

# AnyWireASLINK System Products Guide

## AnyWireASLINK Conversion Adapter Cable for Robot Sho-Haisen

### BL2-R□□□

This product is an AnyWireASLINK conversion adapter cable for robot Sho-Haisen, which is used to connect to the forearm and base of MELFA series industrial robot manufactured by Mitsubishi Electric Corporation.

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

### [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]

#### ■ Standard 1A type

BL2-RVAS	Conversion adapter cable for the forearm
BL2-RVBS	Conversion adapter cable for the base

#### ■ High-capacity 2A type

BL2-RVAH	Conversion adapter cable for the forearm
BL2-RVBH	Conversion adapter cable for the base

#### ■ LAN type

BL2-RVCL	Conversion adapter cable common for the forearm and base
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#### ■ LAN type (for RH-FR series)

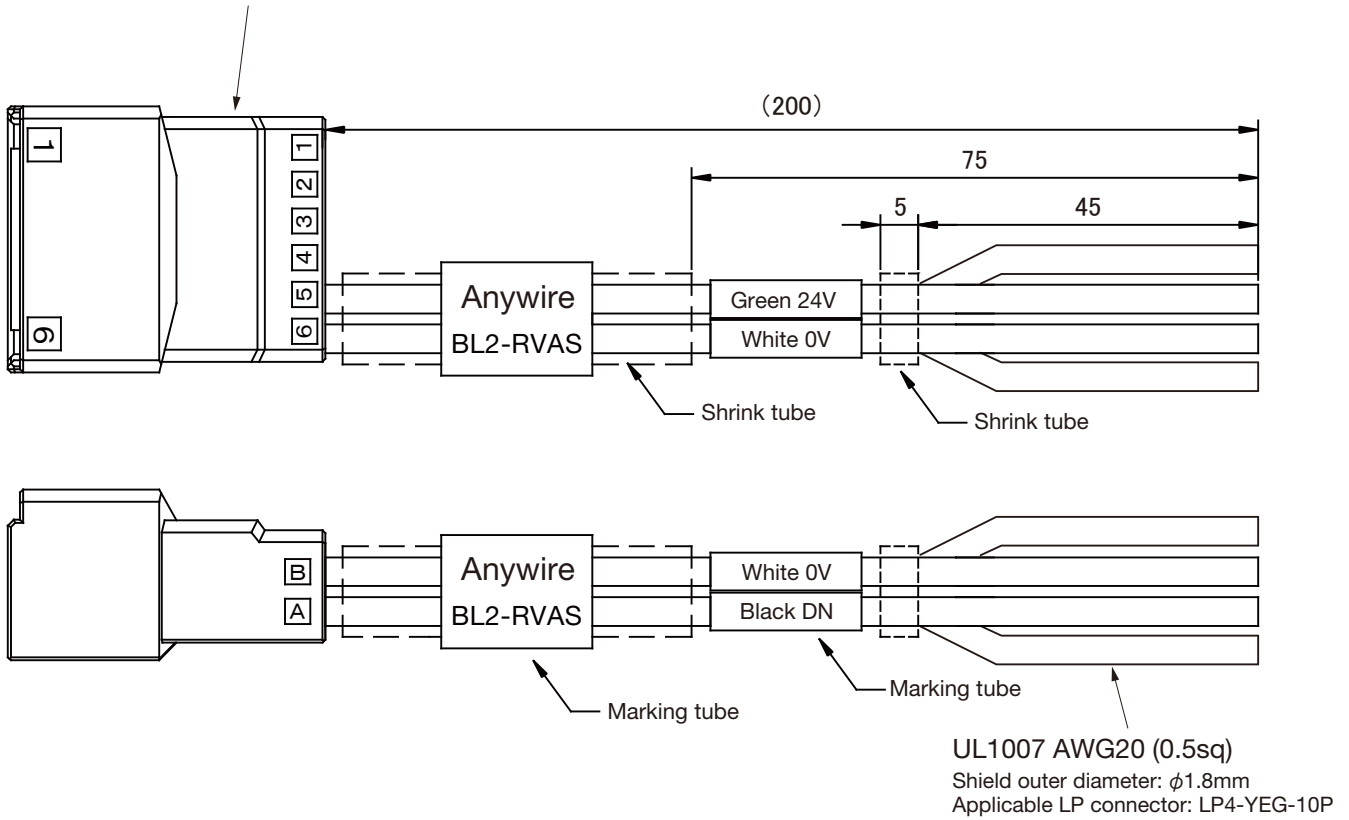
BL2-RHAL	Conversion adapter cable for the forearm
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## [BL2-RVAS Pin Assignment]

### Fitting counterpart

External wiring set for the forearm manufactured by Mitsubishi Electric Corporation  
 Model: 1F-HB02S-1, for connecting to E-F1 connector/E-F2 connector

Manufacturer: Tyco Electronics Japan G.K.  
 Part number: 1-1903130-6



Pin No.	Wire color	Signal name	Marking tube indication
A1	—	—	—
A2	—	—	—
A3	—	—	—
A4	—	—	—
A5	Red	DP	Red DP
A6	Black	DN	Black DN
B1	—	—	—
B2	—	—	—
B3	—	—	—
B4	—	—	—
B5	Green	24V	Green 24V
B6	White	0V	White 0V

## [BL2-RVBS Pin Assignment]

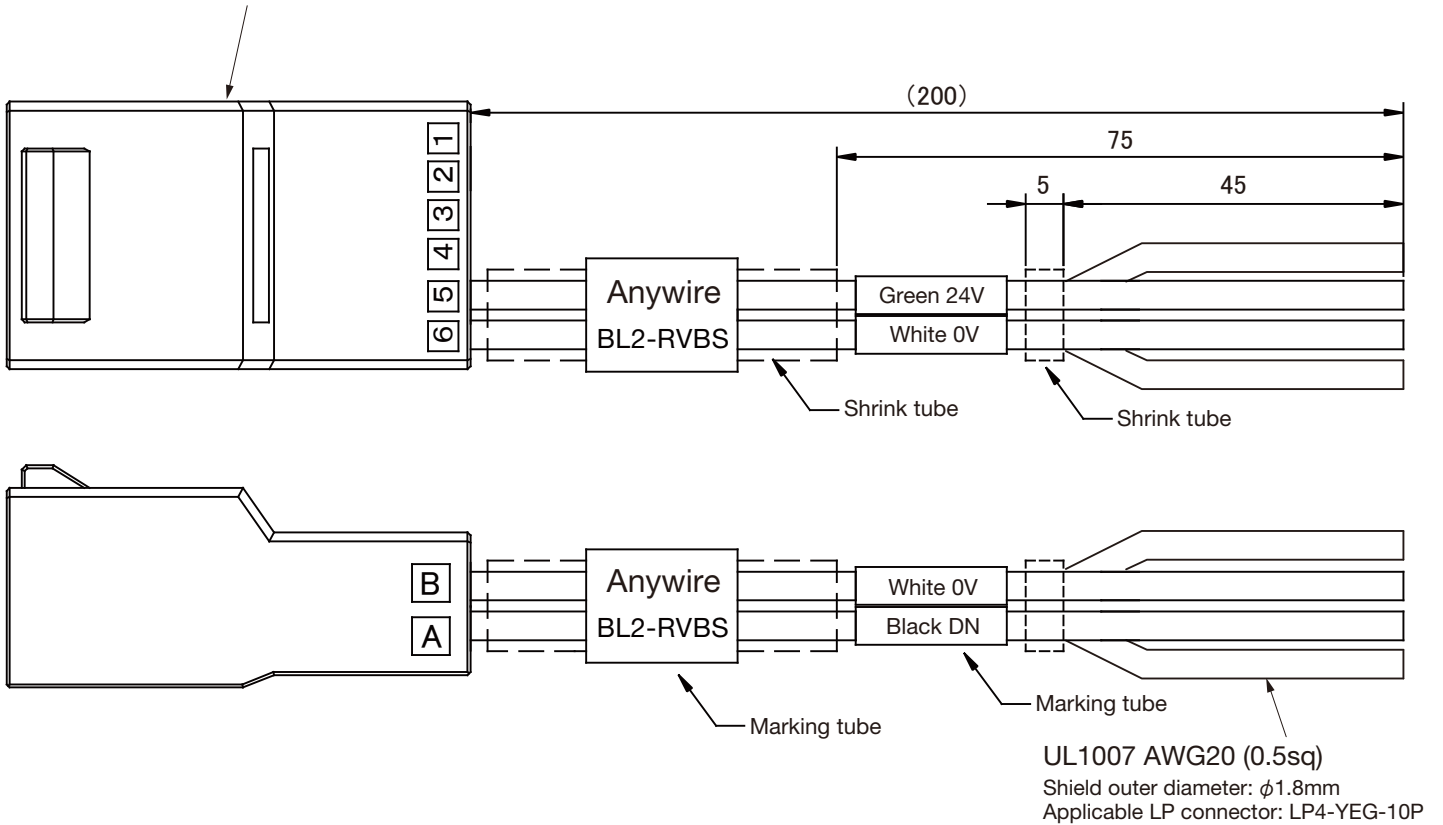
Fitting counterpart

External wiring set for the base manufactured by Mitsubishi Electric Corporation

Model: 1F-HA02S-1, for connecting to E-F1 connector/E-F2 connector

Manufacturer: Tyco Electronics Japan G.K.

Part number: 1-1318115-6



Pin No.	Wire color	Signal name	Marking tube indication
A1	—	—	—
A2	—	—	—
A3	—	—	—
A4	—	—	—
A5	Red	DP	Red DP
A6	Black	DN	Black DN
B1	—	—	—
B2	—	—	—
B3	—	—	—
B4	—	—	—
B5	Green	24V	Green 24V
B6	White	0V	White 0V

# [BL2-RVAH Pin Assignment]

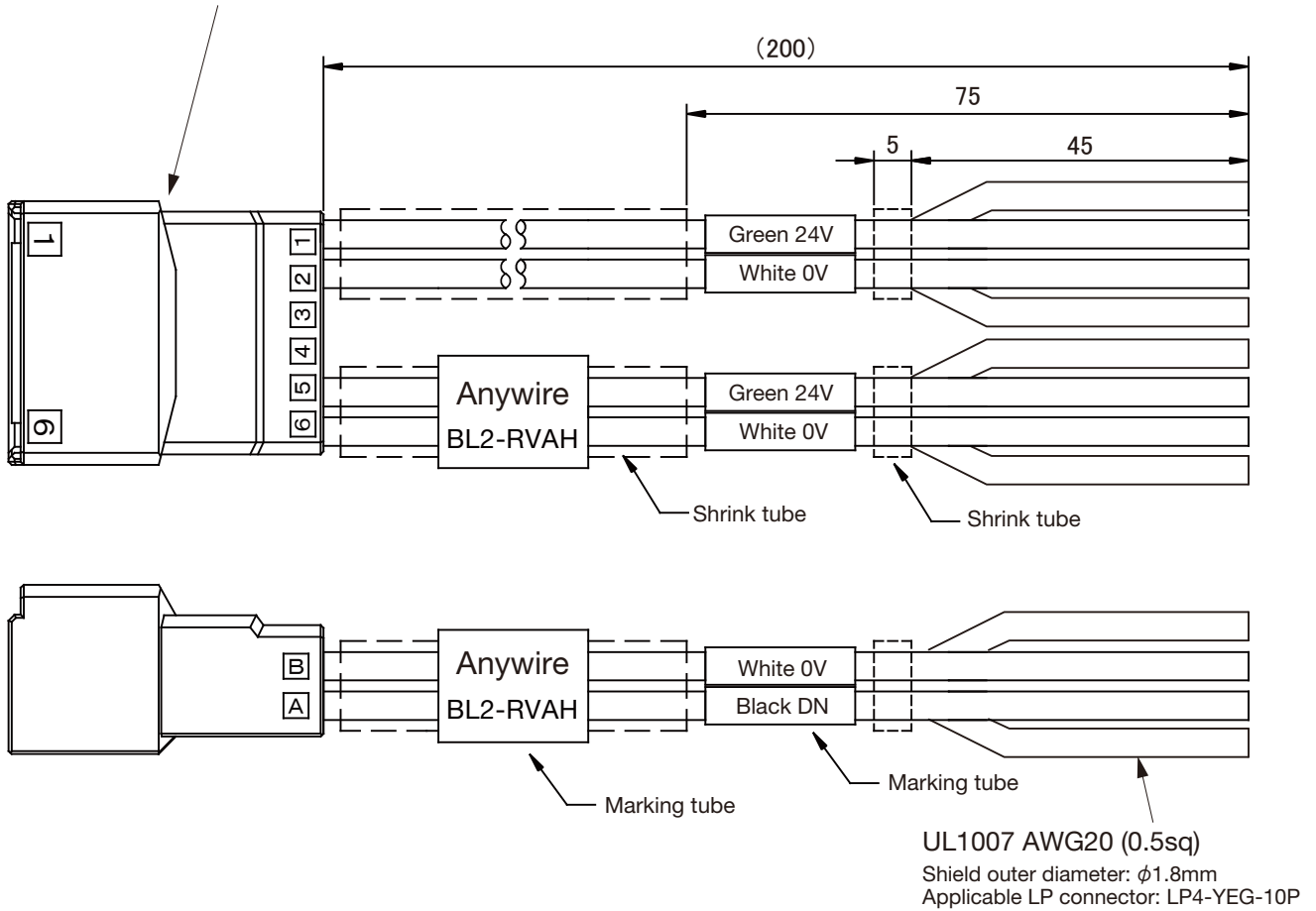
Fitting counterpart

External wiring set for the forearm manufactured by Mitsubishi Electric Corporation

Model: 1F-HB02S-1, for connecting to E-F1 connector/E-F2 connector

Manufacturer: Tyco Electronics Japan G.K.

Part number: 1-1903130-6



Pin No.	Wire color	Signal name	Marking tube indication
A1	Red	DP	Red DP
A2	Black	DN	Black DN
A3	—	—	—
A4	—	—	—
A5	Red	DP	Red DP
A6	Black	DN	Black DN
B1	Green	24V	Green 24V
B2	White	0V	White 0V
B3	—	—	—
B4	—	—	—
B5	Green	24V	Green 24V
B6	White	0V	White 0V



# [BL2-RVBH Pin Assignment]

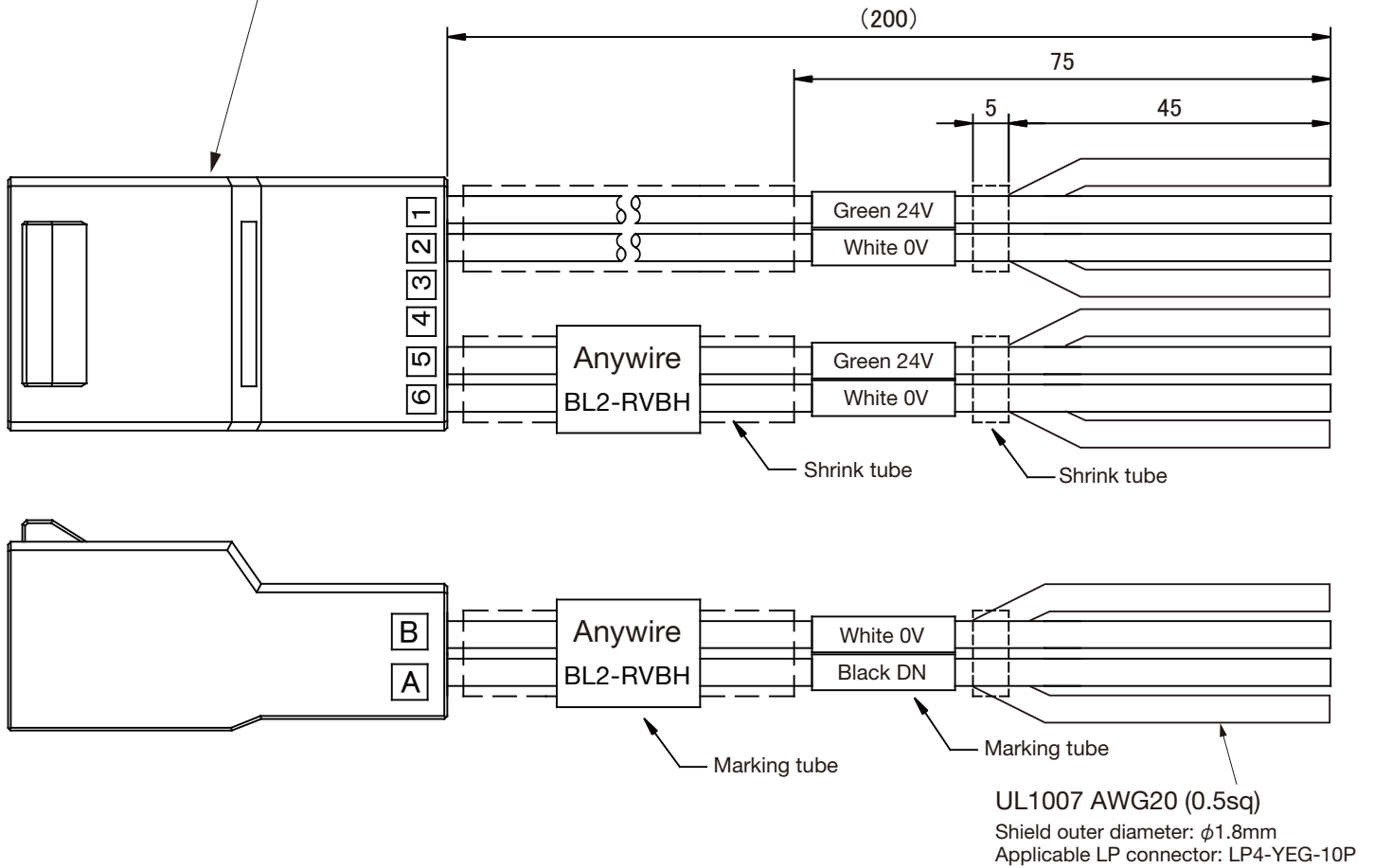
Fitting counterpart

External wiring set for the base manufactured by Mitsubishi Electric Corporation

Model: 1F-HA02S-1, for connecting to E-F1 connector/E-F2 connector

Manufacturer: Tyco Electronics Japan G.K.

Part number: 1-1318115-6



Pin No.	Wire color	Signal name	Marking tube indication
A1	Red	DP	Red DP
A2	Black	DN	Black DN
A3	—	—	—
A4	—	—	—
A5	Red	DP	Red DP
A6	Black	DN	Black DN
B1	Green	24V	Green 24V
B2	White	0V	White 0V
B3	—	—	—
B4	—	—	—
B5	Green	24V	Green 24V
B6	White	0V	White 0V

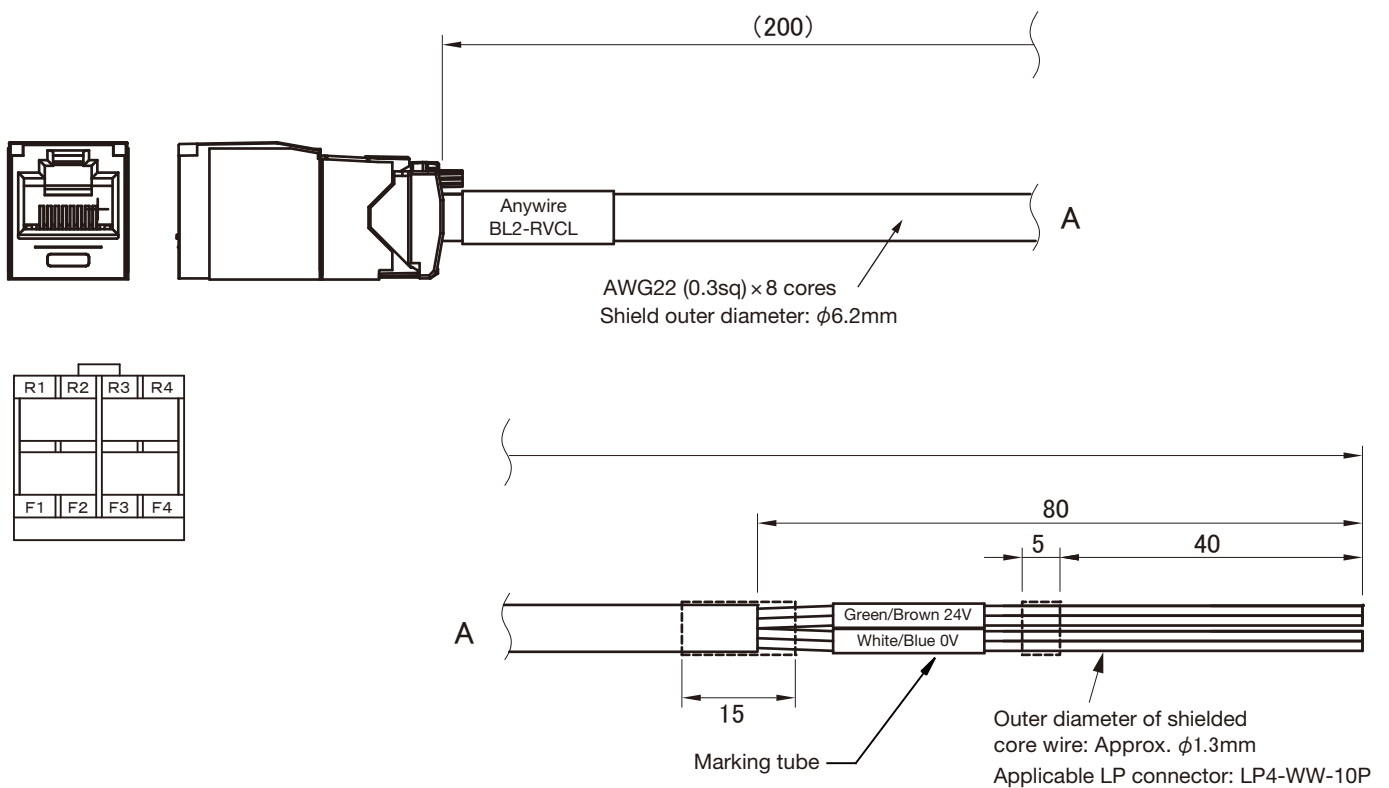
# [BL2-RVCL Pin Assignment]

Fitting counterpart

RV-FR series — External wiring set for the forearm  
 manufactured by Mitsubishi Electric Corporation  
 Model: 1F-HB02S-1, for connecting to LAN connector

External wiring set for the base  
 manufactured by Mitsubishi Electric Corporation  
 Model: 1F-HA02S-1, for connecting to LAN connector

RH-FR series — Direct connection to the Ethernet cable of the base

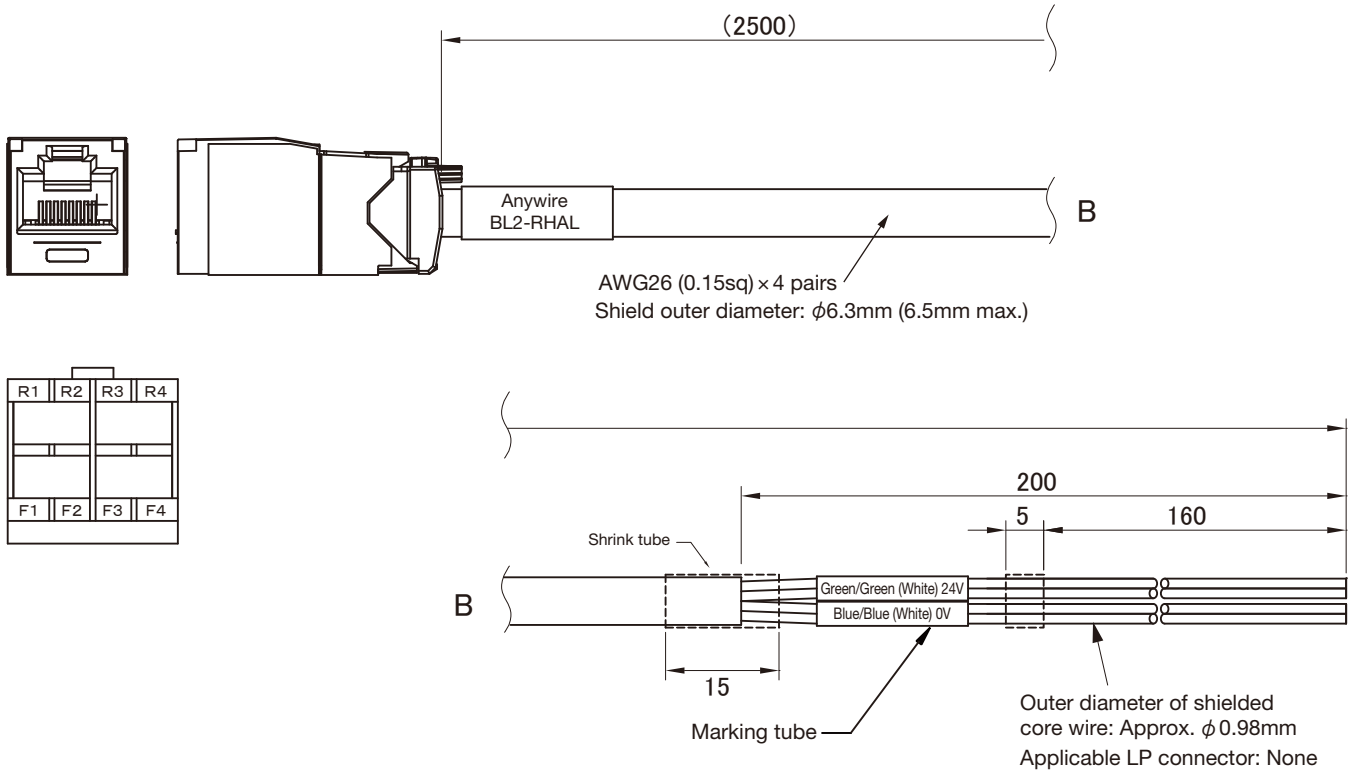


Pin No.	Wire color	Signal name	Marking tube indication
R1	White	0V	White/Blue 0V
R2	Blue	0V	
R3	Red	DP	Red/Yellow DP
R4	Yellow	DP	
F1	Black	DN	Black/Gray DN
F2	Gray	DN	
F3	Green	24V	Green/Brown 24V
F4	Brown	24V	

# [BL2-RHAL Pin Assignment]

Fitting counterpart

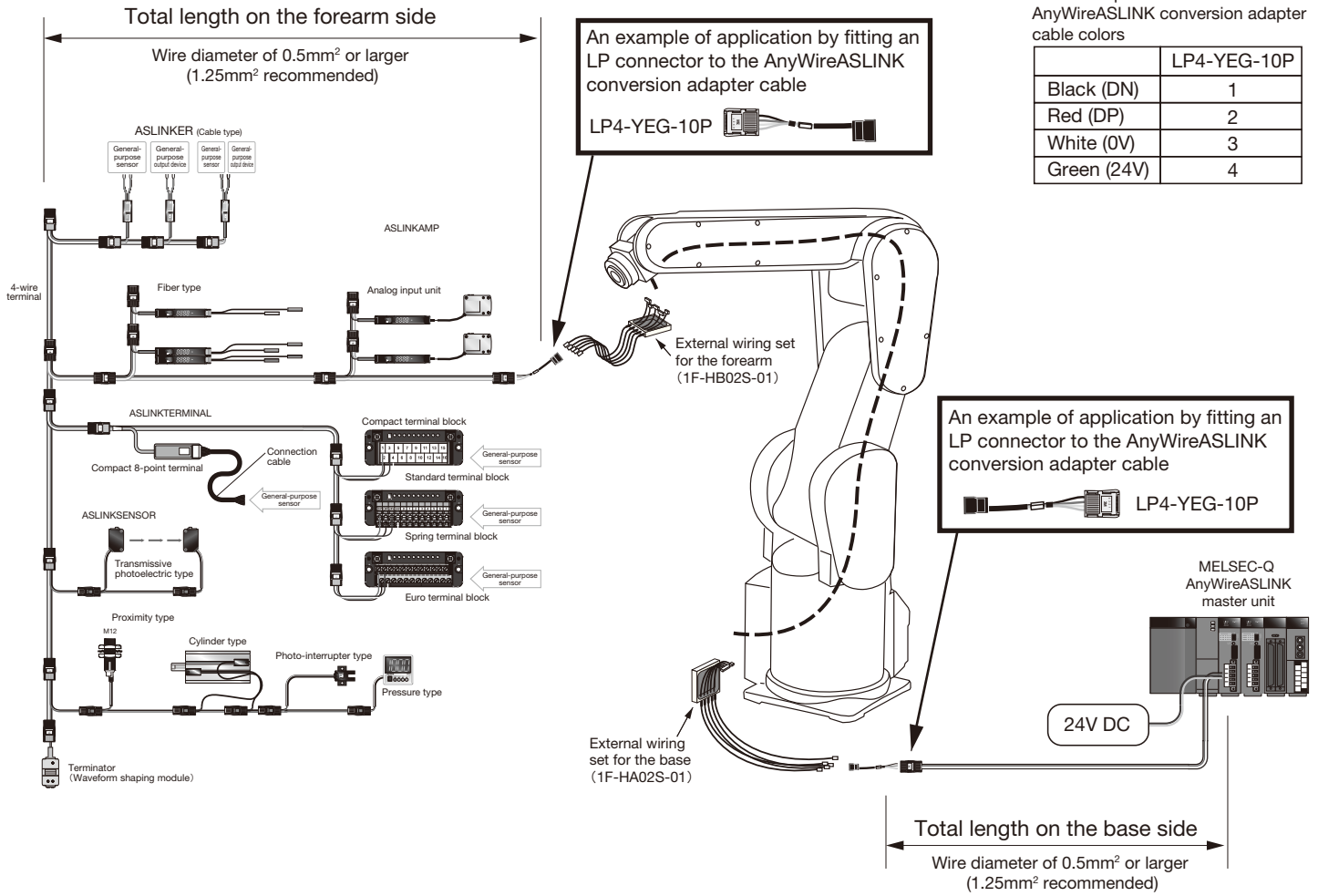
RH-FR series — Horizontal articulated robot manufactured by Mitsubishi Electric Corporation  
LAN cable integrated into the 2nd arm



Pin No.	Wire color	Signal name	Marking tube indication
R1	Blue/White	0V	Blue/Blue (White) 0V
R2	Blue	0V	
R3	Orange/White	DP	Orange/Orange (White) DP
R4	Orange	DP	
F1	Brown/White	DN	Brown/Brown (White) DN
F2	Brown	DN	
F3	Green/White	24V	Green/Green (White) 24V
F4	Green	24V	

## RV-FR series

### ■ Connection example



### ■ External wiring set (Mitsubishi Electric Corporation)

External wiring set for the forearm: 1F-HB02S-01

External wiring set for the base: 1F-HA02S-01

### ■ The length of the transmission line and the allowable supply current

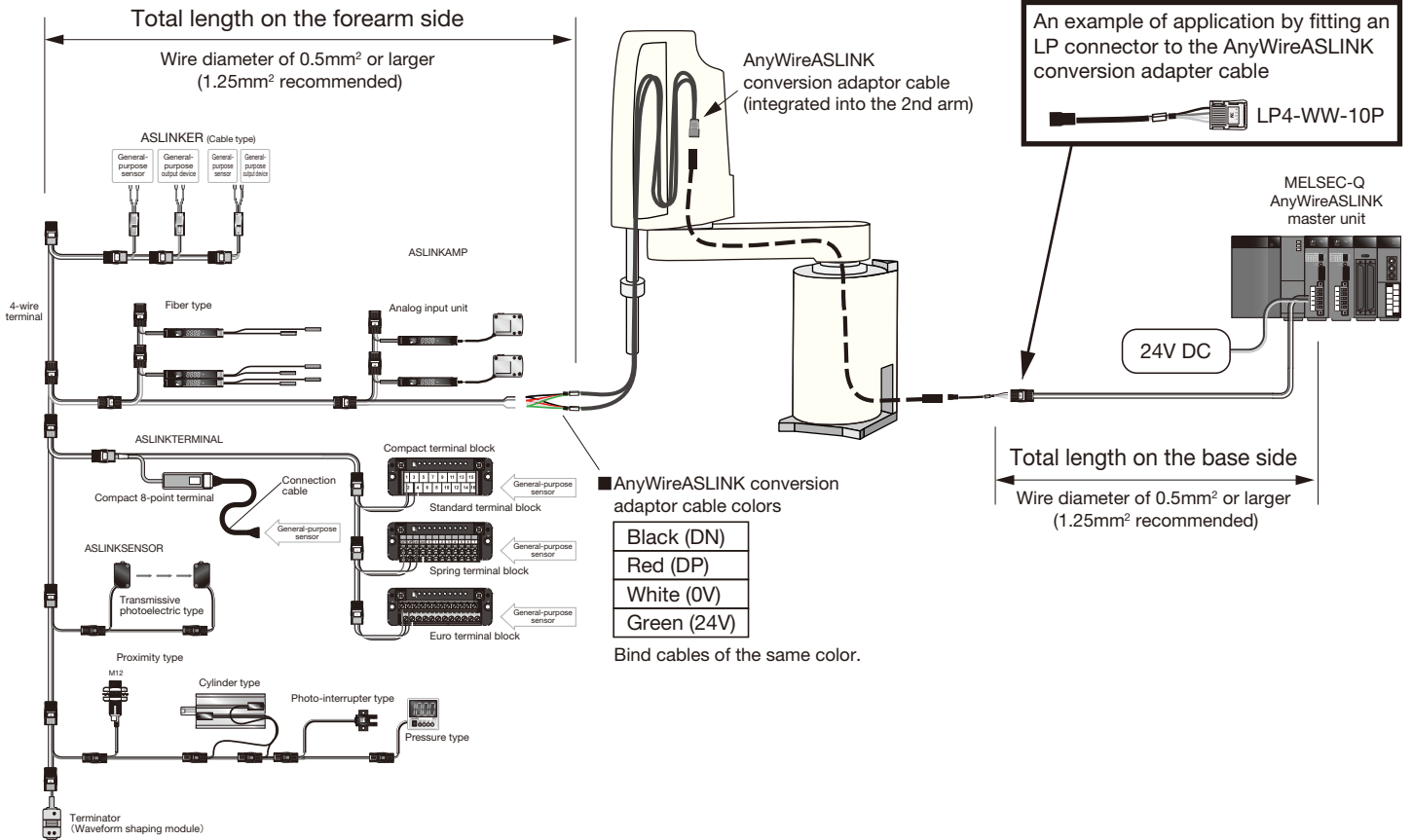
AnyWireASLINK conversion adaptor cable	Total length, forearm side + base side	DP-DN allowable current	24V-0V allowable current
Standard 1A type	5m or less	1.0A	1.0A
	10m or less	0.7A	
High-capacity 2A type	5m or less	2.0A	2.0A
	10m or less	1.4A	

# RH-FR series

## ■ Connection example

■ Correspondence between LP connector pin numbers and AnyWireASLINK conversion adapter cable colors

	LP4-WW-10P
Black (DN)	1
Red (DP)	2
White (0V)	3
Green (24V)	4



## ■ The length of the transmission line and the allowable supply current

AnyWireASLINK conversion adaptor cable	Total length, forearm side + base side	DP-DN allowable current	24V-0V allowable current
LAN type	10m or less	1.0A	1.0A

## 【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。

× : 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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