combinations.







Comprehensive structural optimization is the ideal solution for enhancing installation efficiency





Easy maintenance

Three section structural design/quick wiring/easy maintenance

- Powerful diagnostic function, supporting module level and channel level diagnostics
- Hot swappable function, online maintenance without stopping the machine
- With dial switch and reset function, convenient for on-site debugging and after-sales maintenance
- The dip switch can quickly assign device names or station numbers without the need to operate through upper computer software
- an be quickly replaced without the need for a host computer.





Reliability is significantly enhanced, ensuring stable operation in harsh environments

- Strict electromagnetic testing:Anti-surge, EFT, ESD, lightning, EMCwait
- Comprehensive reliability testing: high and low temperature, salt spray, impact resistance, drop resistance, etc.
 High temperature (70 °C), low temperature (-20 °C)
- protections:OvercurrentProtection,PowerAnti-reverseconnectionProtection channel indicator light:Accurately locate faults,reducing maintenance time
- Channel indicator light: accurately locate faults and reduce maintenance time
- Gold plating process to prevent corrosion and oxidation

Application Cases

Lithium battery - I/O application on visual inspection equipment

Solution

Main Station: Siemens 1500 Application Process Section: Photovoltaic Production Line Visual Inspection Equipment Project I/O configuration: This model uses 3 RB series card type I/O slave stations, with a single digital quantity of 366 points

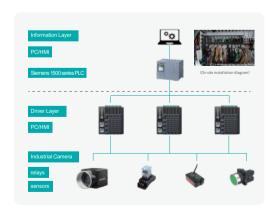
Application advantages

Facing voltage type loads, it can eliminate interference from weak power models, operate stably, and demonstrate High quality performance of domestic brands

Project Overview.** This project involves a visual inspection system for photovoltaic production lines, designed to enable fully automated defect detection and processing through digital input and output signals. It primarily focuses on the rapid response of industrial cameras, electrical components, sensors, and other loads.

Information locates on the rapin response of industrial carrieras, electrical components, sensors, and other locate. Industrial cameras, being voltage-sensitive loads, require only a specific voltage (low-power signal) to activate, making them prone to interference.

Precise coordination between the workpiece arrival signal and the camera activation signal is essential, as the 12 industrial cameras must complete defect detection within 1.6 seconds, posing significant challenges to signal processing speed and stability.





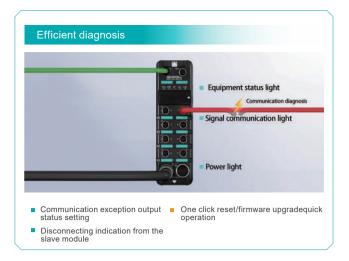
The SD series I/O modules offer an IP67 protection rating, providing exceptional dust and water resistance, making them ideal for use in harsh environmental conditions. The system consists of a master and slave station, with the master station supporting mainstream fieldbus protocols such as PROFINET, EtherCAT, and EtherNet/IP. The master station can connect to slave stations or sensors compatible with the IO-LINK protocol. IO-LINK simplifies equipment installation and maintenance while offering comprehensive diagnostic capabilities, enabling rapid fault detection and resolution. This significantly enhances the overall performance and reliability of the system.



Complete specifications and rich choices

Rich variety of modules to meet various application scenarios

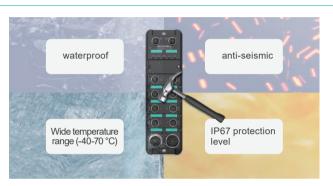


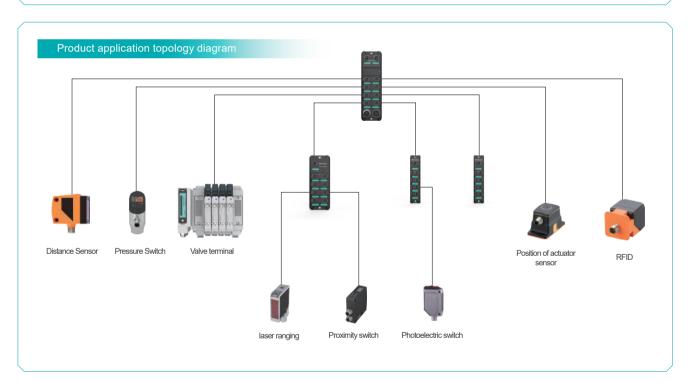




High protection, high reliability

 Waterproof, dustproof, earthquake resistant, wide temperature range (-40-70 °C) IP67 protection level











Economical all-in-one module

Compact structure | Stable performance | High cost performance

PROFO® Theat

Device Net"

CC-Link

Ether et/IP

CC-Línk IE 🖪 ield Basic



FS series integrated I/O is the most classic integrated bus I/O module from Decowell, featuring high cost-effectiveness, stable performance, compact structure, and simple wiring. Supports multiple communication protocols, such as PROFINET, EtherCAT, DeviceNet, CC Link, EtherNet/IP, CANopen, CC-LINK IE Field Basic, etc. A single module can support up to 32 signal points. The Ethernet communication interface is designed at a 45 degree angle, which can reduce the stress caused by long-term bending of the network cable on the network interface structure, and improve the reliability of the system. All terminals use PUSH-IN wiring terminals, greatly reducing the workload of on-site installation wiring and saving installation time.



- Integrating power supply, adapter, and I/O module to simplify communication system design
- Integrated design reduces the complexity of wiring and connections, shortening installation and debugging time















power supply

Multiple configurations to choose from

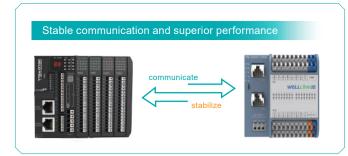
8DI+8DO

16DI+16DO

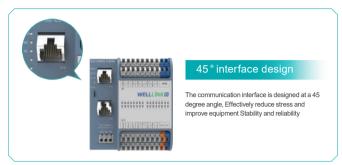
32DI

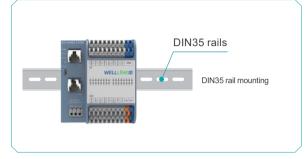
32DO



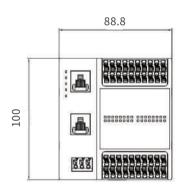








Product size







Application Cases

Semiconductor-Wafer Shifter I/O Device Applications



Master: Siemens 1200 series Application process section: Loadshifting machine Project I/O Configuration: Digital 200 points

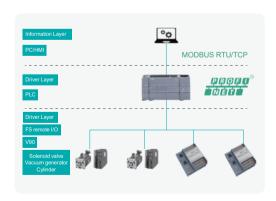
Application advantages

Digital input and output points complete the conveyor line task and improve the project communication stability

The SD series I/O modules feature an IP67 protection rating, ensuring superior dust and water resistance, making them suitable for deployment in harsh environmental conditions.

This system comprises a master station and slave stations, with the master station supporting leading fieldbus protocols, including PROFINET, EtherCAT, and EtherNet/IP. Additionally, the master station can connect to slave stations or sensors that comply with

the IO-LINK protocol. IO-LINK facilitates streamlined equipment installation and maintenance while providing extensive diagnostic functions that enable swift fault detection and resolution. This greatly enhances the overall performance and reliability of the system.







PT series onboard I/O modules are distributed expansion modules with flexible design developed by Decowell. This series of modules consists of adapters, I/O modules, and power modules. PT series onboard I/O can integrate various communication interfaces and functions through customized baseboards, which can realize the miniaturization of control modules and reduce the labor cost of equipment installation and commissioning through prefabricated cables.

- Features

01 PCB onboard I/O solution



- PCB base supports functions designed and developed by customers(Relays, interlocks, etc.)
- A variety of I/O modules are available.
- The PCB base plate can integrate the terminal blocks and prefabricate the cables in advance. Convenient wiring
- We can develop a complete set of solutions according to customer needs

02 Rich variety of modules



100 (FF295H) (F

7. 112M0120

STACE TO THE STACE

Rich variety of modules

Satisfy various application scenarios

Bus adapter

Digital Input Modules

Digital output modules

Analog Input Module

Analog output module

03 Plug-in modules

Modular design

Use plug-and-play to connect I/O modules, Adapters, PCB circuit boards, prefabricated cable junctions All in One

Type Design

Support digital/analog input and output

Free combination of modules

Can be directly inserted into the panel after the adapter is inserted

Different models ofdedicated I/O modules can be the wiring layeris relocated to the PCB backplane

04 Compact structure



The module is very compact, with dimensions of $12 \times 55 \times 62$ mm.

"Its volume is approximately one-third smaller than EX series modules, significantly reducing the footprint of customer equipment."

05 Simplify wiring



Standardized module design is adopted to reduce the testing cost during mass production of machines.

Customers can make prefabricated cables according to their needs for quick installation, while reducing the risk of incorrect wiring, saving working time and thus saving costs.

Customers can match I/O modules according to theirneeds. Custom terminals and special functional requirements are integrated on PCB On the board, realize rapid customization requirements

06 Flexible customization



Special functional requirements (according to Integration of user needs)





Adapters and I/O modules



Customized Terminals

"Customers can select I/O modules based on their specific needs.

Custom terminals and specialized functionalities are integrated directly onto the PCB, enabling fast customization to meet unique requirements."

Special functions: (e.g. interlock, relay output,Power supply, etc.)



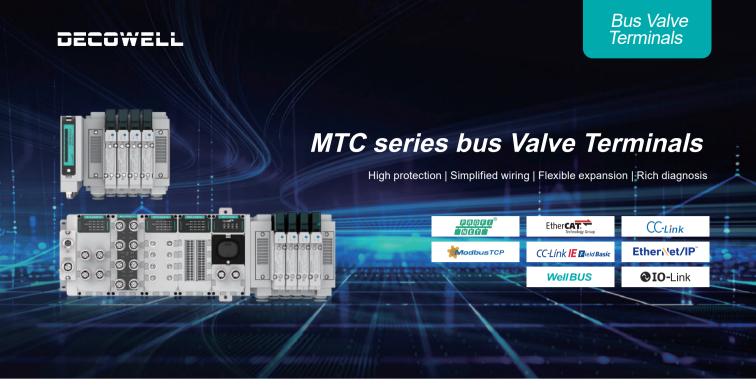
Customized product display 1



Customized product display 2



Customized product display 3



The MTC series valve terminals is our third-generation bus valve island, featuring an IP67 protection rating and support for solenoid valve and I/O module expansion. This integrated solution combines solenoid valves, adapters, I/O modules, silencers, and connectors into a single unit, significantly reducing assembly and wiring time compared to traditional solenoid valve setups.

Advanced diagnostic capabilities allow for quick issue identification, while high-performance solenoid valves ensure stable equipment operation, offering customers enhanced efficiency and reliable protection.



01 The Valve Terminals is available in two versions: compact and expandable

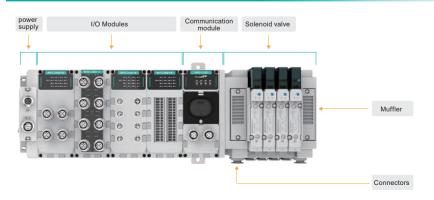


Suitable for Limited space, compact size, easy installation



The I/O modules offer flexible expansion options to accommodate a wider range of application requirements.

02 Functional Integration



One model covers all module accessories

Exhibition Type

Save time in selection

Simplified wiring

IP67 protection

Wide temperature range-10~60°C

03 A diverse range of interface types to accommodate broader application requirements

 Various interface types: M12 interface, M8 interface, European terminal (A dust cover can be added for installation outside the cabinet)





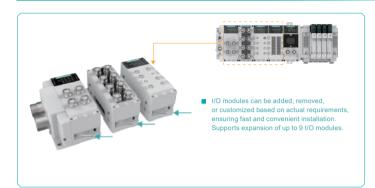


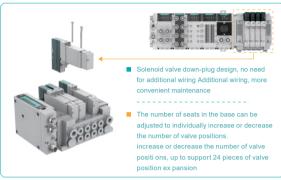




European terminal

04 Flexible expansion





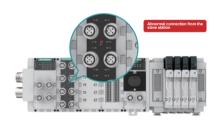
05 I/O modules support multiple signal types



06 Enriched diagnosis

Supports solenoid valve short circuit and open circuit detection, solenoid valve action times
detection, solenoid valve/system voltage over limit, and slave station status detection





Slave status detection

07 Ultra-high performance solenoid valve

- The action life can reach 80 million times, reducing equipment maintenance;
- The response time of the solenoid valve is 20ms, the maximum operating frequency is 15HZ, and it responds quickly;
- The coil power is only 0.6w, generating less heat and being more energy-efficient;
- IP67 protection level, fully functional, suitable for more application scenarios.
- 300mm/s maximum can drive 63mm cylinder, 100mm/s maximum can drive 125mm cylinder Strong circulation capacity, maximum flow rate of 750L/min
- No external emissions, suitable for high demand environments such as food, medicine, chips, etc





The LS series products from Decowell leverage the proprietary WellBUS bus system, offering a streamlined wiring solution tailored for discrete applications. The entire system utilizes a dual-core power cable for both power and signal transmission, effectively addressing the longstanding challenges of complex wiring and extensive cable management associated with long-line equipment in logistics and warehousing environments.

Employing power carrier technology, LS products transmit signals efficiently while the slave stations supply power to the sensors, thereby simplifying the wiring process and minimizing both cable usage and labor costs. Additionally, these products are equipped with advanced diagnostic capabilities, including detection of undervoltage, overvoltage, and disconnection issues, enabling rapid problem identification, reducing downtime, and enhancing overall production efficiency.

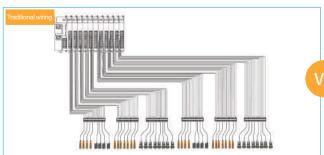


01 WellBUS Wiring Optimization System for Discrete Applications - Minimalist Wiring Solution

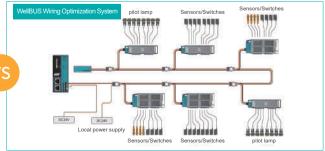


- Complex wiring and high wiring time cost
- Additional terminal blocks and power cables are required, which increases costs
- High quality requirements for construction personnel (installation, commissioning)
- Difficult troubleshooting and high maintenance costs

- Simple wiring, saving wiring time and cost
- The substation module provides load power supply, eliminating the cost of terminal blocks and power lines
- Easy installation and debugging, can be quickly installed
- Equipped with diagnostic function, quickly locate problems, and efficiently maintain



The wiring of the load is transferred to the I/O module through the terminal block, which involves a large amount of work and complicated wiring

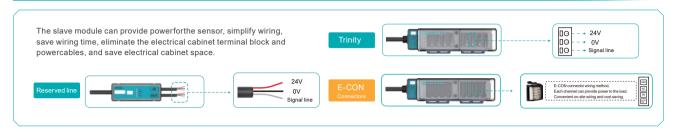


One cable connects all the stations on site, allowing for rapid prototyping of the equipment

02 Rich module types to meet various application scenarios



03 The slave station provides power supply for the sensor, eliminating the need for terminal blocks and power cables



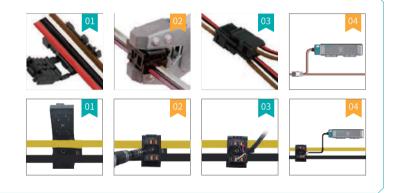
04 Simple wiring, quick installation, and reduced wiring errors



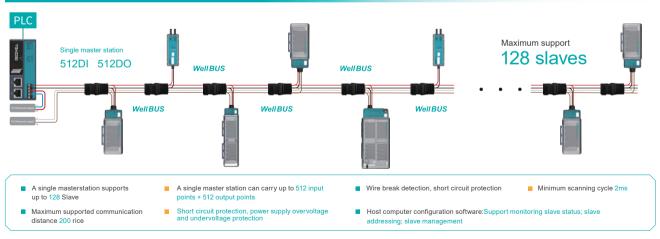
- Use a dedicated stripping-free connector and place the cables in the corresponding cable trough.
- 2.Use a special crimping tool to crimp the strip-free connector.
- 3. Push both ends together until the connector locks.
- 4.Wiring is complete.

TWO-CORE SHEATHED CABLE

- Use a dedicated junction box and place the cables in the corresponding cable trough.
- 2. Use a screwdriverto tighten thejunction box.
- 3.Connect the slave station leads to the junction box.
- 4.Wiring is complete.



05 Reliable and easy to use, powerful performance and complete functions



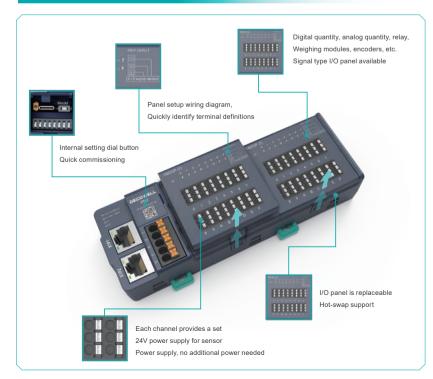




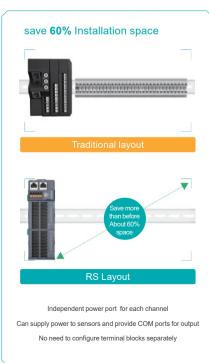
The RS series I/O integrates multiple functions, including bus communication, signal acquisition and output and input and output power supply. It is available in both single-slot and dual-slot configurations, accommodating requirements for 16 and 32 points, respectively. The I/O panel and communication base feature a split design, support hot-swap functionality, and allow for the mixed use of different signal types and terminals. The I/O panel supports various signal types, such as digital signals, analog signals, relays, and weighing modules. Additionally, it offers three types of terminals: European terminal, Trinity, and E-CON connections, which can be utilized for powering sensors. Compared to traditional I/O modules, the RS series occupies less space and is equipped with a protective cover that allows for external cabinet installation in non-hazardous environments. The highly integrated design and flexible configuration of the RS series integrated I/O provide efficient and reliable solutions for modern industrial automation.

- Features

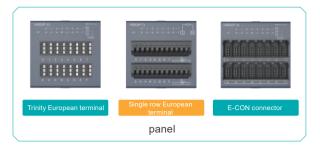
01 Modular design/Any combination as needed

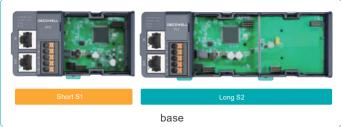


02 Small size saves space



03 Supports a variety of terminal types and supports long and short bases





04 Rich module types to meet various application scenarios

Rich I/O panel types, DI/DO/AI/AO/relay











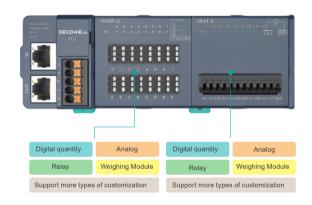


05 Flexible signal type configuration with freely selectable panels in the dual-slot model

Any combination of signal types makes the system more flexible



Note: The panel terminal types of different signal types are slightly different. Please contact the technicians when purchasing the product.





Semiconductor - I/O device application of IC die bonder



Application Advantages

Provide customers with standardized solutions, so that a single workstation can use the same series of I/Os to improve the overall efficiency of the project

Project Overview: Two series of remote I/O, RS integrated and EX card-type, are used in this equipment. The digital signal is mainly used for the arrival signal of each point on the material tray. The solenoid valve and gripper analog module corresponding to the output signal are mainly used for the motor drive of the material tray.

