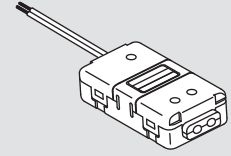


# Anywire AnyWire System Product Guide

## AnyWire DB A20 Series Terminator



# AT2

Cable connection

This AnyWire System Product Guide describes an individual product. Please read and understand the contents of this document.

### [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.



- 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 and replacement of the product, be sure to turn OFF the power supply for the system.



- 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 AnyWireDB A20 series provides high noise immunity, the transmission line and the I/O cables must be placed at a sufficient distance 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 device. 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 AnyWire DB A20 series within the range of the specifications and conditions shown below.

### [Features]

- This product is applicable to the AnyWire DB A20 series.
- This product is a dedicated module to stabilize the AnyWire transmission waveforms.

### [Warranty]

- Warranty period  
The warranty period of the delivered product shall be one year after delivery to the place specified by the customer.
- Scope of warranty  
If a fault occurs with the product under the normal operating conditions assumed in the product specifications and according to the instructions of this manual within the above warranty period, faulty parts shall be replaced or repaired free of charge.  
Note: The following cases are exempted from the scope of warranty:  
(1) User's improper handling or use of the product  
(2) When the fault is caused by any factor other than the delivered product  
(3) When the fault is caused by modification or repair of the product by any person other than the supplier  
(4) When the fault is caused by a natural disaster or other factor which is not attributable to the supplier  
The term "Warranty" mentioned here means warranty of the delivered product only. We shall not be liable for incidental damage resulting from a fault of the delivered product.
- Repair at user's cost  
Investigations and repairs after elapse of the warranty period shall be conducted at user's cost.  
Even in the warranty period, we shall accept order of repair of a fault or investigation of a cause of a fault beyond the above scope of warranty at user'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.

### [Type]

AT2	Transmission waveform shaping
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## [Installation Location]

- Locations where this product is not directly subject to vibration or shock
- Locations where this product is not directly exposed to dust, because it does not provide protective structure
- 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

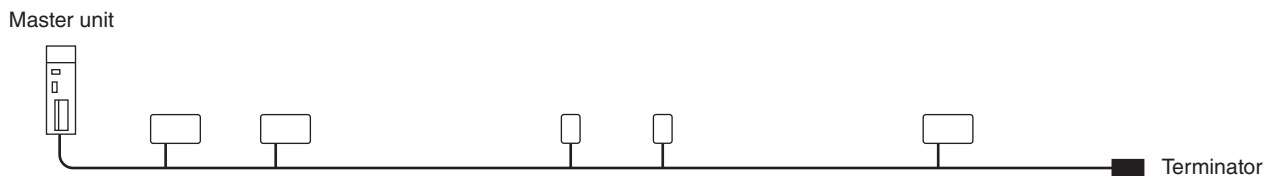
## [How to Use]

- Installation of transmission line  
Although the AnyWire system provides high noise immunity, do not place the transmission line close to a high-voltage cable or power cable.
- Number of units to be connected  
In principle, connect one AT2 unit to the transmission line (D-G) for one master unit.  
Up to three AT2 units can be connected in total.  
If it is possible that this condition is exceeded, please consult us.
- This terminator is dedicated to the AnyWire system.
- The transmission line (D-G) has polarity. Be sure not to connect it in reverse polarity.  
Reverse connection causes transmission failure.  
During transmission, make sure that the connection indicator LED is lit. If the LED is unlit, AT2 is not normally connected, or the master unit is not in operation. Check the AT2 connection and operation of the master unit.

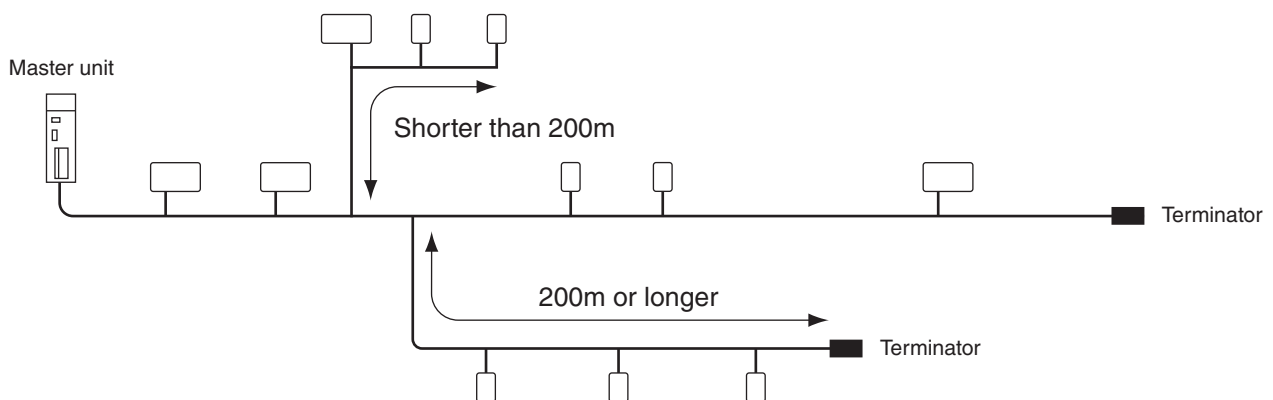
## [Connections]

Be sure to connect one AT2 unit at the farthest end of the transmission trunk line for one master unit.  
To extend a transmission line by branching it, connect one terminator to the end of the branch line with a length of 200m or longer.  
Up to three units can be connected.

### ① Basic configuration



### ② Branching



For a branch line whose length is 200m or longer, up to two branches are allowable.  
When normal connection is established and a transmission signal is supplied, the LED (red) is lit.

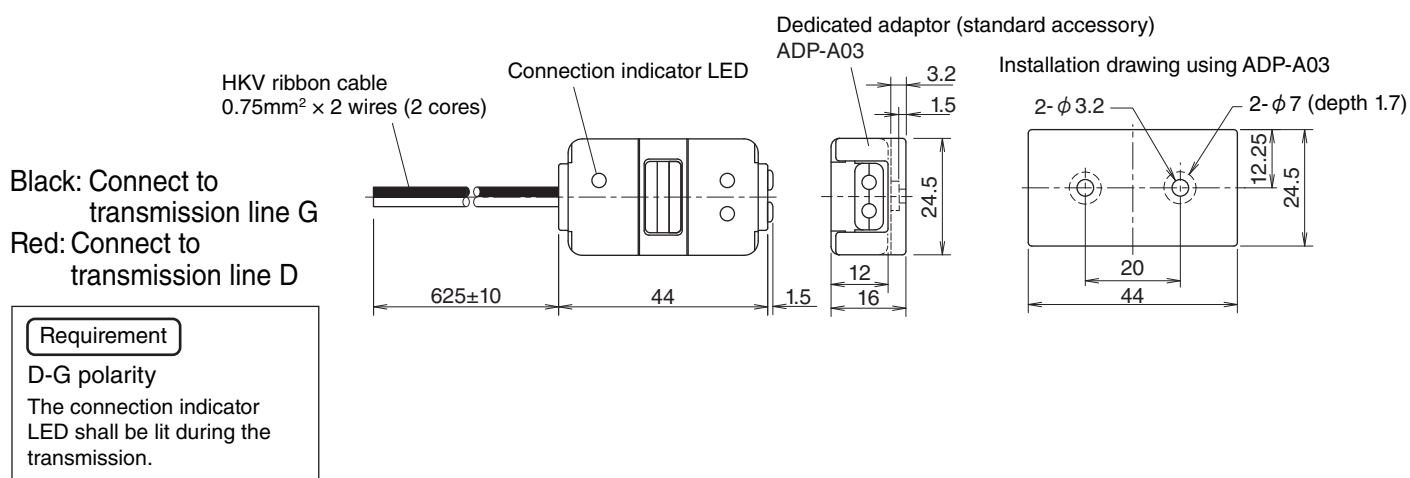
## [Specifications]

Item	Specifications
Operating power supply voltage	24V DC +15% to -10% (21.6 to 27.6V DC) Ripple: 0.5Vp-p or less
Operating ambient temperature	0 to +55°C
Operating ambient humidity	10 to 90% RH (no condensation)
Storing temperature	-20 to +75°C
Atmosphere	No corrosive gas, No inflammable gas
Operating altitude	0 to 2000m (Do not use or store this unit in an environment where pressure exceeds atmospheric pressure at an altitude of 0m.)
Pollution level	2 or less

Item	Specifications
Transmission method	Full-duplex total frame/cyclic method
Synchronization method	Frame/bit synchronization
Transmission procedure	AnyWire DB A20 protocol
Transmission clock/distance	125kHz/50m 31.3kHz/200m 7.8kHz/1km 2kHz/3km
Connection mode	Bus type
Current consumption	2mA
Weight	AT2: 25g ADP-A03: 5g

## [Outside Dimensions]

Unit: mm



## [Directive on Waste Electrical and Electronic Equipment (WEEE)]



Note: This symbol mark is for EU countries only.  
This symbol mark is according to the directive 2012/19/ EU Article 14 Information for users and Annex IX.

This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.

## 【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

## [Address]

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