





To order AnyWire products, please contact the following:

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Pokayoke System Terminal series

Pokayoke System



Accurate operations





Elimination of paper record forms

Simplification of operations



What is picking?

Picking is a physical distribution term. It means to pick products from stock in response to an order or request (shipping instruction). As picking systems, there is "total picking" and "single picking." In the total picking system, a picker brings certain products or articles in bulk to a freight handling area and sorts them by shipping destination according to instructions. In the single picking system, only the required quantity of products or articles are taken off from racks for each shipment. In addition, among the picking systems, there is also the Pokayoke Picking System to prevent errors in orders and assembling of assembly parts at cell production sites.

Problem at cell production sites

At parts-assembling production sites, "picking" operation is performed to pick parts from stock according to shipping instructions for manufacturing. The quantity of parts handled is large and many parts have difficult-to-determine shapes only at first glance. Accordingly, mistakes in assembling wrong parts frequently occur and become improvement tasks at production sites. Where semi-finished products are assembled with such inadequately picked parts, released to a next process due to lack of error detection within the process, and finally detected as an error in the final process stage, a re-start in assembly operations or an entire product failure may result. This is one of the problems in picking operation.

Pokavoke System

The "Pokayoke System" by use of the AnyWire Pokayoke Terminal is a picking system to prevent parts assembly errors. More specifically, parts are ejected, checking and assembling are performed by a switch according to indication from the Pokayoke Terminal, Further, from the next lamp indicator, parts ejection and assembly are performed as a series of operations.

For the Pokayoke Terminal installed respectively on top (or bottom) of the "Picking Tray," the Digital Display Pokayoke Terminal which enables quantity display in addition to lamp indication is also prepared. You can realize an efficient "Pokayoke System" by combining and installing these terminals according to your application.

This system can also be used to collect information on production sites in addition to picking operations. It can be efficiently managed by using the techniques for operation improvements.

Simple and Reliable, Pokayoke Terminal!

The Pokayoke Terminal series is a terminal to support assembly at cell production sites and to support sorting operations for physical distribution / distribution. The Terminal can perform 7-color LED emission and digital display, and the lever-type switch, push button and reflective sensor are integrated as a sensing function. In addition, the AnyWire Sho-Haisen (wiring saving) interface is installed on the terminal itself and only a 4 core cable used for wiring. Therefore, stress can be minimized without being preoccupied with cable routing during design, execution and maintenance.

Pokayoke Terminal series



AnyWire is Environment-Responsive

AnyWire is a participating member of the "Team Minus 6%" campaign. The positioning of the AnyWire Sho-Haisen System is the part nearest to the sensor and the number of cables is the largest. By using the AnyWire Sho-Haisen, cable resources to be newly installed can be reduced and cables used in existing systems can be reused.

The goal of AnyWire is to realize a recycling-oriented society by working towards recycling of used products and reduction of resources in various automation fields.



AnyWire

The Sho-Haisen of AnyWire Corporation is used in every kind of field including automobiles, foods, chemicals and semiconductor distribution

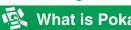
In addition, the Company will continue to supply products capable of adapting to various fields in consideration of a future society.

Since AnyWire Sho-Haisen continues to make advancements and evolve, we look forward to surprising your expectations.

Overview

AnyWire Pokayoke Terminal series

Pokayoke Terminal series



What is Pokayoke Terminal?





Pokayoke system indispensable to sorting and assembly operations in every kind of field

By using the Pokayoke Terminal, the Pokayoke System is designed to eject assembly parts in a paperless manner eliminating the need for forms or lists. In general distribution, this is called a Digital Picking System which supports distribution operations by use of a digital display. In addition, demand for "traceability" has been on the increase recently. The Traceability Picking System also plays an important role in grasping the location and channel of products in production, manufacture, and physical distribution.



Introduction effects on management

· Easy allocation of temporary workers and part-time jobbers due to its

Effects of Introduction of the Pokayoke System!

- · Substantially reduced sorting errors (One-tenth or less)
- A more than double increase in productivity can be realized
 Picking quantity setting errors can be prevented in advance
- Reduced operation time
- Immediate grasp of product shortfalls

■ Introduction effects on operators

- Not only experienced operators but also anyone can operate at once
- No need to operate with the picking list
 No need to search for any goods
- · Easy operation with the shortest amount of movement
- Both hands can be used freely
- No misunderstanding of products or locations

AnyWire Corporation offers the "Sho-Haisen Pokayoke Terminal" which can be used as if it were a D-I/O of a PLC and installable.

Need for Pokayoke Terminal!

Parts ejection, installation and completeness check were previously conducted by operators. However, operational errors sometimes occurred due to "diminished attention caused by long duration operations" or "familiarity and boredom caused by simple operations." This system was established because even a single error is unacceptable in automotive assembly operations and to prevent tremendous damage due to a single error. By introducing the Pokayoke System, parts can be ejected eliminating the need for forms and assembly operations can be performed by "anyone" "speedily" and "accurately."

Features of Pokayoke Terminal



- Simultaneous transmission of the power supply and data with 2 general wires
- Free wire branch (T-branch, multi-drop, tree branch)
- Simple wiring change construction with general connector cable (One type of
- No need for concern about wiring routing due to high resistance to noise

■ Scalable system configuration with a high degree of flexibility and extendibility

- Connectable to any open net, Ethernet or PLC or PC of any company
- Transmission distance: Maximum 50 m (Total extension) Commercial DC power supply is available for use
- Fast response available
- Accurate operations with no interference

■ Terminal reflecting the needs of a site

- Well-lit and clean LED lamp display (Opalescent while the lamp is
- Lever switch with rubber cover can withstand rough operation
- (Mechanical service life: 1,000,000 cycles)
- Terminal equipped with the address switch enabling node number setting in on site

· Even if installed in a high place, a string can be tied to the eject check switch

Application Examples of Pokayoke



Steel parts rack installation type



At an Auto Parts Assembly Site!

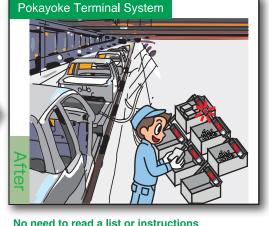


Pipe rack installation

Before and After Adoption of Pokayoke Terminal



At an Automotive Assembly Site!



Pokayoke Terminal

Time and effort required to read a list and instructions

Do not know as to where actual parts are Becomes one-handed operation Time required to assemble

Incorrect parts assembly occurs

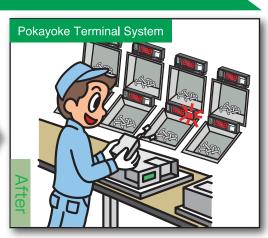
Assembly time reduced

Know where actual parts are at once Can operate with both hands Quality improved with correct parts assembly

At an Electronics Equipment Assembly Site!



hen a Pokayo



■ Pipe rack installation type

Pokayoke Terminal Lineup





■ Steel parts rack installation type (Reflection type)

Mount on a dedicated Wiring duct AO27-DM 1m

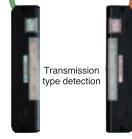
Front reflection type

(2 lamps/ green orange) (1 lamp/ green)

Downward reflection type

(2 lamps/ green orange) (1 lamp/ green)

■ Direct installation type (Transmission type)



(Receiving side) (Transmitting side)

System Configuration Example

PLC (Mitsubishi Electric Corporation)
MELSEC Q

AnyWire Pokayoke Terminal series

Pokayoke Terminal series

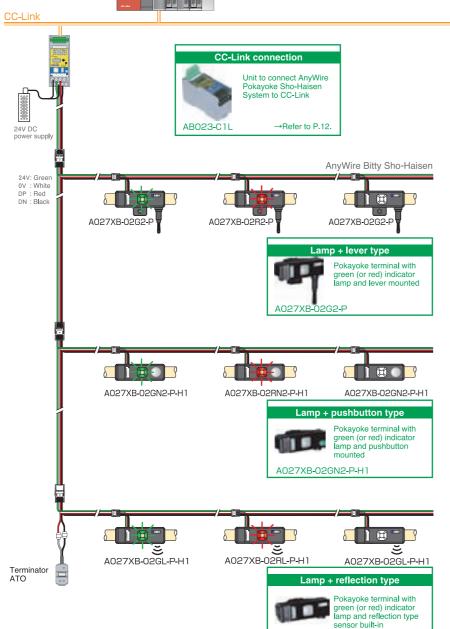
CC-Link compatible system configuration



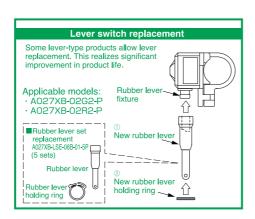
Pokayoke Terminal

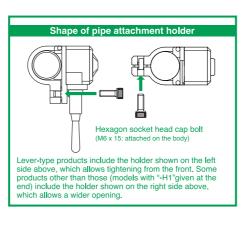




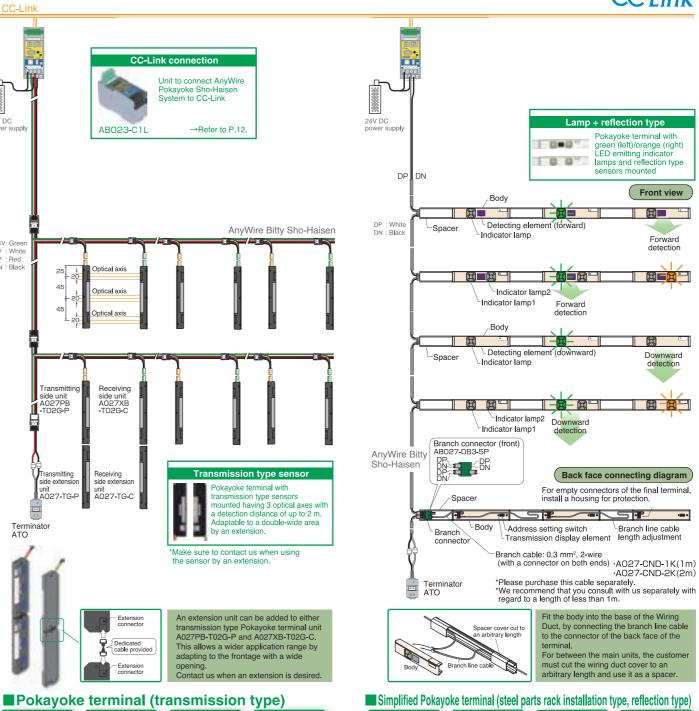


A027XB-02GL-P-H1





CC-Link



7.

■ Pokayoke terminal (pipe rack installation type)



■7-segment LED display Pokayoke terminal



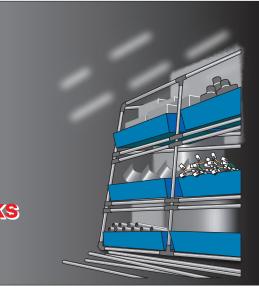
Door Type Pokayoke Terminal

AnyWire Pokayoke Terminal series

"Pokayoke," which is a keyword for ensuring quality...

The Pokayoke System is in the spotlight, as a reliable method for specifying parts to compensate for shortages of experienced operators...

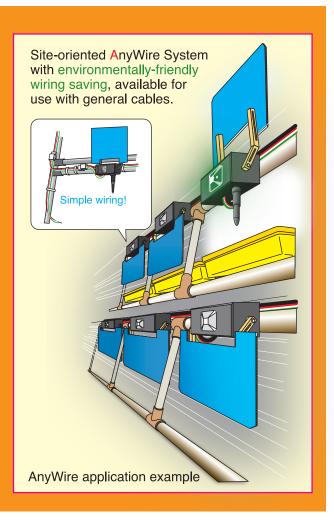
The ultimate picking system is supported by only opening racks for required parts.



AnyWire Door Type Pokayoke Terminal

Enhanced functions packed into a compact body!

- · Opening/closing drive system
- Opening/closing angle adjustment system
- · Opening/closing time setting function
- · Lever type Pokayoke display function
- Wiring saving function
- Connectable to various controllers such as PLC and PC
- · Simple control by memory access
- · Many units are connectable in one system
- · High resistance to static electricity
- · Robust structure
- For details, please contact us separately.
- This terminal is not recommended for large-scale distribution applications.



Why not use AnyWire?

Size A:110x103x66

Door Type Pokayoke Terminal (Pipe rack installation type)



	oints	Sensor input speci-	Display	Circuit	Consumption Current (mA	Installation	Size (mm	Model	Standard Price (¥)
Input	Output	fication			83		Si		` ′
1	1	Lever switch door type	LED		Standby: 19 Operation: 522		Α	A027XB-F02G2-P(-H1)	Open
1	1	Lever switch door type	LED		Standby: 19 Operation: 522		Α	A027XB-F02R2-P(-H1)	Open

*For specifications other than the indicator colors shown above, please contact our Sales Division.

*One section of pipe installation holder the same as A027-HP28-5P is included with the above model

Address Writer
(Door type Pokayoke recommended)

Noncontact
type

ARW-02

Open



• • • • • • •	• •	•	• • • •	• • • •
φ28pipe installation holder bottom tightening type (5 pcs. included)	ф28 ріре		A027-HP28-5P	Open
φ28 pipe installation holder back tightening type (5 pcs. included)	ф28 ріре		A027-HP28-H1-5P	Open
SUS pipe installation holder (5 pcs. included)	SUS pipe		A027-HP-SUS2-5P	Open
Rubber lever set for replacement (cover, lever, ring: 5 pcs each included)	-		A027-LES-01-5P	Open

*The pipe installation holder is included with the Pokayoke Terminal (pipe rack installation type). Single parts are the options for installation change or repair time.

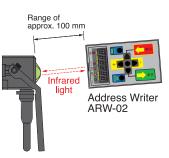
Simple setting with Address Writer!

Setting items

- Address
- Arm lowering delay time
 Arm rising flowering angle

*Set not to exceed the maximum number of transmission points including the number

Writing (reading) toward the setting port using an infrared light.



Arm lowering delay time

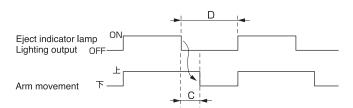
*Speed setting not available.

of points on the terminal itself.

The arm interlocks and rises internally when the eject indicator lamp is lit up (output is ON), while the arm automatically lowers after a specified time when the eject indicator lamp is extinguished (output is OFF).

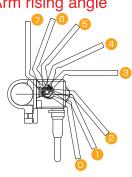
The delay time until this arm lowers can be selected among 10 levels

Set Value	Delay Time C (seconds)
0	0.7
1	1
2	3
3	3
4 5	4 5 6
5	5
6	6
7	7
8	8
9	9
10	10

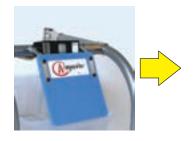


Remarks: When in the same terminal the interval (D) between the eject indicator lamp OFF and ON is shorter than the set delay time (C), the arm temporarily lowers and then rises.

Arm rising angle



The arm rising angle can be set at 7 levels up to approximately. 180°. Adjustment becomes possible when the door strikes the rack or work. Write the number of the position to roughly stop the door at the angle setting mode of the Address Writer (ARW-02).



1 ANYWIRE New Sensor Network Technology

ANYWIRE New Sensor Network Technology 18

Products [AnyWire Bitty series]

AnyWire Pokayoke Terminal series

Bitty Series Pokayoke Terminal

Pokayoke terminal pipe installation type



I/O Points		Sensor input	lay	ij	nption : (mA)		(mm)		Standard Price
Input	Output	speci-	Display	Circuit	Consumption Current (mA)	Installation	Size (Model	(¥)
1	1	Lever switch	LED		35	ф28 ріре	С	A027XB-02G2-P	Open
1	1	Lever switch	LED		35	ф28 ріре	С	A027XB-02R2-P	Open
1	2	Lever switch	LED		35	ф28 ріре	С	A027XB-04GR-P	Open
1	3	Lever switch	LED		35	ф28 ріре	С	A027XB-04M-P	Open
1	1	Downward reflection	LED		35	ф28 ріре	Α	A027XB-02GL-P-H1	Open
1	1	Downward reflection	LED		35	ф28 ріре	Α	A027XB-02RL-P-H1	Open
1	1	"White" pushbutton	LED		35	ф28 ріре	В	A027XB-02GN2-P-H1	Open
1	1	"White" pushbutton	LED		35	ф28 ріре	В	A027XB-02RN2-P-H1	Open

*For specifications other than the indicator colors shown above, please contact our Sales Division.
*For products with "-H1" assigned at the end of the model number, the same pipe attachment holder (1 pc.) as A027-HP28-H1-5P is included as a standard.
(For models with "-H1" not assigned at the end of the model number, the same pipe attachment holder (1 pc.) as A027-HP28-5P is included)

Door type Pokayoke terminal pipe rack installation ty



ONO COLLINIA			par	I O.		= =	Installation	\sim	Model
installation type	Input	Output	speci- fication	Disp	Circ	Consun	mstallation	Size	Model
71	1	1	Lever switch door type	LED		Standby: 19 Operation: 522		Α	A027XB-F02G2-P
Size A: 110x103x66	1	1	Lever switch door type	LED		Standby: 19 Operation: 522		Α	A027XB-F02R2-P
									ve, please contact our Sale

les Division.

• • • • • • •	• • •	• • • • •	• • •
Address Writer (Door type Pokayoke recommended)	Noncontact type	ARW-02	Open

Open

Open



ф28 ріре		A027-HP28-5P	Open
ф28 ріре		A027-HP28-H1-5P	Open
SUS pipe		A027-HP-SUS2-5P	Open
-		A027-LES-01-5P	Open
	ф28 ріре	ф28 ріре	φ28 pipe

*The pipe installation holder is included with the Pokayoke Terminal (pipe rack installation type). Single parts are the options for installation change or repair time.

Bitty Series Pokayoke Terminal

Pokayoke terminal (transmission type)



Size A: 110x30x10 *Consumption current (mA) in case of combination
In case of *A027PB-T02G-P" and *A027XB-T02G-C" → (40 mA x [number of set units]) + 150 mA
In case of *A027PB-T02G-P"+ *A027-TG-P" and *A027XB-T02G-C" + *A027-TG-C" →
(80 mA x [number of set units]) + 300 mA

*Extension sensor unit

Size A: 140x30x10

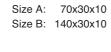
r	Extension sensor (with display)	Transmitting	LED	3	21	M3 screw attachment	Α	A027-TG-P	Open
	Extension sensor (with display)	Receiving	LED	3	25	M3 screw attachment	Α	A027-TG-C	Open
	*Make sure	to contact	us wh	nen us	ing the	sensor by	an ex	ctension.	

*Option

• • • • • • •	•	•	• • • •	• • • •
Transmission type terminal protective bracket	M3 screw attachment		A027-TPC	Made-to-order
Transmission type terminal L-shaped mounting bracket	M3 screw attachment		A027-THL	Made-to-order
Transmission type terminal φ28 pipe mounting bracket	ф28 ріре		A027-THP28-H1	Made-to-order

Open Open

Pokayoke terminal (transmission type dust-proof type) 70 mm short type



Size B: 140x30x10

*Option

Input	Output	fication	Ö	Q.	Cons		Size		(¥)			
	1	Transmitting	LED	3	21	M3 screw attachment	Α	A027PB-T07P02D-P	Open			
1	1	Receiving	LED	3	25	M3 screw attachment	Α	A027XB-T07P02D-C	Open			
•	ransmission type dust-proof type M4 screw											
Trans termin	Transmission type dust-proof type terminal protective bracket							A027-T07PC	Made-to-order			
		n type dus 8 pipe mou			et	ф28 ріре		A027-T07PHP28-H1	Made-to-order			
Fixing screw set with no protective bracket (5 pcs. included)						M4 screw attachment		A027-TSM4-5P	Made-to-order			
Fixing screw set with protective bracket						M4 screw attachment		A027-TPSM4-5P	Made-to-order			

Pokayoke terminal (transmission type dust-proof type) 140 mm Long type

*Option

				_		attachment	-		
1	1	Receiving	LED	5	25	M3 screw attachment	В	A027XB-T14P02D-C	Open
•	•	• •	•	•	•	• •	•	• • • • •	• • • •
termi	nal pro	on type du otective bra	acket			M4 screw attachment		A027-T14PC	Made-to-order
		on type du 18 pipe mo				ф28 ріре		A027-T14PHP28-H1	Made-to-order
	g screv s. inclu	w set with uded)	no pro	tective	bracket	M4 screw attachment		A027-TSM4-5P	Made-to-order
/= ° '					acket	M4 screw attachment		A027-TPSM4-5P	Made-to-order



Address writer (general-purpose) Nonc	ncontact type	ARW-01	Open

Products [AnyWire Bitty series]

AnyWire Pokayoke Terminal series

Bitty Series Pokayoke Terminal

 Simplified Pokayoke terminal Steel parts rack installation type (reflection type)

*Such products can be adhered on the smooth surface of the rack plate side etc., with double-sided tape.



Size A: 140x26x23 Size B: 100x26x23

◆ Simplified Pokayoke terminal Steel parts rack installation type Short type (reflection type)

*Such products can be adhered on the smooth surface of the rack plate side etc., with double-sided tape.

	I/O Points		O Points Sensor input		Optical axis Consumption Current (mA)		Installation	(mm)	Mardal	Standard Price
	Input	Input Output Sensor input specification Output		Installation			Size	Model	(¥)	
	1	1	Forward reflection	LED	1	35	Wiring duct	Α	A027XB-D02GLF	Open
се	1	2	Forward reflection	LED 2 lamps	1	45	Wiring duct	Α	A027XB-D04GOLF	Open
^	1	1	Downward reflection	LED	3	35	Wiring duct	Α	A027XB-D02GLU	Open
3 3	1	2	Downward reflection	LED 2 lámps	3	45	Wiring duct	Α	A027XB-D04GOLU	Open

•	•	• •	•	•	•	• •	•	• • • • •	• • • •
1	1	Forward reflection	LED	1	35	Wiring duct	В	A027XB-D102GLF	Open
1	2	Forward reflection	LED 2 lamps	1	45	Wiring duct	В	A027XB-D104GOLF	Open
1	1	Downward reflection	LED	1	35	Wiring duct	В	A027XB-D102GLU	Open
1	2	Downward reflection	LED 2 lámps	1	45	Wiring duct	В	A027XB-D104GOLU	Open

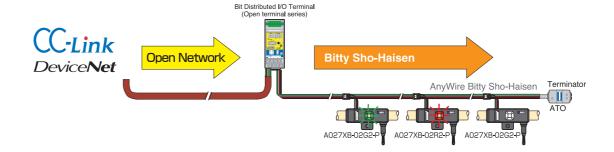
*Option

Trunk line cable	0.75 sq x 2-wire cable with connector on both ends: 1000 mm	A027-CND075-1K	Open
Cable	0.75 sq x 2-wire cable with connector on both ends: 2000 mm	A027-CND075-2K	Open
	1.25 sq x 2-wire cable with connector on both ends: 1000 mm	A027-CND125-1K	Open
	1.25 sq x 2-wire cable with connector on both ends: 2000 mm	A027-CND125-2K	Open
	1.25 sq x 2-wire cable with connector on one end: 1000 mm	A027-CN125-1K	Open
	1.25 sq x 2-wire cable with connector on one end: 2000 mm	A027-CN125-2K	Open
Branch line cable	0.3 sq x 2-wire cable with connector on both ends: 1000 mm	A027-CND-1K	Open
capie	0.3 sq x 2-wire cable with connector on both ends: 2000 mm	A027-CND-2K	Open

*We recommend that you consult with us separately with regard to any orders at a length other than the above. (Unit: 50 mm)

• • •	• • • • • • • • • • • •	• • • •	
Branch connector	Trunk line ⇔ 3-branch connector for branch line connection (5 pcs. included) A027-DB3-5P	Open	
Wiring duct	g duct Wiring duct for rack installation (width: 25 mm): 1000 mm A027-DM		

Open Network Interface



◆ Bit Distributed I/O Terminal







AB023-C1L

AB023-D1									
	Support I	/O Points	Consumpt						
_	Language	0	Current						

Product Specification	Connection Specification	Support I Input	/O Points Output	Consumption Current	Size (mm)	Model	Standard Price (¥)
Bit Distributed I/O Terminal for CC-Link	Remote device station (1 - 4 stations selectable)	256 (When 4 stations are occupied)	256 (When 4 stations are occupied)	Approx. 200 mA (When 128 terminals are connected) (Not including load current)	40x100x66	AB023-C1L	Open
Product Specification	Connection Specification	Support I Input	/O Points Output	Consumption Current	Size (mm)	Model	Standard Price (¥)
Bit Distributed I/O Terminal for DeviceNet	Group 2 only server	256	256	Approx. 200 mA (When 128 terminals are connected) (Not including load current)	40x100x66	AB023-D1	Open

◆ Terminator



Product Specification	Size (mm)	Model	Standard Price (¥)
For Bitty Line terminal, with polarity	44x24.5x12	AT0	1.100

Products [AnyWire Bitty series]



Accessories

◆ Debugger / Monitor Tool

Product Specification	Details	Model	Standard Price (¥)
DB monitoring software for PC	I/O monitoring software for Windows PC Compatible with Windows 98/98SE/ME/2000/XP	Please contact us *Free download available from our website	No charge
Connection cable for DB monitoring	Cable to connect PC and Anywire DB master (PC side: RS232C)	CA-PCRM-15C	10,000
DB monitoring software for PDA *Cable for RS232C included	I/O monitoring software for PDA Compatible with Pocket PC 2002 (RS232C port required)	DBM-PPC-1	28,000

◆ AnyWire Cable / Connector

Product Specification	Details	Model	Standard Price (¥)
4-wire flat cable (100 m winding)	AWG18 (0.75 sq) x 4-wire insulating coating outside diameter ϕ 2.5±0.1 mm (Conductor resistance 0.027 Ω /m, Allowable current 6A)	FK4-075-100	Open
LP connector (10 pcs. included) *Insulation displacement link connector	For 4-wire flat cable (Coating outside diameter: \$\phi\$2.54 mm, Cover: black Body: black)	LP4-BK-10P	Open
insulation displacement link connector	For cabtire cable (Coating outside diameter: \$\phi1.8 - 2.1 \text{ mm, Cover: white Body: black})	LP4-WH-10P	Open
	For cabtire cable (Coating outside diameter: \$\phi 2.1 - 2.4 mm, Cover: orange Body: black)	LP4-OR-10P	Open
	For cabtire cable (Coating outside diameter: ϕ 1.8 – 2.1 mm, Cover: yellow Body: black)	LP4-YE-10P	Open
	For cabtire cable (Coating outside diameter: ϕ 2.1 – 2.4 mm, Cover: orange Body: gray)	LP4-ORG-10P	Open
- 100 PM	For cabtire cable (Coating outside diameter: \$\phi1.8 - 2.1 \text{ mm, Cover: yellow Body: gray})	LP4-YEG-10P	Open
Insulation displacement tool for LP connector	Insulation displacement tool for exclusive use of LP connector (Dedicated tool is recommended although insulation displacement is possible with pliers etc.)	LP-TOOL	Open



- Make sure to read the product manual of each piece of equipment in advance in order to use the product described in this catalog properly. Use the product within a predetermined range.
- AnyWire System is designed for general industrial use. It therefore does not always retain reliable functionality in regard to usage which requires higher safety such as safety equipment or accident prevention systems. In such cases, make sure to consult with us in advance.
- In case the system is to be used under the following conditions or environments, please contact our sales representative while considering keeping the usage allowance against ratings and functionality as well as implementing safety measures such as fail-safe devices.
- ① Usage under the conditions or environments that are not described in the Bitty Series Technical Manual.
- ② Application of the system for nuclear-power control, railroad facilities, air-navigation facilities, vehicles, combustion devices, medical devices, amusement machines, safety equipment, etc.
- ③ Application of the system for purposes where significant impact upon human life and property is predicted, and for purposes where safety is especially required.