

# AnyWireASLINK System Product Guide

## ASLINKAMP

[Power Supply Unit for Analog]

## LB-S24

### [Type]

LB-S24	Power supply unit for analog	Insulated power supply for CH load
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This product is power supply unit for analog for AnyWireASLINK system.

### [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.

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

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

**WARNING**

- 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.
- Before installation, replacement and/or cleaning of the product, be sure to turn OFF the power supply for the system.
- Prolonged continuous flow of a rated load current or higher or a transit current due to load short-circuit, etc., in the hybrid unit including the output unit and the output circuit may result in smoking or firing. An external safety device such as a fuse must be installed.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

**CAUTION**

- 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 AnyWireASLINK has a high noise margin, install the transmission line and I/O cables away from high-voltage and power cables.
- Connectors and terminals
  - Consider the length and securing method of cables so that the cables and connectors would not be subjected to any stress and, even if they are under stress, they would not become loose.
  - 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 remote units when the transmission line is active. A malfunction may occur.
- Use the AnyWireASLINK within the range of the specifications and conditions shown below.
- The equipment is an Open type device which is intended to be installed in a suitable external enclosure for fire, shock and mechanical protections.
- Equipment installation, wire insulations, routing and separations shall in compliance with NEC/CEC and any requirements from local authorities.

### [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 Products Guide, 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.

#### ■ Changes in the product specifications and the descriptions in the manual

The descriptions in this manual may be subject to change without notice.

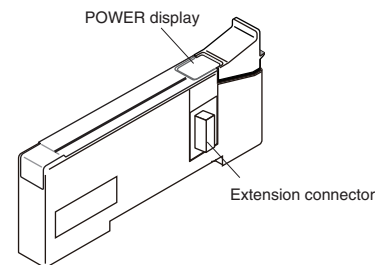
### [Function]

Model	Power Supply Unit for ASLINKAMP
Input	188mA/24V DC
Output	100mA/24V DC
Function	Only 1CH supply Insulated power supply (Withstand voltage 100V DC)

### [Packaging Item]

LB-S24	Base unit ...1
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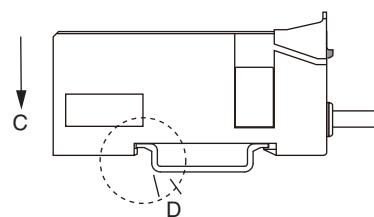
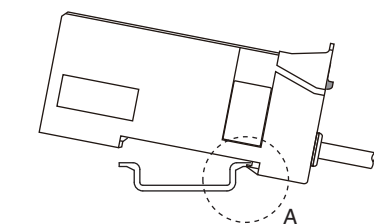
### [Part Name]



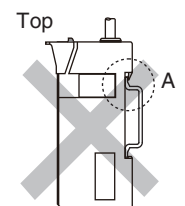
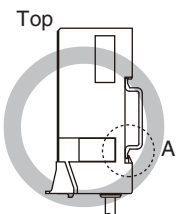
### [Mounting]

How to mount the unit on the DIN rail is described as follows.

Put the moving claw on the A side on the DIN rail.  
Pull down the unit to the C direction until the fixed claw on the opposite side clicks.



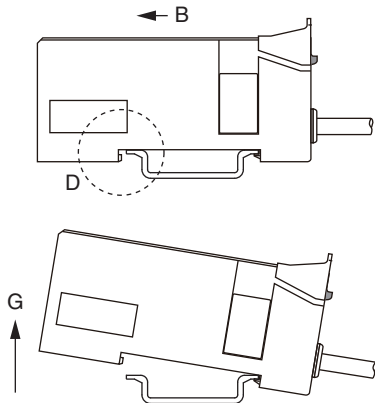
When mounting it to the vertical direction, ensure the moving claw comes under the DIN rail.



## [Removal]

How to remove the unit from the DIN rail is described as follows.

Push the unit to the B direction and remove the fixed claw D from the DIN rail. Pick it up in the G direction as it is and raise the unit to remove.



## [Installation Place]

Install in the following indoor locations and dry location.

- Locations where this product is not directly subject to vibration or shock
- Locations where this product is not directly exposed to dust
- Locations where this product is not directly exposed to conductors, such as metal chips or spatters
- Locations without condensation
- Locations where the atmosphere is free of corrosive gases, flammable gases, and sulfur
- Locations far from high-voltage or high-current cables
- Locations far from servos, inverters, and other cables and controllers that generate high-frequency noise

### \*Mounting

Except that the fixed claw D has to be set facing above, the mounting position is not specified. When the unit is used mounted on the DIN rail and the terminal unit has to be fixed, use the DIN rail stopper. In particular, when the unit is mounted on a rail to the vertical direction, the stopper should be used.

## [Notes on Use]

When connecting this unit to a transmission line or when extending an extension unit with a base unit, stop the transmission signal supply. When connection is performed in a live wire status, the unit may regard chattering in the connection as abnormality and stop.

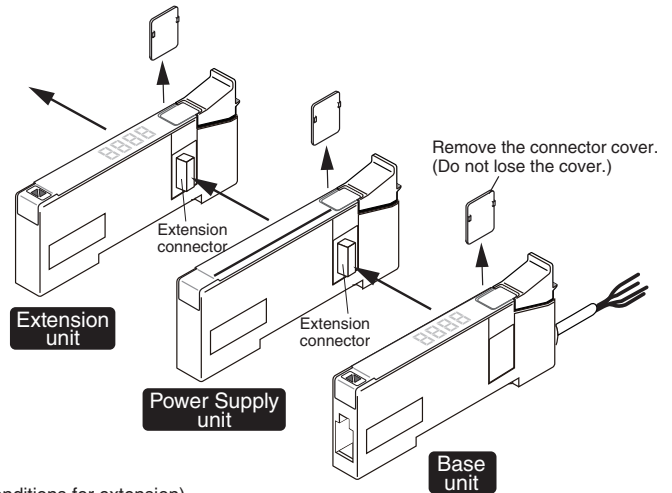
When complying with the UL Standard, make sure to use a 24V DC stabilized power supply of "NEC/CEC Class 2 Output."

## [Extension]

Use this power supply unit for 24V supply to an analog device connected to an analog base unit and extension unit of the CH insulation type.

Remove the connector cover of the base unit, extension unit and this unit and connect the device with a built-in extension connector.

Make the extension within the range meeting the conditions below.



Conditions for extension)

### ■ Current consumption

LA-A1AW LB-A1AW	common	DP-DN	20mA ①
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### ■ I/O points

LA-A1AW	16 points ②
LB-A1AW	16 points ③

### ■ Conditions for extension

The maximum number of extended devices in connecting the base unit to the extension unit or power supply unit	31 ④
Total DP-DN current consumption for 1 block (base unit + extension unit)	DP-DN: 800 mA or less ⑤
Total power supply unit 24V-0V current consumption used for 1 block above	24V-0V: 800 mA or less ⑥

### ■ Conditions for 1 system

Make sure the total number of I/O points of connected devices does not exceed the maximum transmission points per one system by master setting.	Input: 256 points or less ⑦ Output: 256 points or less
Make sure the total DP-DN consumption of connected devices does not exceed the maximum allowable supply current per one system.	In the case of 50 m/1.25 mm <sup>2</sup> , up to 2 A ⑧

### Example)

Transmission conditions: Transmission distance (total extension), transmission distance diameter 1.25 mm<sup>2</sup>, I/O 256 points respectively Device conditions: Only 1 LA-A1AW and 7 LB-A1AW are connected.  
Analog sensor 24V Current consumption 50 mA × 8 devices ⑨

#### (1) Considering based on the limit of I/O points

LA-A1AW: Input 16 points × 1 device ②,  
LB-A1AW: Input 16 points × 7 devices ③  
Maximum input points: 256 points ⑦ ÷ 16 points = 16  
 $16 \times 1 + 16 \times 7 = 128 \leq 256$  points ⑦ (Maximum number of input points)

#### (2) Reviewing based on the limit of DP-DN current consumption per block

LA-A1AW: 20 mA × 1 device ①, LB-A1AW: 20 mA × 7 devices ①  
In other words, LA-A1AW: (1 device × 20 mA), LB-A1AW (7 devices × 20 mA = 140 mA)  
Therefore,  $20 \text{ mA} + 140 \text{ mA} = 160 \text{ mA} \leq 800 \text{ mA}$  ⑤ → No problem

#### (3) Reviewing based on the limit of 24V-0V current consumption per block

Analog sensor: 50 mA × 8 devices ⑥ ⑨  
In other words, analog sensor: (8 devices × 50 mA = 400 mA)  
Therefore,  $400 \text{ mA} \leq 800 \text{ mA}$  ⑥ → No problem

#### (4) Reviewing based on the limit of DP-DN current consumption per system

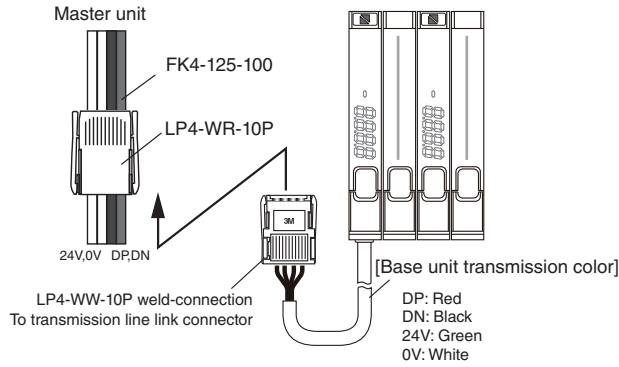
Eight devices consisting of LA-A1AW: 1 device and LB-A1AW: 7 devices → 160 mA ①  
Therefore,  $160 \text{ mA} \leq 2 \text{ A}$  ⑧ → No problem

## [24V Supply]

Connect the transmission line of the base unit of the analog input unit to the transmission line from the master.

The base unit's 24V and 0V are used to supply 24V to the load from each CH analog input connector together with the power supply unit.

Example of supplying power in a batch)

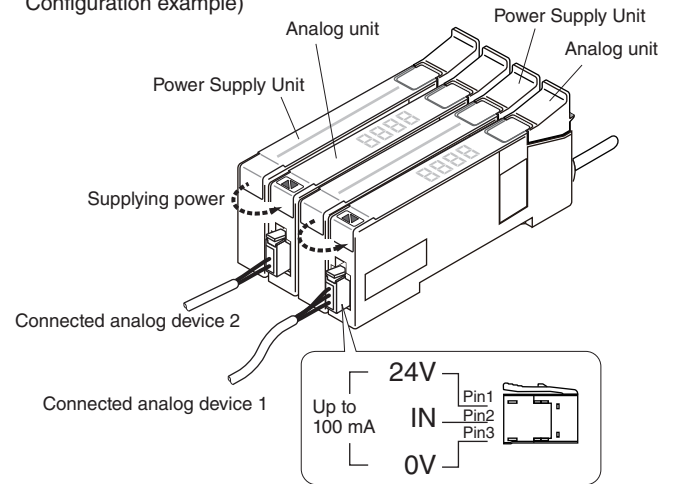


## [Supplying Power to Connected Load]

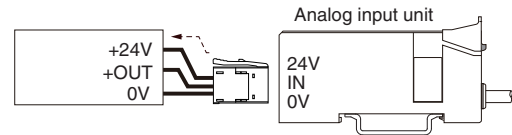
Connect the transmission line of the base unit of the analog input unit to the transmission line from the master.

The base unit's 24V and 0V are used to supply 24V to the load from each CH analog input connector together with the power supply unit.

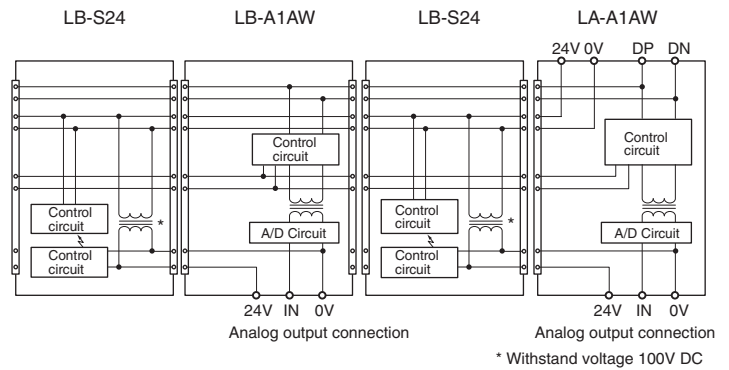
Configuration example)



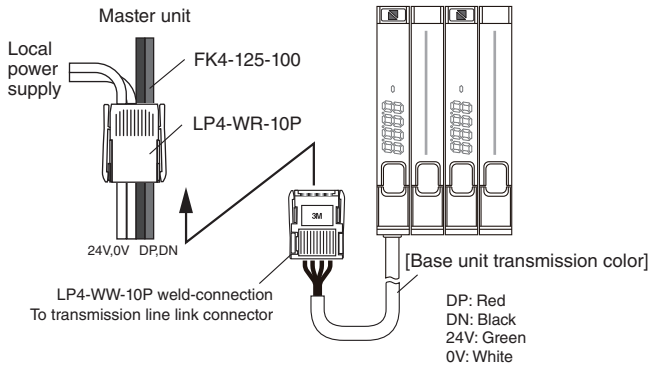
Analog-side connection example)



## Block diagram



Example of local power supply)





## Link connector pin arrangement

Pin number	Content	Line color
1	DN	Black
2	DP	Red
3	0V	White
4	24V	Green

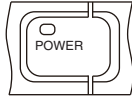
LP connector (link connector) consists of both male and female connectors. Just joining the same kinds of connectors together enables easy "connecting" and "branching."

## [Notes on Safety]

This unit contains POWER display LED.

LED Display	Name	Display status	Content
	POWER	Lighting	
Off			24V non-supply

POWER display



## [Specifications]

### ■ General specifications

Operating ambient temperature/humidity	0 – +55°C, 10 – 90%RH No condensation
Storing ambient temperature/humidity	-25 to +75°C, 10 to 90% RH No condensation
Operating atmosphere	No corrosive gas
Operating altitude*1	0 - 2000 m
Pollution level*2	2 or less
Means of protection	Class III

\*1 Do not use or store AnyWireASLINK devices in an environment where the pressure is larger than the atmospheric pressure at an elevation of 0 m.  
A malfunction may occur.

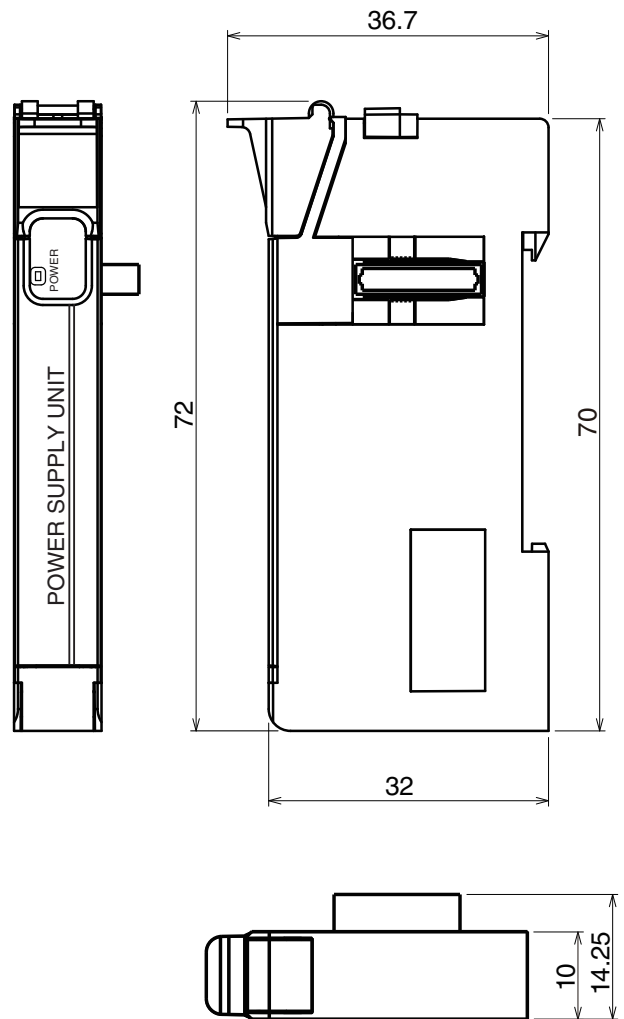
\*2 Indicates the degree of occurrence of conductive objects in an environment in which the device is used. At pollution level 2, only non-conductive contaminants occur.  
However, the environment may cause temporary conduction due to accidental condensation.

### ■ General specifications

Input voltage range	24[V] DC - 10% to + 15% (DC21.6 to 27.6[V]) Ripple 0.5[V]p-p max.
Output voltage	24 [V] DC - 10% to + 15%
Output current	0 to 100 [mA]/CH
Ripple noise	1[V]p-p max.
Current consumption	188mA
Weight	17g
Number of extended devices	Up to 31 (refer to P2 [Extension])

## [Outer Dimension Drawing]

Unit: mm



【中国版RoHS指令】

的产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 [Cr(VI)]	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
安装基板	×	○	○	○	○	○
框架	○	○	○	○	○	○

本表格依据SJ/T11364的规定编制。  
 ○：表示该有害物质在该部件所有均质材料中的含量均在GB/T26572规定的限量要求以下。  
 ×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572规定的限量要求。

基于中国标准法的参考规格：GB/T115969.2



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