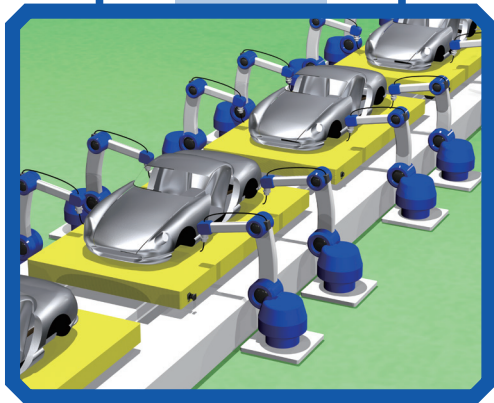


Press



Welding



Coating

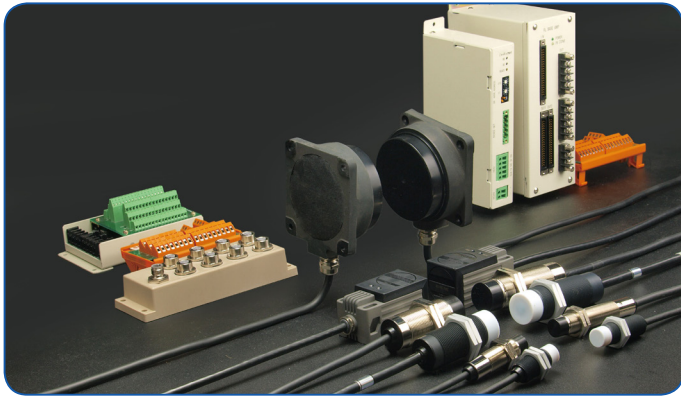
Automotive Manufacturing Solution
-Manufacturing Process-



Assembly

The solution B & PLUS provides

Remote System - Wireless Power Supply and signal transmission -



Remote System is a system that transmits the power and the signal wirelessly at the same time. Between the two sides, Stationary Side (Primary Side) which has a power and control board, connected to output. And a Moveable-side (Secondary Side) which is connected to sensors and other units. By making the devices wireless, it will extend the range of motion and also be able to dissolve from unnecessary damage of the connector and the cable.

Product range



Remote Sensor system

Wireless Power Supply 12...24V / 5...550mA
Signal Transmission
Input 1...16 signals.(Proximity, Photoelectric sensor and more)



Remote Coupler system

Wireless Power Supply 24V/300mA...2A
Signal Transmission
Input 4...64 signals.Output signals 4...32 signals.Data Signal (RS-232C, CC-Link and more)



Remote Power supply system

Wireless Power Supply 24V / 1A and 2A
Wireless Charging Lead battery
Wireless Charging A lithium ion battery made by BAYSUN company

RFID system



B&PLUS RFID system / Z series

RFID system is the reliable ID system using inductive coupling type. Connect directly to MELSEC-Q bus and CC-Link. And also able to replace Mitsubishi ID System.
ISO15693

- Usage example
 - Warehousing system
 - Pallet Control System for transportation Line
 - Localization of AGV
 - Manage Press Mold



8-bit system / 10-bit system

No need to have complicated setting or ladder program!
Just need to face the ID tag and ID reader. Easy to be able to use 8 bit or 10 bit Parallel. ID system

- Usage example
 - Numbering
 - Manage Press Mold
 - To Identify the press mold

Position / Angle Sensor



Non-Contact Linear transducer, Linear Potentiometer

Highly Precise linear sensor that detects a absolute position of the straight line movement.

- Non-contact linear transducer(device)
No Machinery Life. Protection Class, Over IP67
- Linear potentiometer
Excellent Linearity, Correspond in high speed

■ Usage example

- injection molding machine
- Press machines Stroke Control
- length measurement for sheet cutter
- Vibration testing equipment of the car



Non-contact rotary sensor / Rotary potentiometer

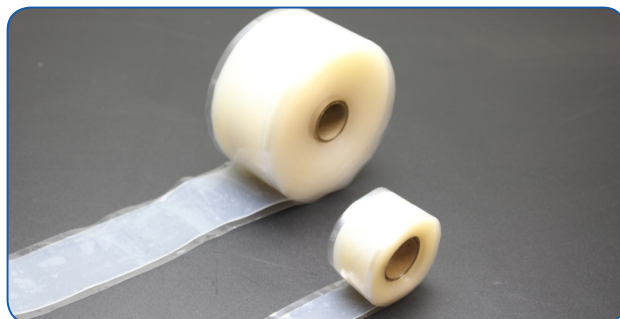
Detects the angle of the body with high precision Rotary sensor

- Non-contact rotary sensor
No machinery Life. Protection Class, Over IP67
- Rotary potentiometer
Excellent Linearity, Correspond in high speed

■ Usage example

- Control of Metalworking machine
- Control of valve and fitting
- Control of the door system
- Gear sensor for Segway
- Power Supply for solar supply module

Parts for Factory Automation



Protective silicon tape / BP tape

No need to use the adhesive and seal because the rubber made by silicon with the contractility fusion-bonds it. Superior in the durability, Neither the air nor the water passes through after the adhesion.

■ Usage example

- Welding spatter prevention
- Electricity, the plumbing and repair construction
- Water Leak, Air leak measures
- Electric insulation measures



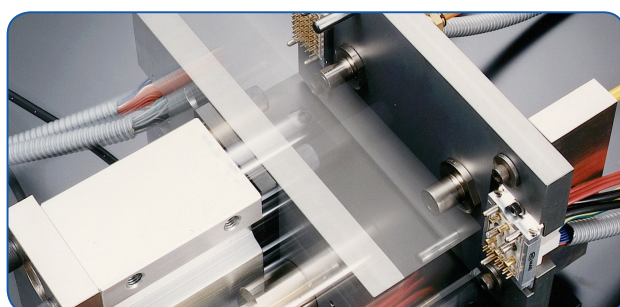
Auto coupling connector / MAC series

Using a spring wire as contact mechanism and realize high point of contact reliability, resistance, longer life energy.

Functional module that has mount frame with Insert guide that can locate any pin.

■ Usage example

- Engine, mission, electronic equipment, and OA apparatus. Production and Inspection line.
- Various devices. Robot and die automatic exchange and automatic transport system.



Mechatronics coupler system / BACS series

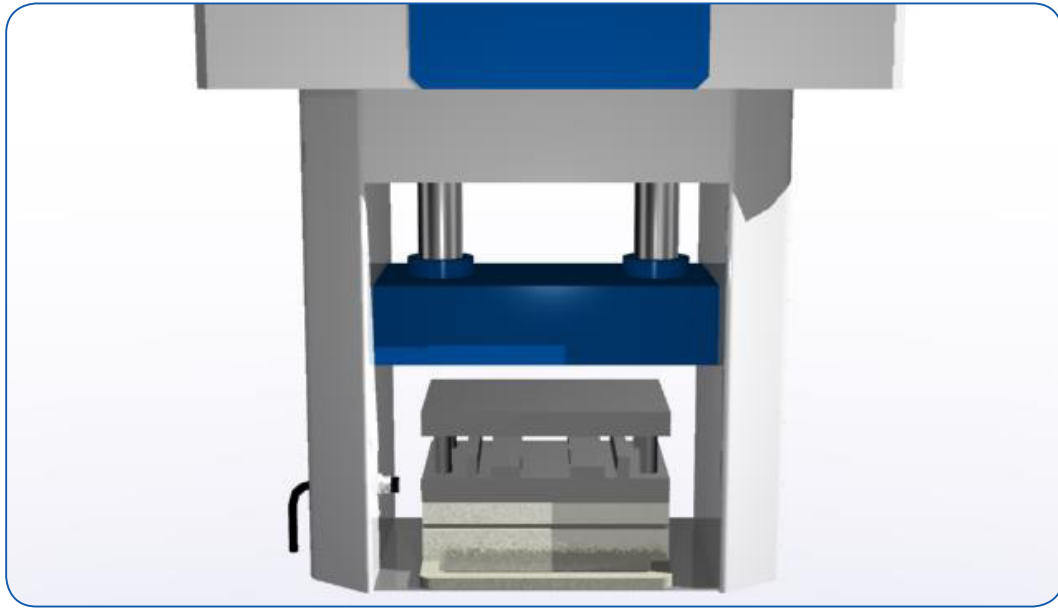
Multichannel coupler that can automatically put on and off the power signals.

Depending on the needs it can be designed the most suitable unit.

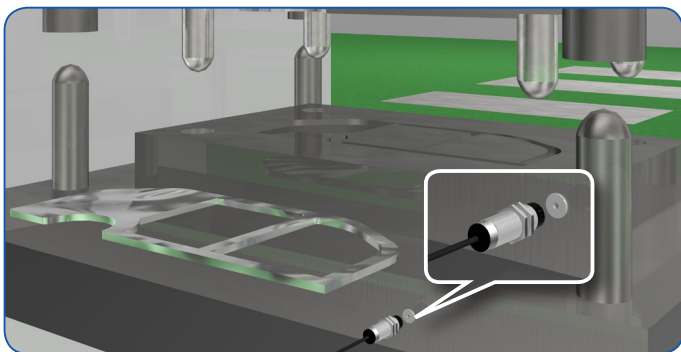
■ Usage example

- Exchanging tools for the assembling line
- Exchanging palette for the machine tool

Press Process



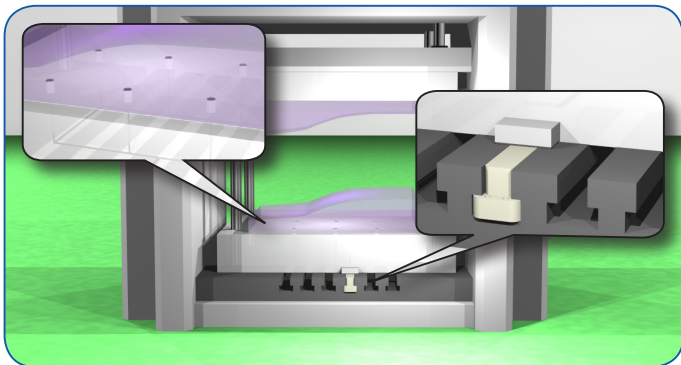
Example of the implementation



Press Mold identification / Managing numbers of the shots

■ When Only Identifying the molds
When only needs to "identify "the metal molds, it is recommended to use 8 bit system which is easy & cheaper. Easy to identify 8 bit(256 cases) without contact.

■ When also need to manage the numbers of shots.
RFID system Series Z which are possible to control over MELSEC Q bass and CC-Link.



Automation of the installation of the die

Attach the output part of the Remote System on the press machine side, attach the transmitter on the bottom of the metal mold die. when installing the metal mold, it is possible to identify and communicate to an apparatus at the same time.

✗ After having supplied a metal mold, in order to feed and confirm to sensors, a worker connected the transmission.

○ By Adopting a remote system, it is succeeded to automation and labor saving. T slot type attached directly to the metal mold is most suitable.

Recommended Product

RFID System / 8 bit system



Easy to Identify 8 bit(256 cases)

Suitable for the identification of the die

RFID system / Z series



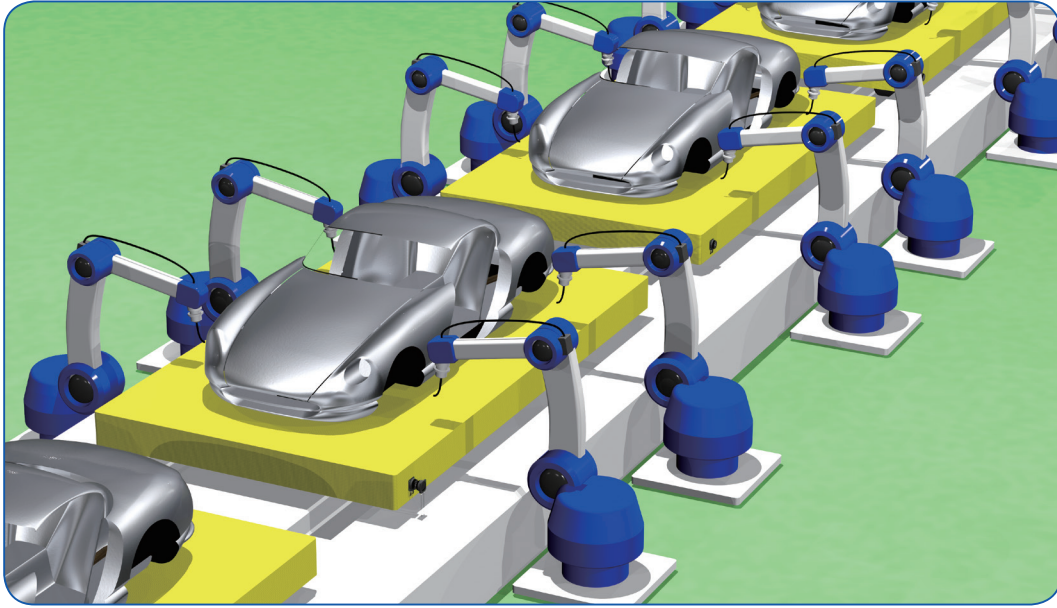
Controlling MELSEC-Q, CC-Link

Remote System / T-slot shape

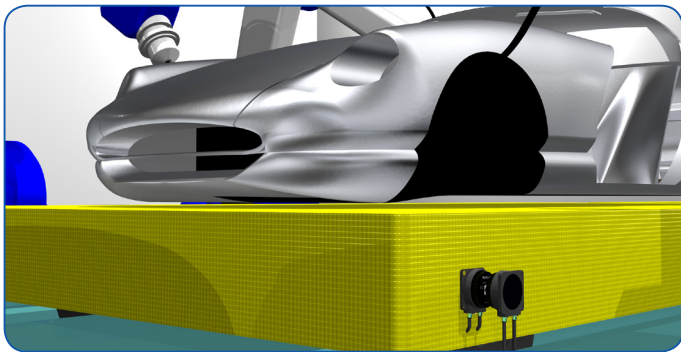


Applicable to T-slot . Applicable with die

Welding Process



Example of the implementation

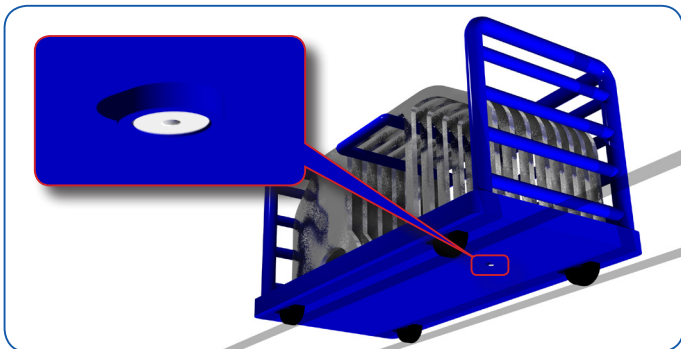


Car model identification, seating confirmation on the palette

At the welding line, the palette carries many different kinds of the body. Identifying the car model and seating confirmation using proximity sensors. And provide solenoid valve to move the cylinder to work the clamp operation.

✗ Connecting to a connector at any time, but poor contact by the sputtering and periodical maintenance occurred while feeding the signal confirmation to a sensor and an electromagnetic valve

○ To place the palettes in the fixed position, the power supply and signal transmission is possible to the sensor and solenoid valve. And unnecessary work on connections.



Palette identification for part conveyance

The conveyance palette which supplies a part to each line and provide necessary material to a palette, in order to move to the next process.

✗ When displaying plural proximity sensors and identify palette, reading accident or malfunction may occur. Need to stop in the fixed position to avoid inputting different data.

○ Using 8 bits system, there is no malfunction and misreading. And when there will be palette enlargement in the future, only need to increase ID tags.

Recommended Product

Remote System / Anti-weld type



Welding spatter prevention

RFID System / 8 · 10 bit system



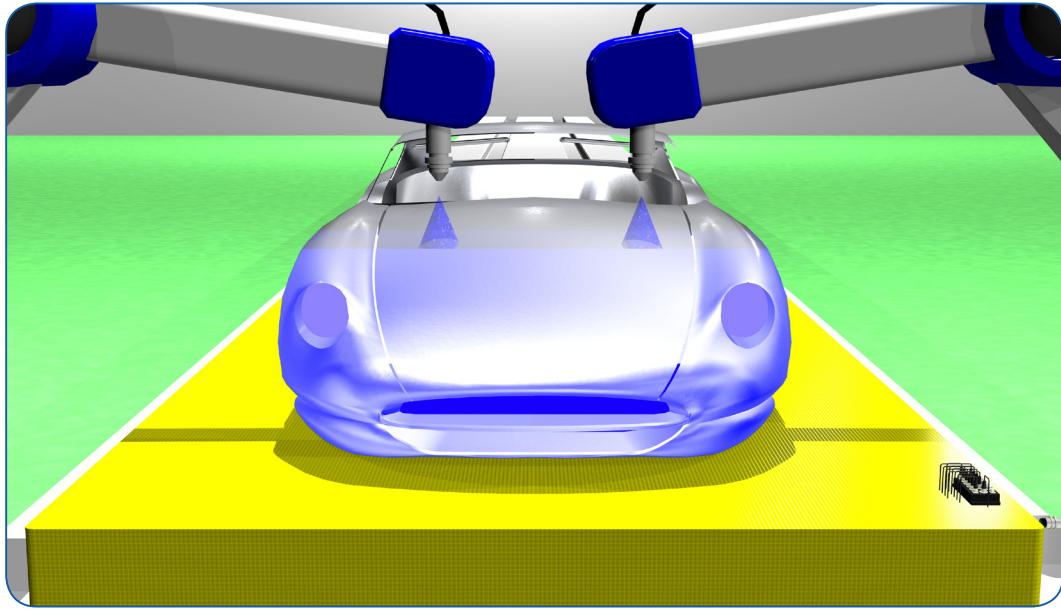
help the identification of a jig, the palette!

B&PLUS Silicon tape

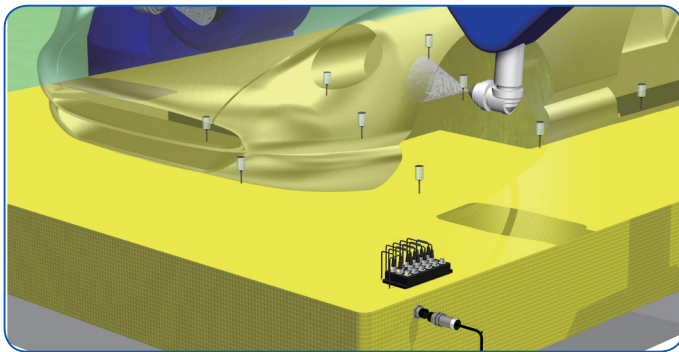


SELF-ADHESIVE and protection just by wind around

Painting Process



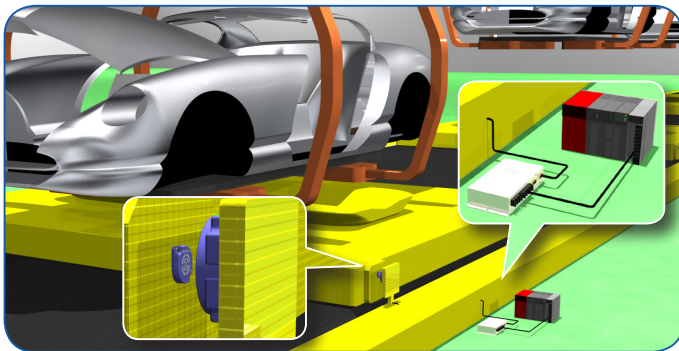
Example of the implementation



Body confirmation and automation of the corrosion inhibitor application line

In a process of applying a corrosion inhibitor to a car model, a proximity sensor for a seating, the identification confirmation of the body is installed in the conveyance chassis of the body.

- ✗ Using the connectors to supply power and confirm the signal to each sensors before the process, but malfunction occurs by the abrasion and adhesion of the corrosion inhibitor
- By Adopting a remote system, it is succeeded to automation and labor saving. T slot type attached directly to the metal mold is most suitable.



Model and Color confirmation after the hanger palette loading

In a painting process, the tag which was attached to a conveyance palette recognize the model and the color, then able to fix the body painting without mistaken.

- ✗ Identifying the color of the model by Human work.
- To prevent from mistake, using the ID tag. To lighten the burden of workers. Enlargement and remodeling can correspond by increasing tags.

Recommended Product

Remote System / Terminal



Possible to identify 16 bits.

RFID System / 8 · 10 bit system



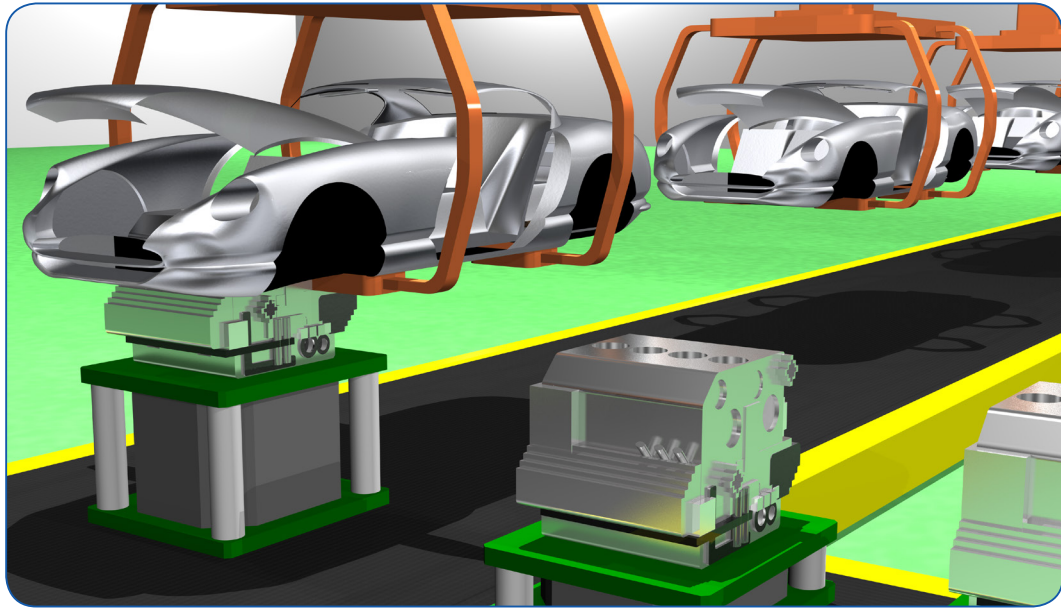
Suitable for the identification of the palette!

RFID system / Z series

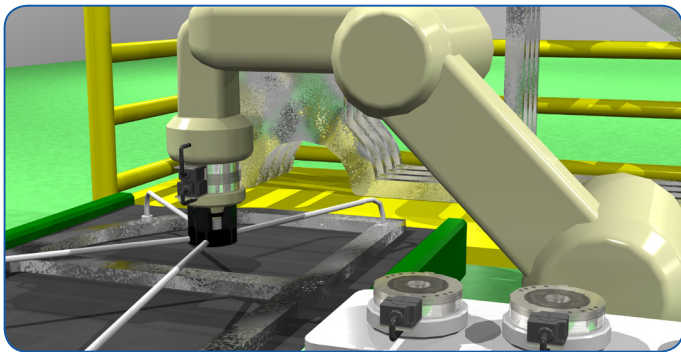


Controlling MELSEC-Q, CC-Link

The Final assembling process



Example of the implementation

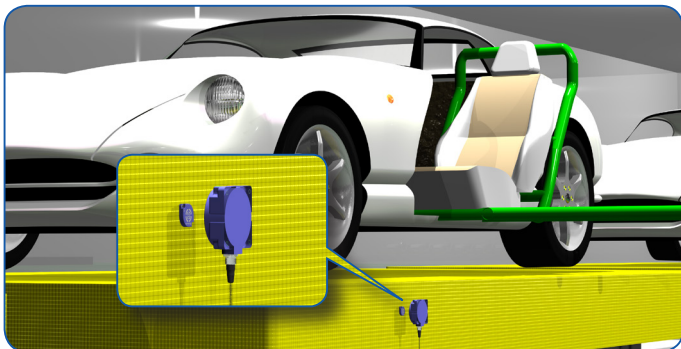


Changeover Robot Hand to wireless

There is a sensor for work grasp confirmation on the handle. Because a hand is necessary to grasp work exactly, and to confirm it, the changeover of the hand is necessary for the suitable work.

✗ By using the contact pins to supply power and signal communication to the sensor, but line stop by contact damage occur frequently.

○ Changeover Robot Hand to wireless. No more poor contact, and became easy for automatic exchange of the tool.



Automation of the car model confirmation

In a process of assembling the seat, the tag that is attached on the palette will read the car model and place the correct seats.

✗ Due to using the operation instruction and checking each by each, placing the wrong specifications have occurred.

○ Due to the implementation of the ID system, automatically verifies the correct seats and specification and avoid any mistakes.

Recommended Product

Remote System / Compact shape



Possible to install in to a robot hand.

RFID System / 8 · 10 bit system



Suitable for the identification of the palette!

RFID system / Z series



Controlling MELSEC-Q, CC-Link

Wireless Power Supply by

B & PLUS K.K.

Mail : b-plus-usa@b-plus-kk.com

Web : <http://www.b-plus-kk.com>

* Contents is subject to change without notice.

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