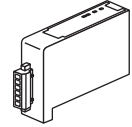


# AnyWireASLINK System Products Guide

## ASLINKTERMINAL [ASLINK Terminal (Driver type)]

### BL264PB-16F□-T5 (Applicable to CKD product)



This Products Guide is a document that describes individual products. Read it carefully to understand the products.

#### ■ Function list

Model	Specifications	Connection targets	Functions				
			Detection of slave unit voltage drop	Detection of sensing level drop	Detection of I/O disconnection	Detection of I/O short-circuit	Detection of I/O power supply drop
ASLINKTERMINAL 4-wire (isolated) Manifold driver	NPN output: 16 points PNP output: 16 points	CKD manifold MN4G	○	×	×	×	○

■ Note on use ⇒ A separate Address Writer ARW-04 (Ver. 04-1.01 or later) or ARW-03 (Ver. 2.10 or later) is required to set addresses and other data.

### [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 in installing or replacing 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.



- 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
  - 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 when the transmission line is active. A malfunction may occur.
- Use the AnyWireASLINK within the range of the specifications and conditions shown below.

### [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.

### [Type]

BL264PB-16F-T5	NPN output	16 points
BL264PB-16FS-T5	PNP output	16 points

Applicable to MN4G-T70-FL series manifold  
manufactured by CKD Corporation

## [How to Connect AnyWireASLINK]

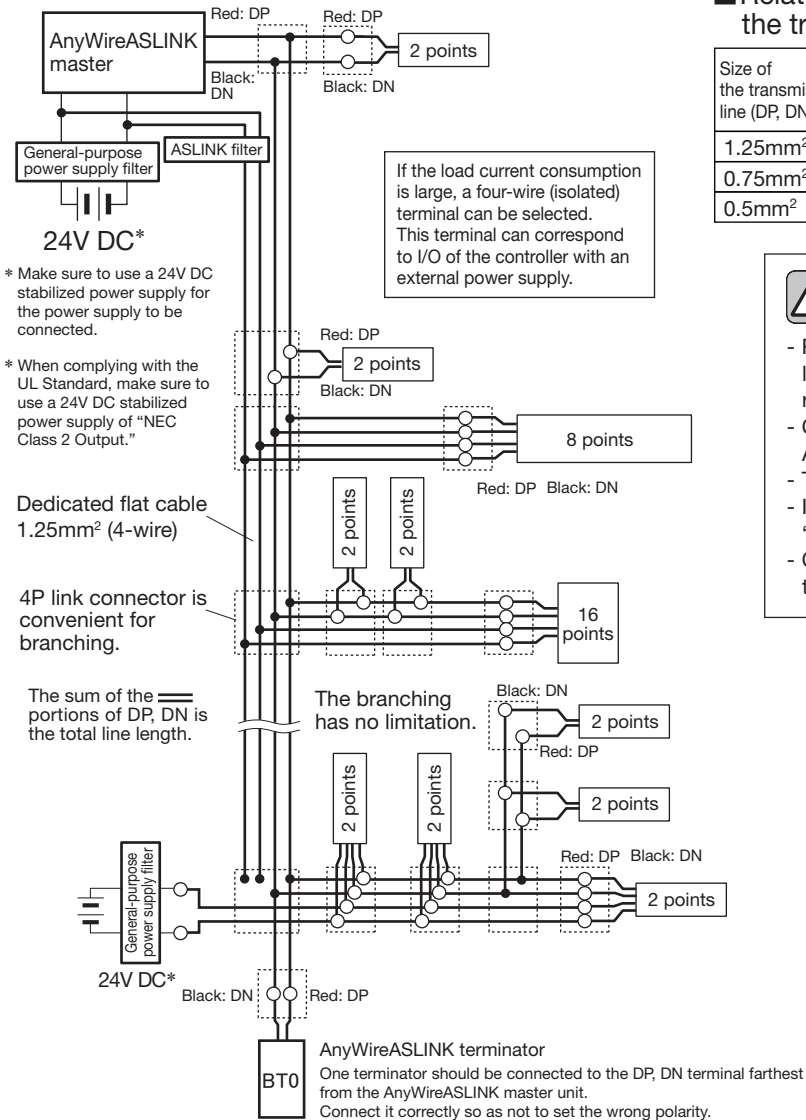
The AnyWireASLINK can employ a two-wire or four-wire terminal selectively depending on the load current.

If the load current is small, using a two-wire (non-isolated) terminal allows for achieving simplified wiring without local power supply.

In the case of prioritizing the sites of concentrated loads and/or the number of connections, hybridization with a four-wire (isolated) terminal, which supports local power supply, is also possible.

Make sure to use a four-wire (isolated) terminal in the case of input and load driving using an external power supply.

## [System Configuration Example]



### ■ Relationship between the size and length of the transmission line and the supply current (Table 1)

Size of the transmission line (DP, DN)	Supply current on the transmission line (DP, DN)		
	Total length: 50m or less	Total length: Over 50m, no longer than 100m	Total length: Over 100m, no longer than 200m
1.25mm <sup>2</sup>	MAX 2A	MAX 1A	MAX 0.5A
0.75mm <sup>2</sup>	MAX 1.2A	MAX 0.6A	MAX 0.3A
0.5mm <sup>2</sup>	MAX 0.8A	MAX 0.4A	MAX 0.2A

### ⚠ CAUTION

- Refer to Table 1 so that the size and length of the transmission line and the allowable supply current lie within an appropriate range.
- Connect the same symbols (DP, DN) correctly between the AnyWireASLINK master unit and each device.
- The branching length or branch number has no limitation.
- Include the length of the cable provided with the terminal in the "total line length."
- Connect the terminator BT0 (with polarity) to the DP, DN terminal farthest from the AnyWireASLINK master unit.

## [Installation 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

# [Notes on Use of 4-Wire (Isolated) Terminal]

If the total length of the sections where all the DP, DN, 24V, and 0V lines run in parallel in the power supply system is more than 50m, connect an ASLINK filter (Type ANF-01) or a filter manufactured by COSEL Co., Ltd. (Type EAC-06-472) in series to the 24V and 0V lines at a position where these four lines start running in parallel.

This will improve noise resistance, suppress the adverse effects of crosstalk caused by transmitted signals, and stabilize signals.

The above filters must be inserted regardless of whether power is supplied to all terminals collectively from the power supply for the master or power is supplied to each terminal individually from their local power supply.

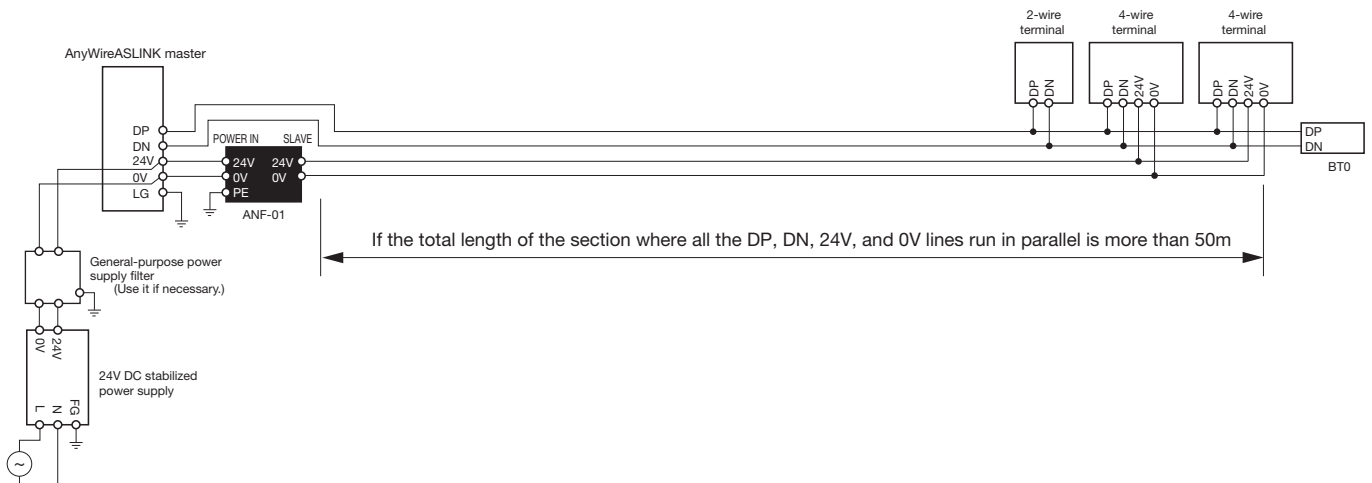
Insert the "ASLINK filter [Type ANF-01]" regardless of installation method and distance when complying with CE Standard.

## Filter allowable current

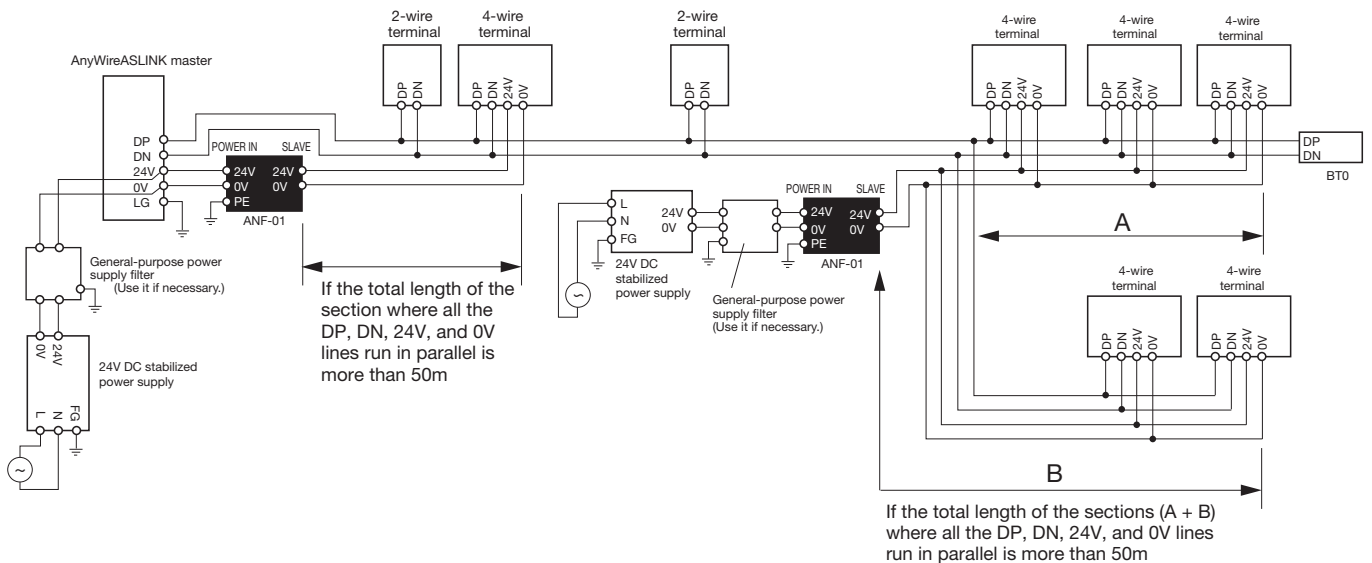
Product	Type	Allowable power current
ASLINK filter	ANF-01	MAX 5A/24V DC
Filter of COSEL Co., Ltd.	EAC-06-472	MAX 6A/24V DC

## AnyWire Type: ANF-01 Connection example

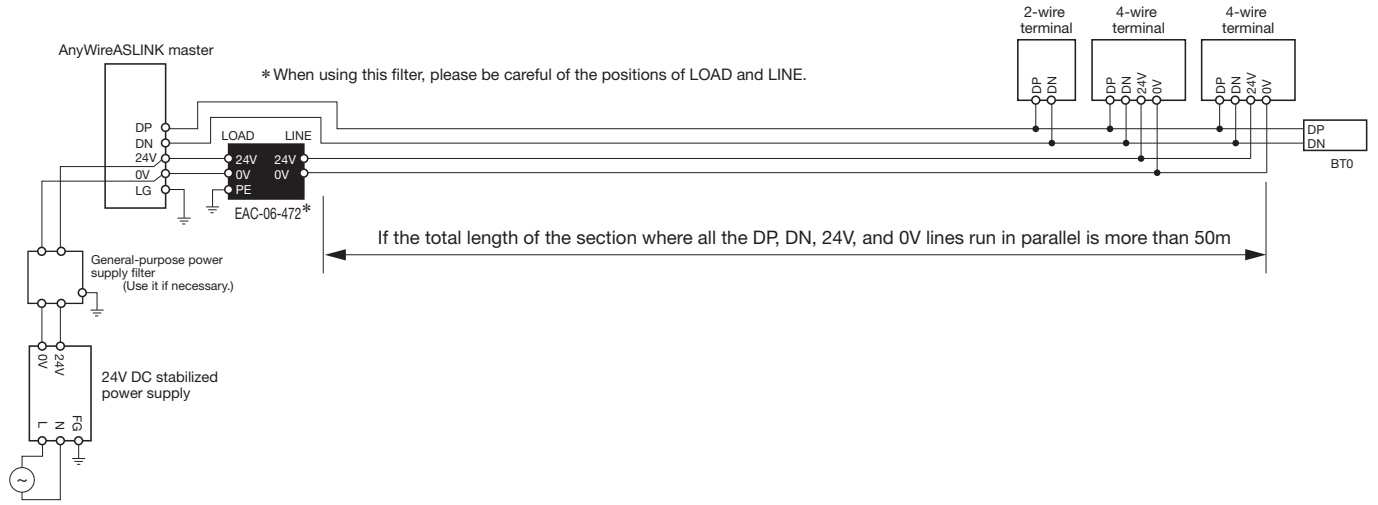
### ① Power supply to the entire system



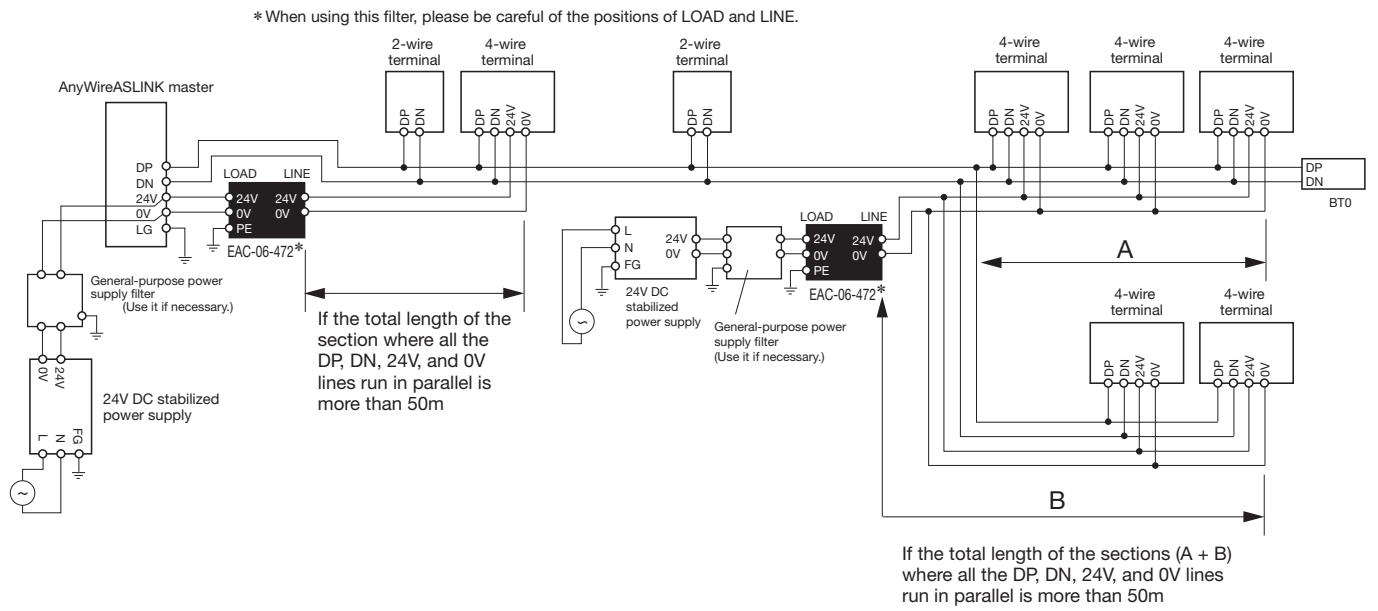
### ② Local power supply/branching



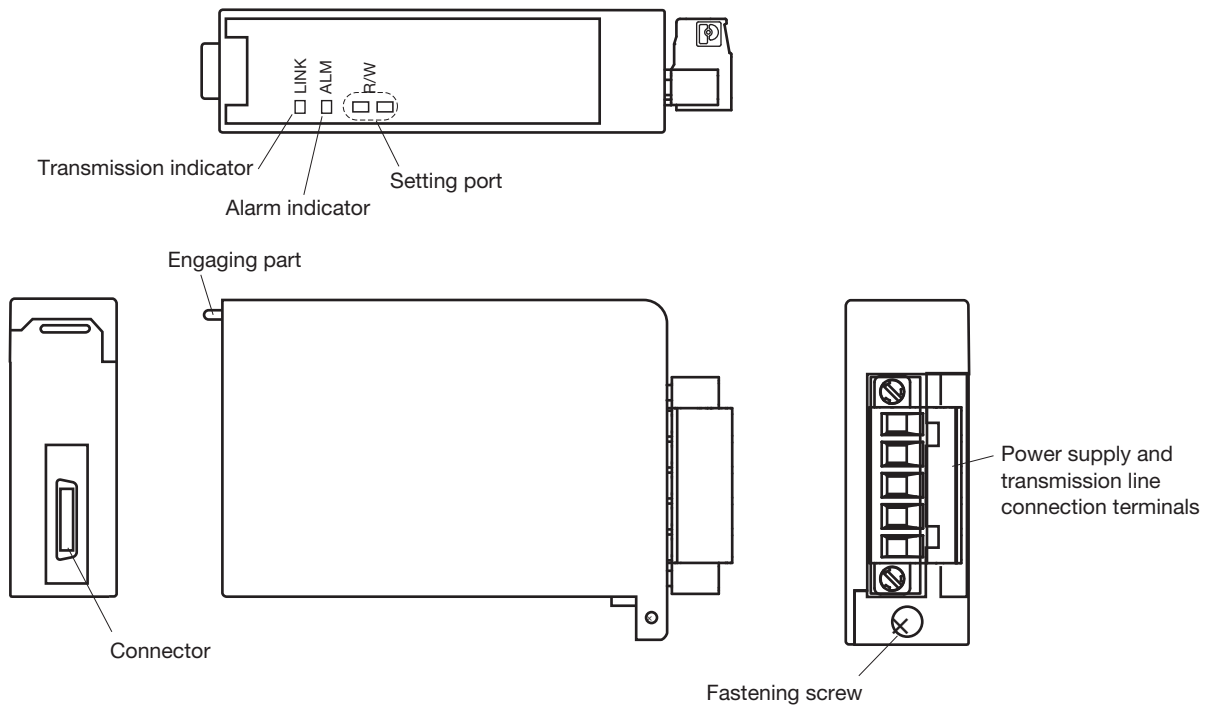
① Power supply to the entire system



② Local power supply/branching

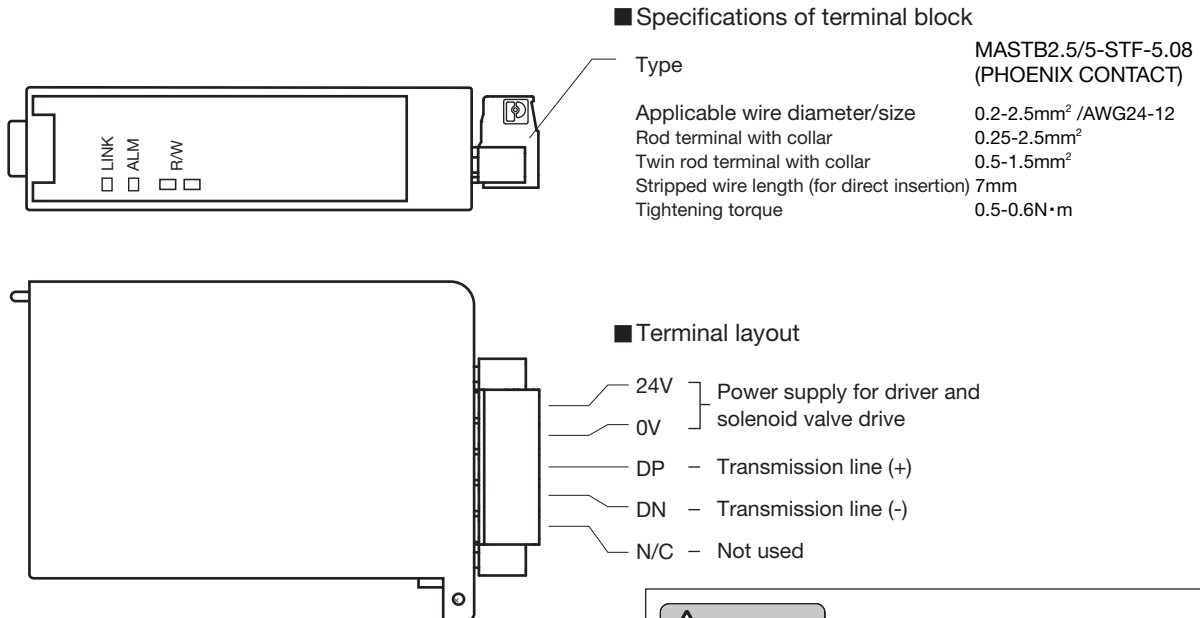


## [Name of Each Part]



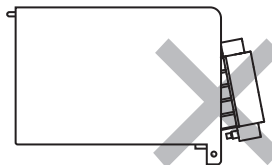
## [Connecting Parts]

The terminals to connect power supply and transmission line are plug-in type. Connect each terminal correctly according to the terminal layout. For connections, refer to the example given on page 3.



### CAUTION

When you dismantle the terminal block, make sure that the retaining screw has come off the socket, and then pull out the terminal block straight.  
If you pull out the terminal block with the screw inserted, or if you obliquely pry up the terminal block, it may cause a fault of the equipment.



## [Address Setting]

### 1. Writing addresses

- The address number to be set on the terminal is for the purpose of keeping correspondence with the controller's I/O memory map. This address number indicates a position of assignment of this terminal to the AnyWire transmission frame (0 to 254). Starting from this address number, 16 points are occupied for this terminal. (It does not mean a station number.)
- The address number may be set by the unit of point.
- Write an intended address into the unit by using the dedicated address writer, ARW-04 (Ver. 04-1.01 or later version) or ARW-03 (Ver. 2.10 or later version).  
For the address writer operating procedure, refer to the operation manual in a separate volume.

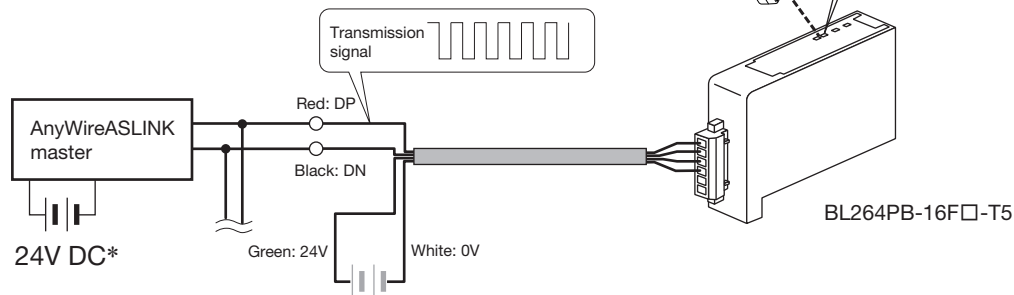
- ① Connect the transmission line of BL264PB-16F□-T5 to the AnyWire master unit, and input a transmission signal.
- ② Write an address number by operating the address writer.

Address number setting available with BL264PB-16F□-T5: 0 to 254

- ③ Disconnect BL264PB-16F□-T5 from the master unit.

#### ■ An overview of setup operation using ARW-04 (Ver. 04-1.01 or later) or ARW-03 (Ver. 2.10 or later)

Specify settings while pointing the address writer at the setting port of this unit.



\* For the power supply to be connected, be sure to use a 24V DC stabilized power supply.



The factory setting of the terminal is "255," which means no setting. With this setting, it does not perform any input/output operation. Also note that the unit ID will not be registered even if an automatic address recognition operation (see the master unit manual) is performed. Before using the terminal, be sure to set an address number between 0 and 254.

### 2. Reading set values

- Also, use the address writer to read an address that has been written in the terminal.











## [Current Consumption]

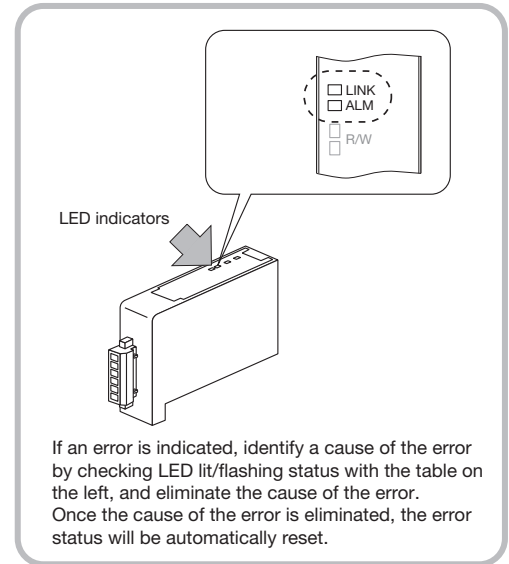
Type		Current consumption
BL264PB-16F-T5	NPN output: 16 points	DP-DN side: 7mA 24V side: Total of 38mA <sup>Note)</sup> + solenoid current
BL264PB-16FS-T5	PNP output: 16 points	DP-DN side: 7mA 24V side: Total of 38mA <sup>Note)</sup> + solenoid current

Note) Indicates current consumption in a condition that all points are turned ON without load connection. For power supply capacity, current consumption for solenoid should be added.

## [Indicator Function]

Normal condition: LINK flashing, ALM unlit and I/O ON (lit) or OFF (unlit)

LED name	Display status	Description
LINK	Lit 	No transmission waveform
	Flashing 	Normal
	Unlit 	DP, DN line disconnection, no power
ALM	Lit 	I/O power supply drop
	Flashing 	Slave unit voltage drop
	Unlit 	Normal
LINK ALM	Alternate flashing LINK  ALM 	The master unit has detected that the unit ID (address) is either duplicated or unregistered
I/O	Lit 	ON
	Unlit 	OFF



## [Troubleshooting]

### <LINK does not flash>

Things to be checked	Remedy
Check the connection of slave units.	Disconnect slave units and then reconnect them.
Check the connection of the master unit.	Check to see if the LINK LED on the master unit is flashing and take the following actions. 1) If LINK on the master unit is flashing and LINK on the slave unit is lit, there is a possibility that the master unit is damaged. Contact the customer support. 2) If LINK on the master unit is flashing and LINK on the slave unit is unlit, it is possible that the power (24V DC) is not supplied to the master unit, there is a disconnection on the transmission line (DP, DN), or the slave unit has been damaged. Ensure that the power is supplied to the master unit and, if necessary, contact the customer support. 3) If LINK on the master unit is not flashing, check the power supply to the master unit. Also, since there is a possibility that some system error has occurred, refer to the user's manual of master unit.

### <ALM is lit>

Things to be checked	Remedy
Check the connection of I/O terminals on the slave unit.	Adjust the voltage of external power supply connected to the I/O side of the slave unit so that it falls within the rating (21.6 to 27.6V). In addition, ensure that there is no contact between and erroneous wiring of transmission lines.

### <ALM is flashing>

Things to be checked	Remedy
Check the voltage (24V DC) of external power supply to the master unit.	Adjust the voltage of external power supply to the master unit so that it will be in the range from 21.6 to 27.6V. (Recommended voltage is 26.4V.) Check the total length. Review the total length and wire diameter of transmission line so that the load will not exceed the current limit supplied by the transmission line and adjust the connected load. (In the case of the wire size of 1.25mm <sup>2</sup> and total length of 50m or less, the current supplied by the transmission line is 2A.) If ALM is flashing although the appropriate voltage is applied to the 24V and 0V terminals of the master unit and this unit, it is possible that this unit has a fault. In this case, replace this unit.

### <LINK and ALM flashes alternately>

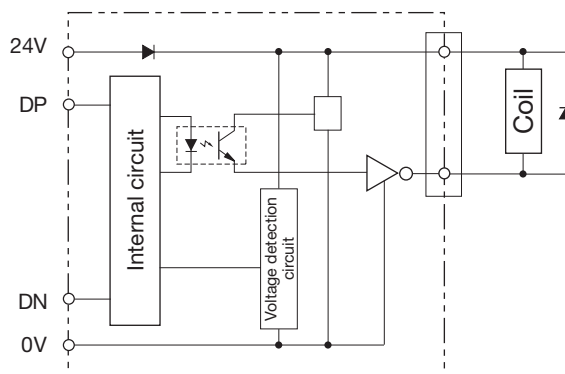
Things to be checked	Remedy
Check the address of the slave unit.	The address of the slave unit is either unregistered (255) or duplicated. Take the following actions. 1) Change the address in the range of 0 to 254. 2) Check if there is a slave unit on which the indicator lamps are flashing in the same manner and reset the addresses so that they are not duplicated.

# [Configuration and Electrical Characteristics of Output Circuit]

## BL264PB-16F-T5: 4-wire (isolated) NPN output

### <Circuit conditions>

Withstand voltage: 30V DC  
Max. ON current: 100mA

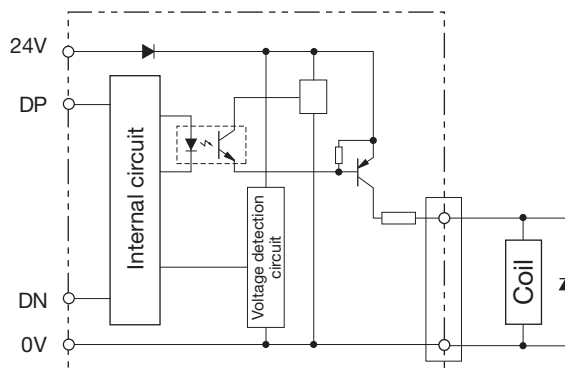


For connection of a solenoid valve, specify a type with a surge killer.

## BL264PB-16FS-T5: 4-wire (isolated) PNP output

### <Circuit conditions>

Withstand voltage: 30V DC  
Max. ON current: 100mA



For connection of a solenoid valve, specify a type with a surge killer.

# [Specifications]

### ■ General specifications

Operating ambient temperature	0 – +55°C
Operating ambient humidity	10 – 90%RH No condensation
Storing temperature	-25 – +75°C
Atmosphere	No corrosive gas
Operating altitude*1	0 – 2000m
Pollution level*2	2 or less
Noise resistance	1200Vp-p (pulse width 1μs)

\*1 Do not use or store AnyWireASLINK devices in an environment where the pressure exceeds the atmospheric pressure at an altitude of 0 meters. Doing so may result in malfunction.

\*2 "Pollution level" is an index that indicates the degree of occurrence of conductive substances in the environment where the device is used.

Pollution level 2 means the occurrence of only pollution by non-conductive substances. In such an environment, however, electrical conduction could occur due to accidental condensation.

### ■ Transmission specifications

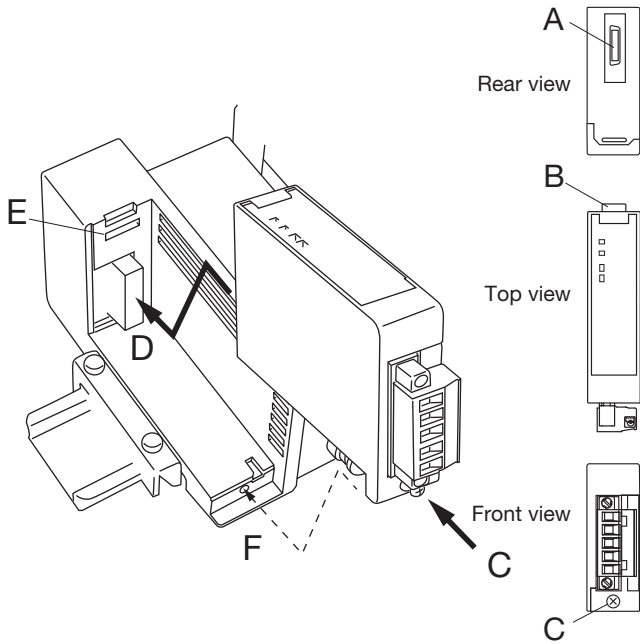
Service power supply voltage	24V DC +15% to -10% (21.6 to 27.6V DC) with a ripple of 0.5Vp-p or less
Transmission method	DC power supply superimposed total frame/cyclic method
Synchronization method	Frame/bit synchronization method
Transmission procedure	Dedicated protocol
Connection mode	Bus type (Multi-drop method, T-branch method, Tree branch method)
Number of connection points	512 max. (IN: 256, OUT: 256)
Number of connection units	Up to 128 units

### ■ Individual specifications

Number of occupied data items	BL264PB-16F-T5 NPN output: 16 points BL264PB-16FS-T5 PNP output: 16 points
Monitoring function	Slave unit voltage drop I/O power supply drop
Response time*3	1ms max.
Weight	55g

\*3 Apart from the transmission delay time (2-cycle time), the internal processing time required for the terminal to recognize a change in the signal.

## [How to Mount This Unit to a Manifold]



This manifold driver is intended for the MN4G-T70-FL series manifold manufactured by CKD Corporation. Mount the driver to the specified manifold. (Purchase the manifold separately.)  
MN4G-T70-FL can be connected to a solenoid valve quickly with the plug-in connector.

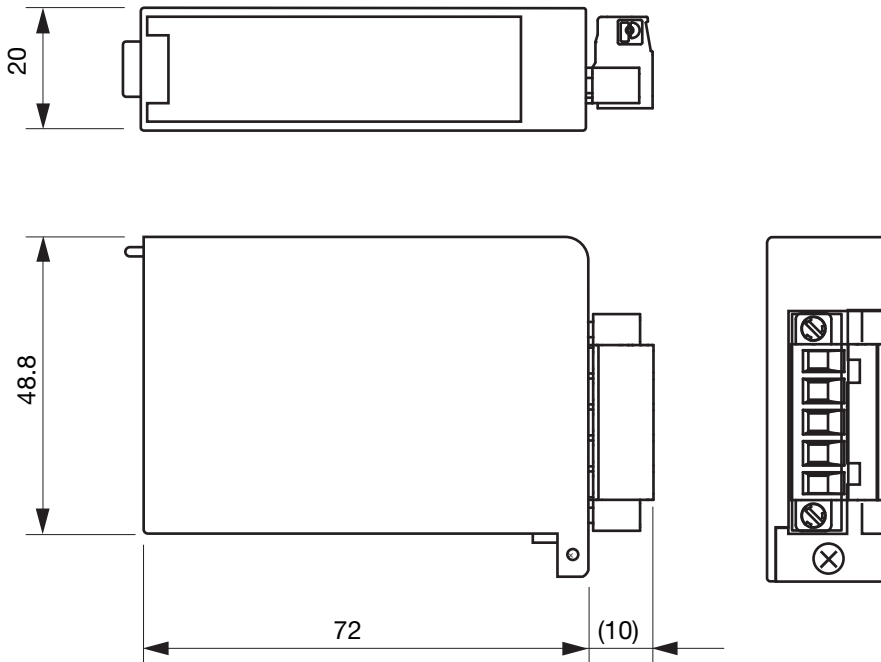
### ■ Mounting procedure

Mount BL264PB-16F□-T5 to the driver mounting part of the manifold as shown on the left. Thus, the connector (A) at the back of the driver is fit on the connector (D) of the manifold, and the engaging part (B) of the driver is engaged in the groove (E) of the manifold.

After confirming that BL264PB-16F□-T5 is normally mounted, insert the fastening screw (C) of the driver into the screw hole (F) of the manifold, to fasten the driver.

## [Outside Dimensions]

Unit: mm



## 【中国版RoHS指令】

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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	○	○	○	○	○	○

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○: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。  
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## [Address]

**Anywire** Anywire Corporation

Headquarters :1 Babazusho, Nagaokakyo-shi, Kyoto 617-8550 JAPAN

Contact :Contact by mail info\_e@anywire.jp  
:Contact by website http://www.anywire.jp

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