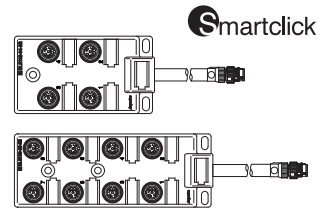


AnyWireASLINK System Products Guide

Branching Unit (IP67)

BL2109-0□-22



Smartclick is a registered trademark of OMRON Corporation.

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

■ Function List

Product	Specifications	Waterproof
Branching unit with M12 Smartclick connector	4 ports 8 ports	IP67

[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 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.

[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]

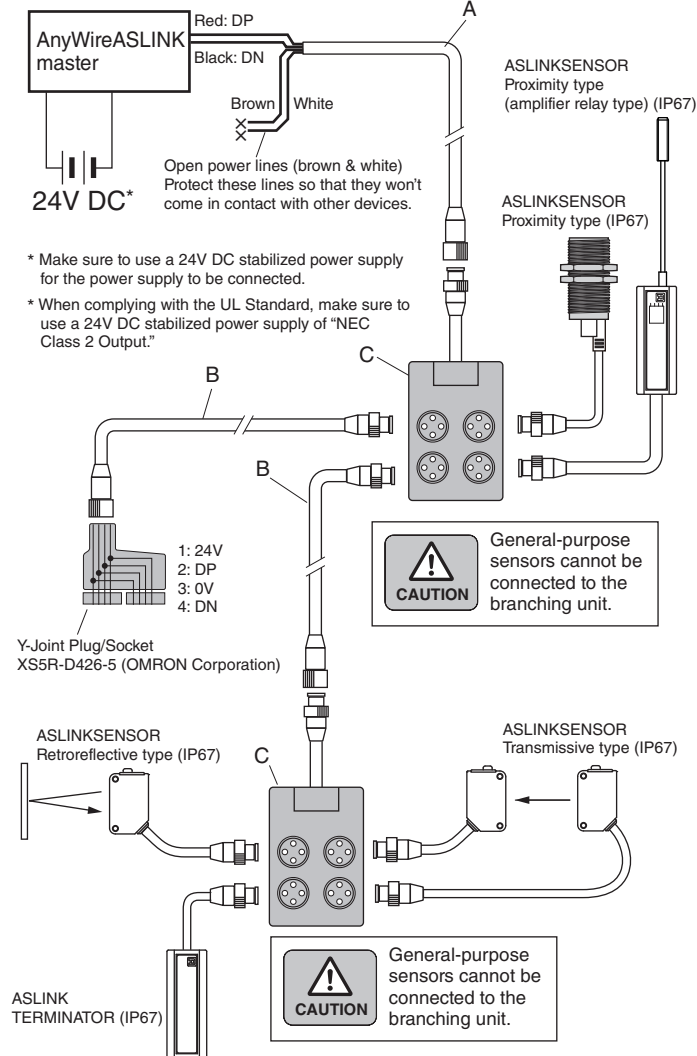
BL2109-04-22	4 ports
BL2109-08-22	8 ports

[AnyWireASLINK Terminal]

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]

■ Connection with a 2-wire (non-isolated) terminal only



A Waterproof trunk cable (1.25mm²)

Model	Description
BL2-0C1S-3K	Loose wires on one end, straight M12, 3m

B Waterproof trunk cable (1.25mm²)

Model	Description
BL2-1S1P-3K	Straight M12 on both ends, 3m
BL2-1S1P-5K	Straight M12 on both ends, 5m
BL2-1S1P-10K	Straight M12 on both ends, 10m

C Waterproof branching unit

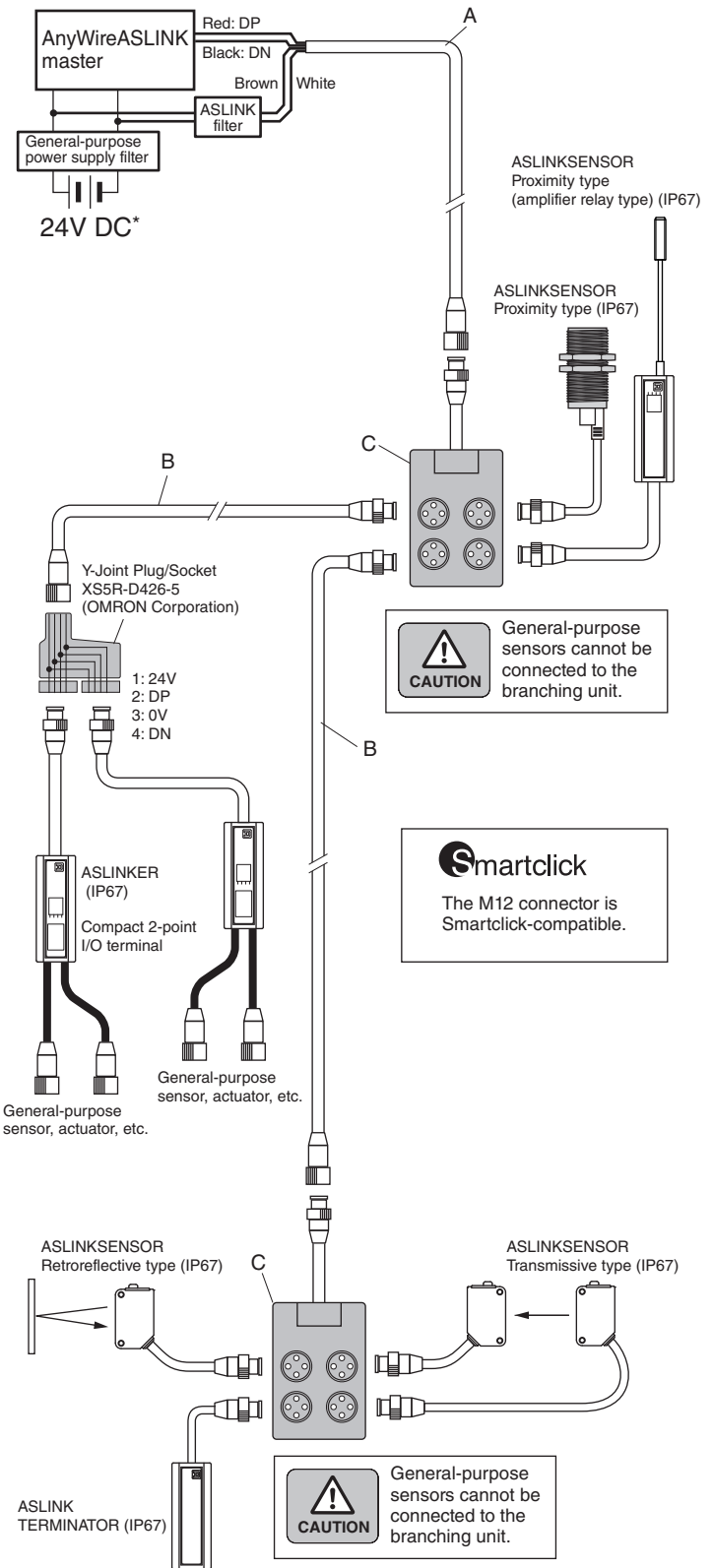
Model	Description
BL2109-04-22	4 ports
BL2109-08-22	8 ports

■ 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 ²	MAX 2A	MAX 1A	MAX 0.5A
0.75mm ²	MAX 1.2A	MAX 0.6A	MAX 0.3A
0.5mm ²	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 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 (with polarity) to the DP, DN terminal farthest from the AnyWireASLINK master unit.

■ Example of mixed installation with 2-wire (non-isolated) and 4-wire (isolated) terminals



A Waterproof trunk cable (1.25mm²)

Model	Description
BL2-0C1S-3K	Loose wires on one end, straight M12, 3m

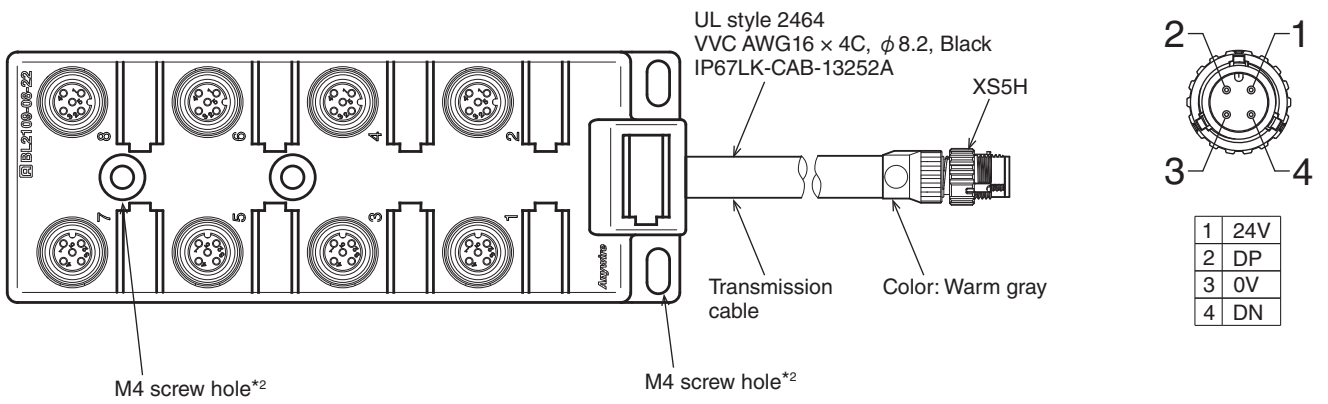
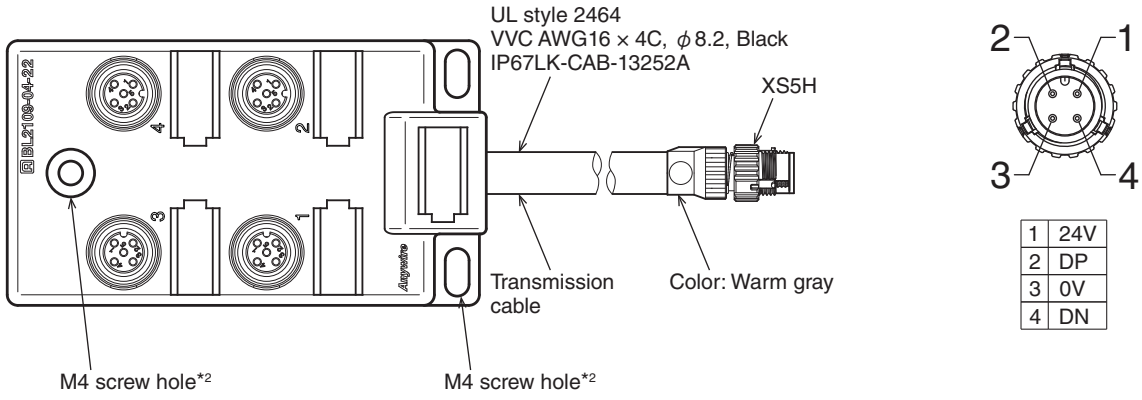
B Waterproof trunk cable (1.25mm²)

Model	Description
BL2-1S1P-3K	Straight M12 on both ends, 3m
BL2-1S1P-5K	Straight M12 on both ends, 5m
BL2-1S1P-10K	Straight M12 on both ends, 10m

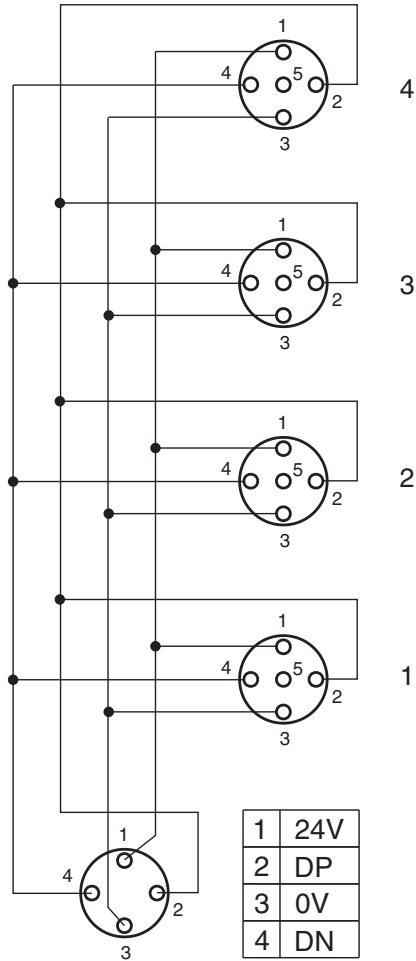
C Waterproof branching unit

Model	Description
BL2109-04-22	4 ports
BL2109-08-22	8 ports

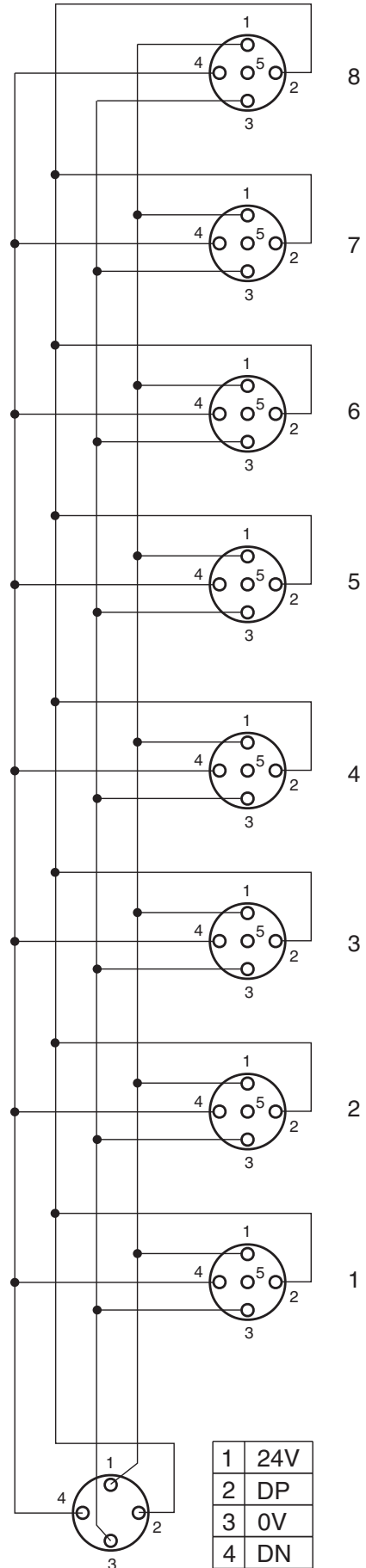
- CAUTION** To connect loads (e.g. I/O ports) that are controlled with a power supply other than the one used for the AnyWireASLINK system, always use a 4-wire (isolated) terminal. Otherwise, malfunction may be caused.



■ BL2109-04-22



■ BL2109-08-22




* Pin #5 is open.

[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

[Engagement]

To engage the Smartclick connector, insert the plug deep into the socket and then turn it clockwise by about 45 degrees until it clicks.

 Smartclick is a registered trademark of OMRON Corporation.

[Specifications]

■ General 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
Ambient temperature use	0 – +55°C
Ambient humidity use	10 – 90%RH No condensation
Temperature/humidity storage	-25 – +75°C
Atmosphere	No corrosive gas
Altitude use ^{*1}	0 – 2000m
Pollution level ^{*2}	2 or less
Noise resistance	1200Vp-p (pulse width 1μs)
Withstand voltage	1000V AC

*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.

■ Individual Specifications

DP-DN permissive current	BL2109-04-22	1 port	2A or less
		Port 1 to 4 total	
	BL2109-08-22	1 port	
		Port 1 to 8 total	

24V-0V permissive current	BL2109-04-22	1 port	4A or less
		Port 1 to 4 total	
	BL2109-08-22	1 port	
		Port 1 to 8 total	

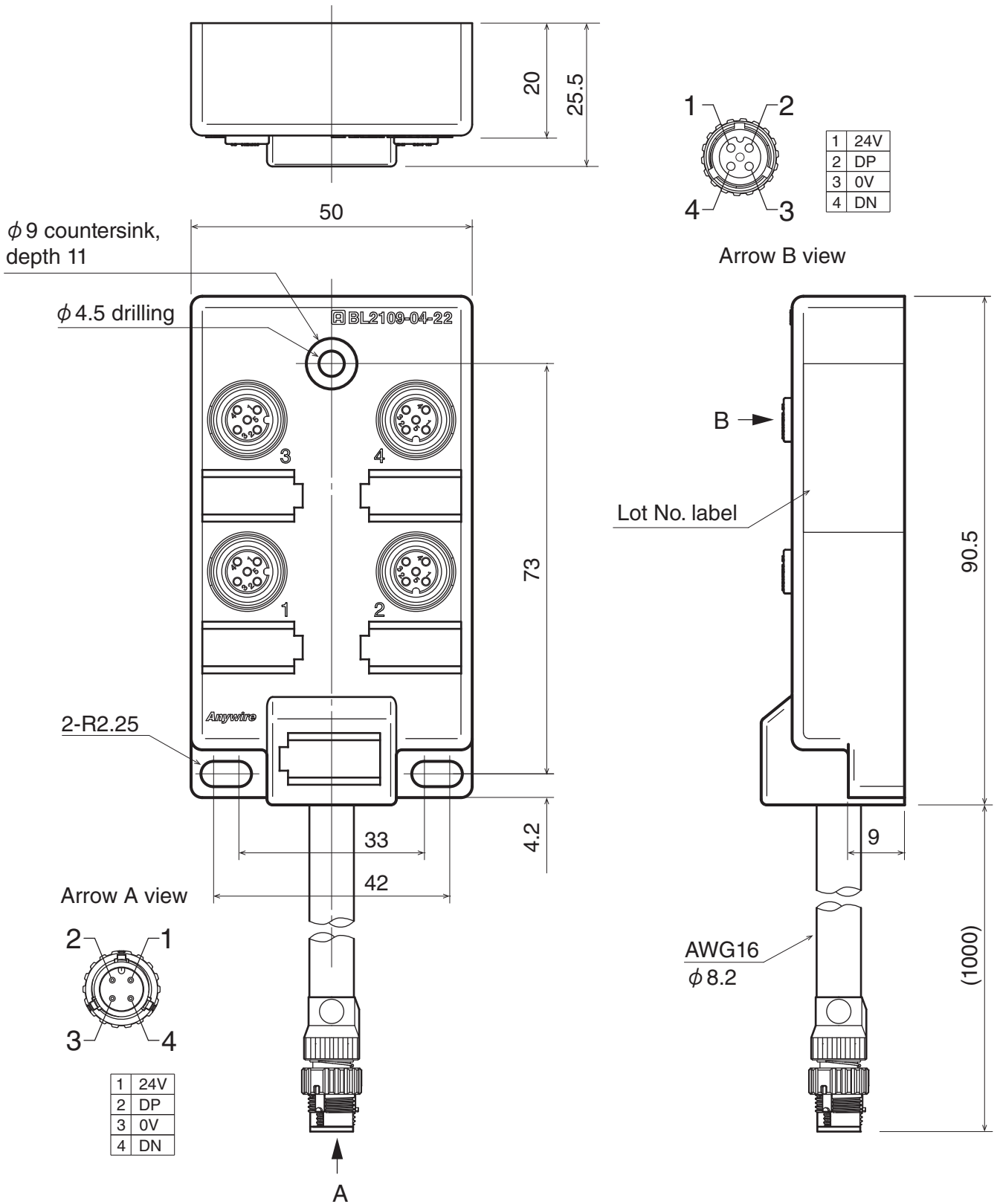
■ Connector specifications

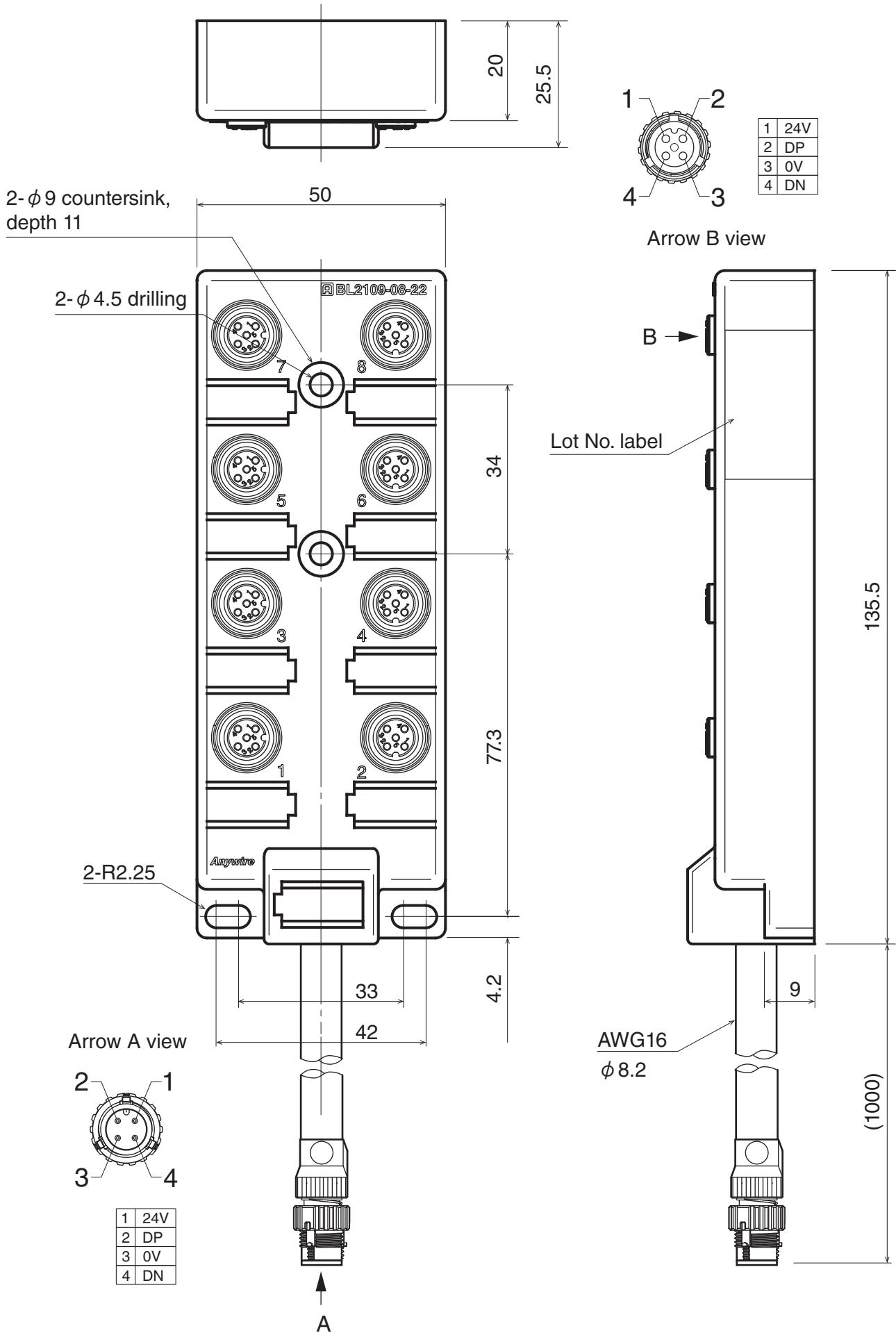
Insertion and removal	Withstand 50 cycles
Locking force	0.1 to 0.25N·m

[Outside Dimensions]

Unit: mm

■ BL2109-04-22





【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/T15969. 2

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