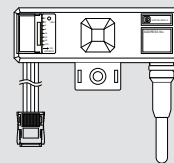


AnyWire Bitty series POKA-YOKE Terminal



A027XB-02□2-P

Replaceable lever input

Eject indicator lamp (Green) (Red)

Protruding transmission line and flat cable

The **AnyWire System Products Guide** describes individual products. Refer to the Guide as necessary.

[Notes on Safety]

Precautions that must be observed in order to use this system safely are indicated as shown below. You must observe these precautions.



A **WARNING** indicates a potentially hazardous situation which, if not handled correctly, could result in death or serious injury.



A **CAUTION** indicates a potentially hazardous situation which, if not handled correctly, may result in personal injury or property damage.



- System Safety
This system is intended for general industrial applications. It does not have functions for supporting applications requiring higher levels of safety such as safety-related devices or accident prevention systems. The product must not be used for these purposes.
- Always turn off the power before attempting to mount or replace.



- System power supply
Use a stable, 24V DC power supply. Use of an unstable power supply may cause problems with the system.
- Separately route high-voltage and power cables
Although the **AnyWire Bitty Series** has a high noise margin, keep the transmission line and I/O cables away from high-voltage and power cables.
- Connectors and terminals
 - * Pay careful attention to the length and installation of cable wiring to ensure that connectors and cables are neither overloaded nor disconnected.
 - * Make sure to prevent any metal objects from getting inside the connectors or the terminal blocks.
 - * Short-circuits caused by metal objects or mis-wiring are likely to damage the device.
- Do not impose any external loads on the units. Doing so may cause a failure.
- Do not disconnect or reconnect between the transmission line and slave units. A malfunction may be caused.
- Do not use for power supply of **AnyWire Bitty series** and for switching parallel signal for SBC (Single Board Controller) and controller, etc.
Commonalization of mutual power supply systems may result in system failure.
- Use the **AnyWire Bitty series** within the range of the specifications and conditions shown below.

[Features]

- * This product is compatible with the AnyWire Bitty series.
- * This product has a replaceable lever switch (input) and an indication to direct ejection (output) function.
- * This product can be laid out with a $\phi 28$ pipe.
- * Transmission and power supply can be connected with a 4-wire connection.
- * This product has a flat cable equipped with a link connector for transmission line connection.
- * The distance for transmission is 100 m, and up to 128 units can be connected.
(Power supply to the entire system)
- * The lever can be replaced.

[Warranty]

- Warranty period
The warranty on the delivered Product shall continue to be effective for one (1) year after the delivery thereof to a location as designated by the original owner.
- Scope of warranty
Should a defect occur in any part of the Product during the foregoing warranty period when it is used normally in accordance with the specifications described in this User's Manual, the Company shall replace or repair the defect free of charge, except when it arises as a result of:
 - [1] Misuse or abuse of the Product by the owner;
 - [2] Fault caused by other than the delivered Product;
 - [3] The unauthorized modification or repair of the Product by any person other than the Company's personnel;
 - [4] Any unusual force of nature, disaster or other cause beyond the Company's control.
 The term "warranty," as used herein, refers to the warranty applicable to the delivered product alone. The Company shall not be liable for consequential or incidental damages resulting from any malfunction.
- Repair at cost
After the expiration of the warranty period, the owner shall be responsible for all costs and expenses incurred for the troubleshooting and repair of the Product. Even during the warranty term, the Company shall repair any defects arising from causes other than within the scope of the warranty as specified above, at the owner's cost.

[Type]

Bit Operation

A027XB-02G2-P	One point input	Eject check input
	One point output	Eject indicator lamp (Green)
A027XB-02R2-P	One point input	Eject check input
	One point output	Eject indicator lamp (Red)

[Connection Example]

CC-Link DeviceNet

Compatible Open Bus	Type	Connector layout
CC-Link Bit distribution I/O terminal	AB023-C1L Input: 256 points Output: 256 points	FG SLD DG DB DA
DeviceNet Bit distribution I/O terminal	AB023-D1 Input: 256 points Output: 256 points	+V HNCV CANL Drain CANH -V

Terminal layout

24V	24V	DP	DP
LG	0V	DN	DN

24V: Green
0V : White
DP : Red
DN : Black

A027XB-02□□2-P

24V: Green
0V : White
DP : Red
DN : Black

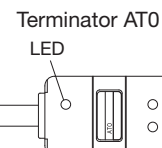
Eject indicator lamp

Eject check switch (Lever type)

A027XB-02□□2-P

24V: Green
0V : White
DP : Red
DN : Black

In order to turn ON the eject check switch without fail, tilt the lever at least approximately 30° or more. The lever is allowed to be tilted in any direction.



24V DC stabilized power supply for general-purpose

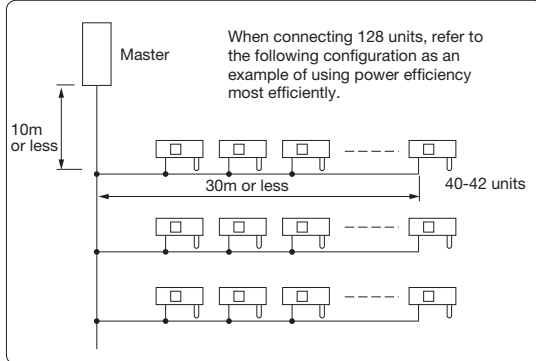
Install an AnyWire dedicated power supply to supply to the entire system.

24V DC stabilized power supply set voltage 26.4V. Select capacity 1.3 times of required consumption current.

Transmission line consists of four wires including power supply by our flat cable (FK4-075-100). Under this condition, number of units of A027XB-02□□2-P connectable to AB023-□□□ is up to 128 units per one system.

Transmission distance within the maximum length of 100 m

* The total length refers to the total of the used cables.



CAUTION
The terminator (AT0) is a composite element to stabilize the transmission wave form. Connect it at a position at the furthest end from the master in the transmission line. Note that it has own polarities. (The LED lights up in a normal state.) Improper connection may cause a malfunction or a failure.

CAUTION
If a shock of 0.49 G or greater is applied to the eject check switch, it may cause damage. Do not force the lever, such as by "twisting it" or "pulling it downward." Doing so may damage the eject check switch.



- **Transmission line (Bitty line)**
Connect transmission lines DP and DN correctly.
- **Installation of transmission lines**
Keep route transmission lines away from high-voltage and power cables. Assign one transmission cable to one system of AB023-□□□. If multiple systems are used, assign a cable to each system. If multiple systems are combined by a multi-wire cable, a malfunction may occur.
- **AnyWire transmission line error**
When the transmission line is not working properly, output is reset.
- **Power supply to the AnyWire System**
Install an AnyWire system-dedicated power supply to provide 24V DC power.

Wiring of POKA-YOKE Terminal

- Use the cable with a connector protruding from the back of the unit.
- Connect the cable, being careful not to reverse the connection or cause a short circuit.
- When swaging by the link connector, we recommend using a dedicated tool that can realize stable work quality. (L-TOOL-N: SUZUDEN CORPORATION)



When making the connection, make sure that the cable is not under tension. In addition, do not fix the unit while the cable is under tension.



Pay attention to crimping direction of the link connector. Improper connection results in malfunction or failure.

The hinge part side of the connector cover is the black line.



For details of link connector pressure welding work, refer to "How to pressure-weld link connector to flat cable" in our separate manual. (Contact our Sales Department.)

Trunk line side

Manufacturer: Sumitomo 3M Limited
Applicable connector: Link connector **Included**

A027XB-02□□2-P

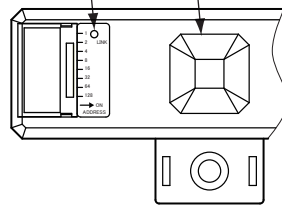
Cable used: 0.75mm²/4-wire flat cable
Applicable connector: FK4-075-100 (100m)

Cable used: 0.75mm²/4-wire flat cable
Applicable connector: FK4-075-100 (100m)

[Monitor Setting]

- This terminal has a monitor function.
- **LINK** indicator indicates the state of the system as shown in the table on the right.
- In cases other than normal indications, immediately turn off the power and eliminate the associated cause then turn on again after checking safety.

LINK indicator Eject indicator lamp



Indication LED	Indicated state	Monitor information
LINK (Red)	Flashing	Transmission signal received
	Goes out	Disconnection of power
	Lights up	Abnormal transmission (disconnection, short-circuit)
	Goes out	
Eject indicator lamp (Green) (Red)	Lights up	Eject indicator

Lights up Goes out

[Address Setting]

- Address numbers are used to correspond to the I/O memory map of the controller.

- Bit operation terminal

The numbers set with the address setting switch of the terminal correspond to the addresses of the "eject indicator lamp (output)" and the "eject check switch (input)," respectively.

This terminal performs **word-by-word data verification and update**.

- You can set addresses on a point-by-point basis.
- The DIP switch value is set as the same address for the input and output.
- It is registered as the "Input unit" in registration by address automatic recognition operation on the **AnyWire** Master side.

Setting example

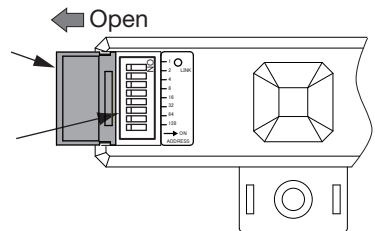
Bit Address	Switch Setting							
	1	2	4	8	16	32	64	128
0								
:	:	:	:	:	:	:	:	:
6		○	○					
:	:	:	:	:	:	:	:	:
254		○	○		○	○	○	○

* There is no speed setting.

* Set in such a manner so as not to exceed the maximum number of transmission points including the number of own terminals.

Address cover
Slide it in ← direction to open.

Address setting switches are located under the cover. When the lever is slid in the right direction in the posture in the figure on the right, the switch is turned ON. Operate the lever without fail.



[Specifications]

Item	Specification
Rated power supply voltage	24V DC (Power supply from AnyWire Master unit.)
Allowable power voltage range	21.6V DC - 27.6V (24V DC +15% - -10%) Ripple 0.5Vp-p
Ambient temperature use	0 - +55°C
Ambient humidity use	35 - 85%RH No condensation
Temperature/humidity storage	-20 - +70°C/35 - 95%RH
Atmosphere	No corrosive gas
Noise resistance	1200Vp-p (Pulse width 1 μs)
Transmission method	DC power supply superimposed total frame/cyclic method
Synchronization method	Frame/bit synchronization method
Transmission procedure	Dedicated protocol (AnyWire Bus)
Transmission clock	27.8kHz (when using AB023-□□□)
Transmission cycle time	5.5ms (when setting input 128 points, output 128 points) Note) Transmission delay time is 1 cycle to 2 cycle time.
Connection mode	Bus type (Multi-drop method, T-branch method, Tree branch method) 4-wire power batch supply method
Address setting range	0 - 255
Number of connection points	Up to 128 units (Connect to A027XB-02□□2-P only)
Transmission distance	Up to 100 m (0.75mm ² when using our flat cable)
Number of simultaneously output on points	128 points (When using an indication output test only)
Number of occupied data items	Input 1 bit/output 1 bit

[Power Consumption/Mass]

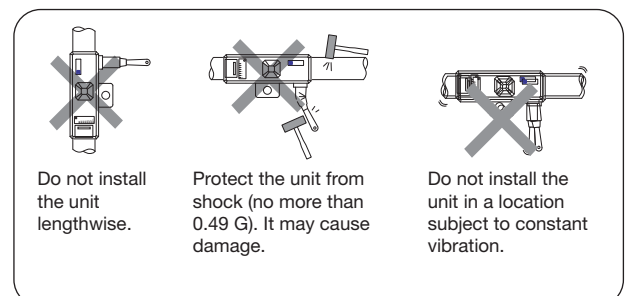
Type	Power Consumption	Mass
A027XB-02□□2-P	During standby : 10mA While the indication is ON : 20mA	100g

- Make sure to supply power to 24V DC line for A027XB-02□□2-P from the power supply which is supplied to the AnyWire Master.

[Installation Location]

- * Location where the unit will not be subject to vibration or shock.
- * Do not install the POKA-YOKE Terminal (AU27XB-02□□2-P) lengthwise.
- * Where the body is not exposed to waste metal or sputter.
- * Location where humidity is 35 to 85% RH, non-condensing.
- * Location where the atmosphere is free of corrosive gas, flammable gas, and sulfur.
- * Location where there are no high-voltage or high-current cables.
- * Location where there are no cables and controllers that generate servo, inverter, or other high-frequency noise.

This unit does not have any special protective structure.



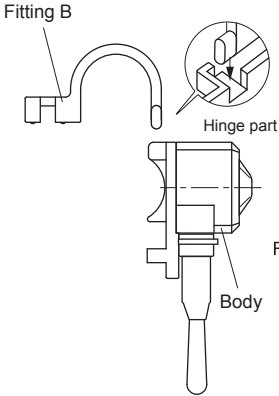
Do not install the unit lengthwise.

Protect the unit from shock (no more than 0.49 G). It may cause damage.

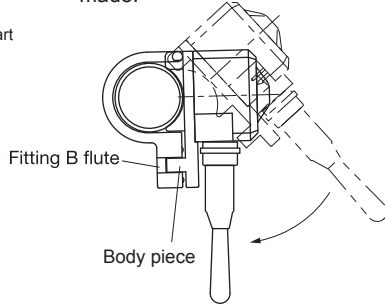
Do not install the unit in a location subject to constant vibration.

[How to Mount Fittings on the Pipe]

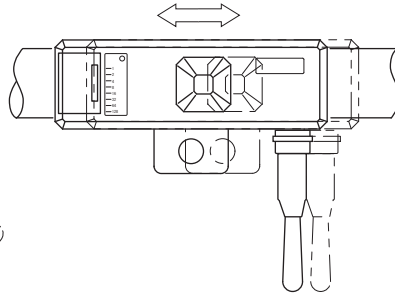
Hook the boss of fitting B onto the hinge part of the body.



Hook fitting B onto the pipe, and then pull the body to make the connection. When the body piece snaps into the flute of fitting B, a temporary fixing has been made.

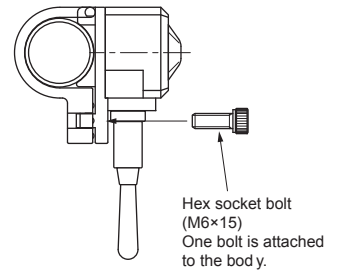


Slide the body to adjust the position.



Once the position has been determined, fasten fitting B to the pipe with the provided bolts.

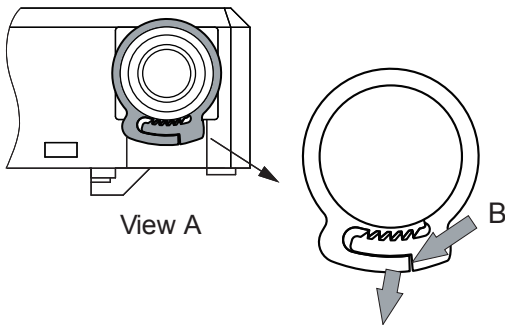
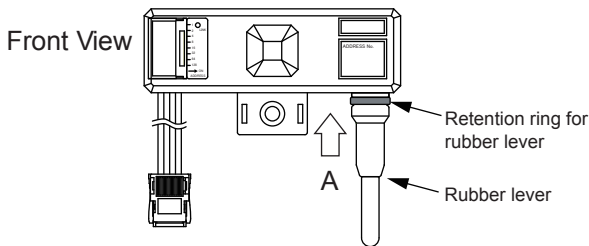
M6 bolt fastening torque: 1.5 - 2 N·m



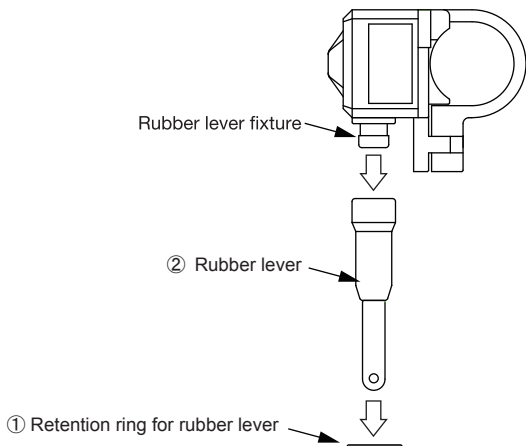
[How to Replace the Lever]

■ Removal of Rubber Lever

- (1) Push the black part of the retention ring for the rubber lever in the direction of B and release the stopper fitting to loosen the ring.

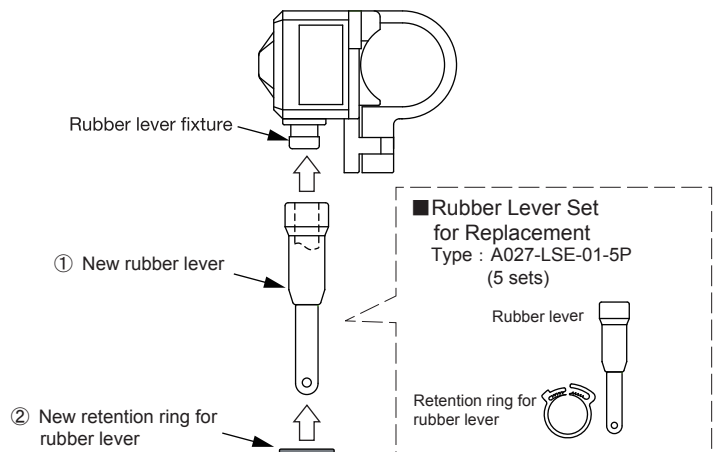


- (2) Remove the rubber lever from the rubber lever fixture in order (① → ②).



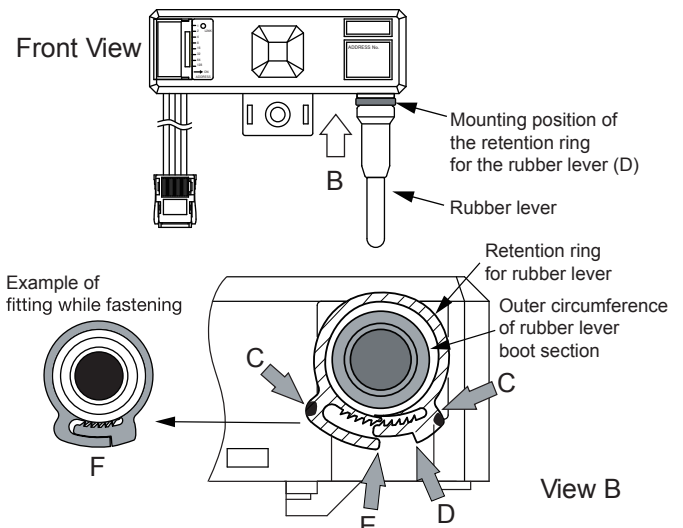
■ Mounting the Rubber Lever

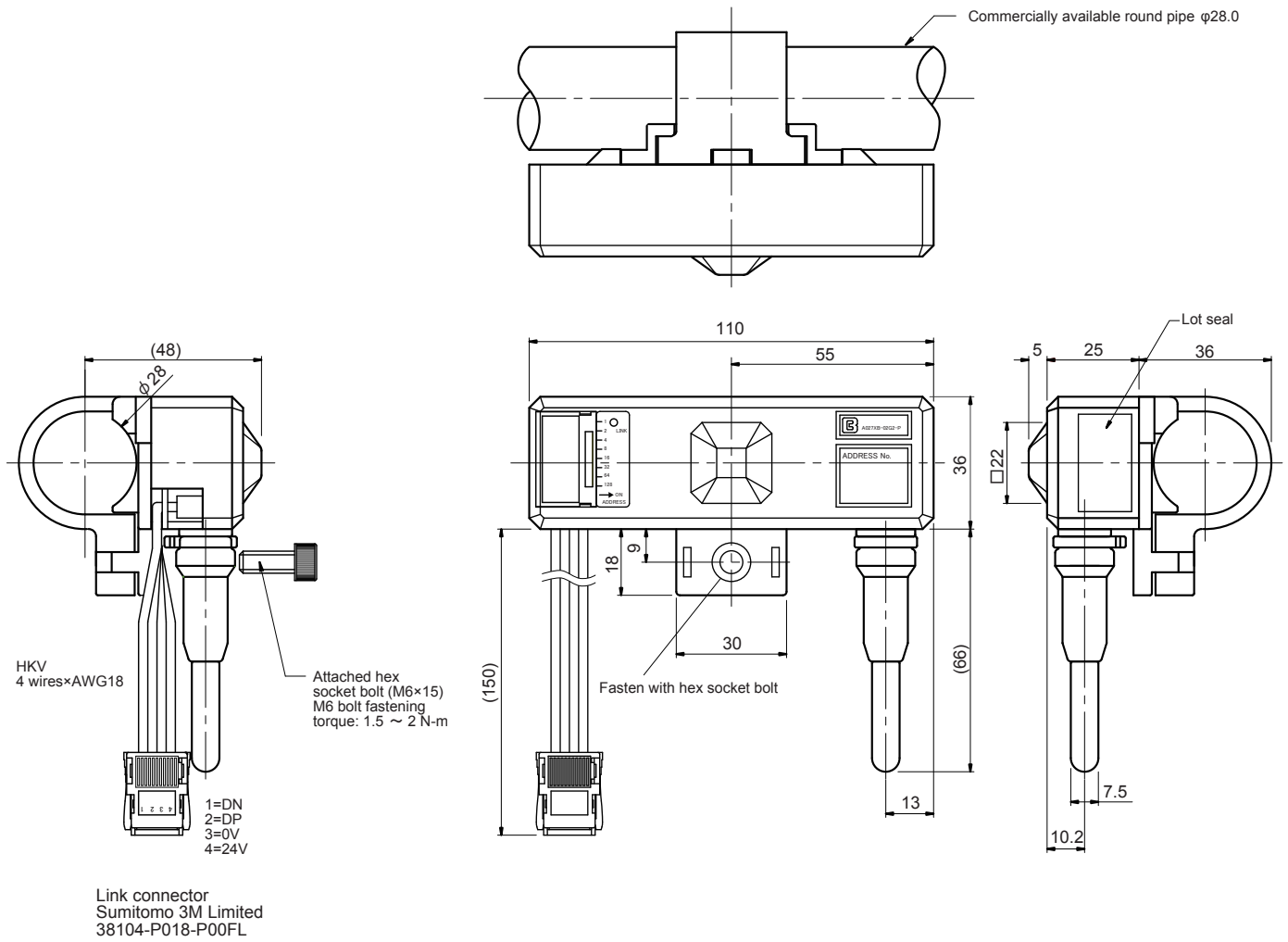
- (1) Ensure that a rubber lever fixture has been pushed completely into the boot section and place the retention ring over the rubber lever. Use a new retention ring for the rubber lever.



- (2) Mount the retention ring for the rubber lever to the (D) position (Rubber lever boot section) in the front view.

Fasten the outer circumference of the rubber lever boot section after pushing the black mark part in the direction of C with pliers, etc., and matching the stopper piece until D and E contact each other (Refer to F). After fastening, pull the lever and ensure that the lever is securely fixed.





[Address]

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