

## LP-ABR Series Quick Reference

Thank you for purchasing our Fixed mount 2D Code Reader LP-ABR. This Quick Reference describes the specification summary and simple operation check method of this product.



In order to use this product properly, be sure to read the operation manual at use.

You can download the instruction manual and configuration software from our website.

<http://industrial.panasonic.com/ac/efasys/lasermarker/lasermarker/lp-abr10/index.jsp>

### 1. Included items

Item	Qty
LP-ABR series code reader	1
LP-ABR series Quick Reference	1
Configurator LP-ABR Quick Reference	1

### 2. Lineup

Model Number LP-ABR1 **1**

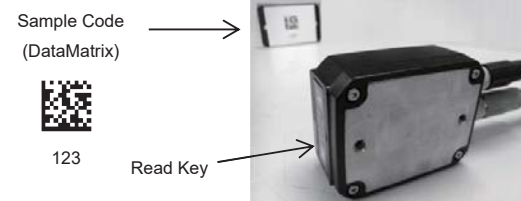
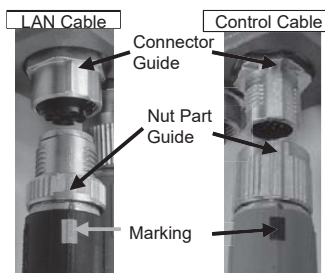
Number	Note	Description
1		Regular: Distance 100mm
2		Long Range Type: Distance 200mm

### 3. Optional Items

Unit Name	Model	Note
Control Cable	LP-ABR10-C5	5m
LAN Cable	LP-ABR10-L5	5m

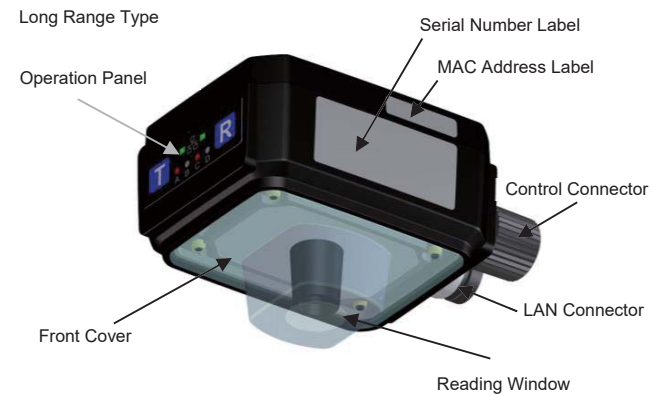
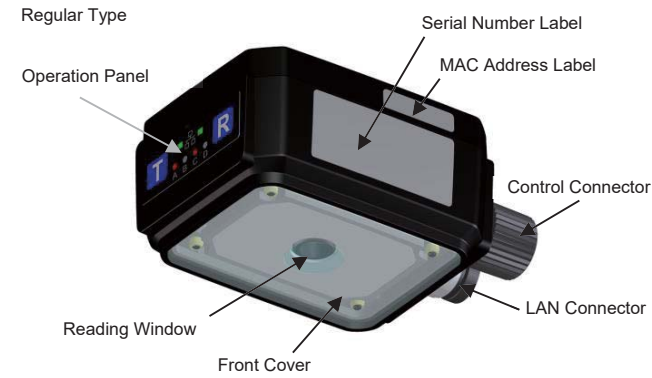
### 9. Operation Check Method

- Connect the control cable and LAN cable with LP-ABR.
  - Adjust the positions of the guide part of the cable nut and the marking of the resin part.
  - Adjust the marking of resin part with the connector guide and insert the connector all the way in.
  - Lock by turning the nut to the right.
- Establish other connection referring to the connection samples.
- Press the power switch to ON on the reader. After the 2 long and 3 short beeps, the monitor LED-A turns on.
- Start the communications software to configure the following items.
- Place the sample code within the reading area (refer to the reading specification) and press Read key. The internal illumination turns on and the device reads the code.

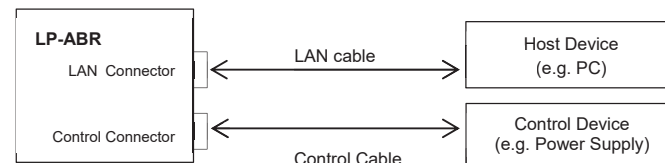


- When the reader reads the sample code successfully, the monitor LED-C (green) turns on after 1 short beep and the communications software displays the reading result "123" on the monitor.
- If the reader fails to read, the monitor LED-D (red) turns on and the communications software displays "BR" on the monitor.

### 4. Product Description



### Example of Connection

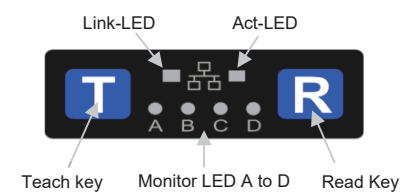


### 10. Interface Specifications

#### (1) I/O Interface

Color	Name	Function
grey / pink	SYNC+	SYNC Input (+ Side of Photo coupler)
red / blue	SYNC-	SYNC Input (- Side of Photo coupler)
purple	OUT1+	Digital Output 1 (+ Side of Photo coupler)
black	OUT2+	Digital Output 2 (+ Side of Photo coupler)
white / green	OUT3+	Digital Output 3 (+ Side of Photo coupler)
brown / green	COM-	Digital Output COM (- Side of Photo coupler)
green	LIGHT+	External Illumination Timing (+ Side of Photo coupler)
yellow	LIGHT-	External Illumination Timing (- Side of Photo coupler)
white / yellow	TXD	Transmitted Data (RS-232C, for host device)
yellow / brown	RXD	Received Data (RS-232C, for host device)
grey	RTS	Transmission Request (RS-232C, for host device)
pink	CTS	Transmission Permission (RS-232C, for host device)
brown	PVIN	+24V Power Input
red	PVIN	+24V Power Input
blue	PGND	Power Ground
white	PGND	Power Ground
white / grey	SGND	Signal Ground

### 5. Operation Panel



#### (1) Function of Monitor LED

LED	Color	Name	Description of Function
A	Red	Ready	Turns on when the code reader is operable.
B	Green	SYNC	Turns on at a synchronizing input.
C	Green	GO	Turns on when the reader successfully reads symbols or characters.
D	Red	NG	Turns on when the reader fails to read.
Link	Green	LINK	Turns on when the LAN is connected
Act	Orange	ACTIVE	Turns on at the data transmission/reception

#### (2) Read Key

Read Key is used for a test/verification. When it is pressed, the reader acts the same as when the external synchronizing input signal is entered.

### 6. Default Settings

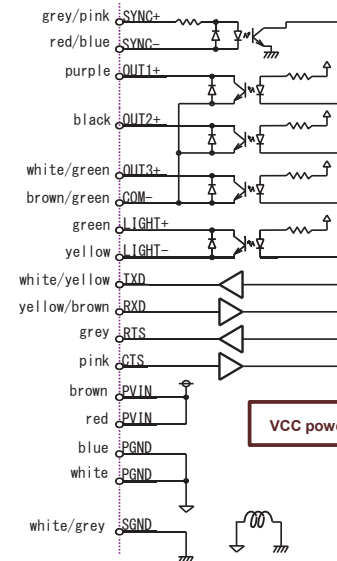
Protocol	TCP/IP
IP Address	192.168.209.10
Subnet Mask	255.255.255.0
Port Number	27110
Default Gateway Address	192.168.209.254

### 7. Configuration Software

The following configuration softwares are available.

Configurator LP-ABR: For the configuration and reading confirmation on your computer

#### (2) I/O Interface internal circuit



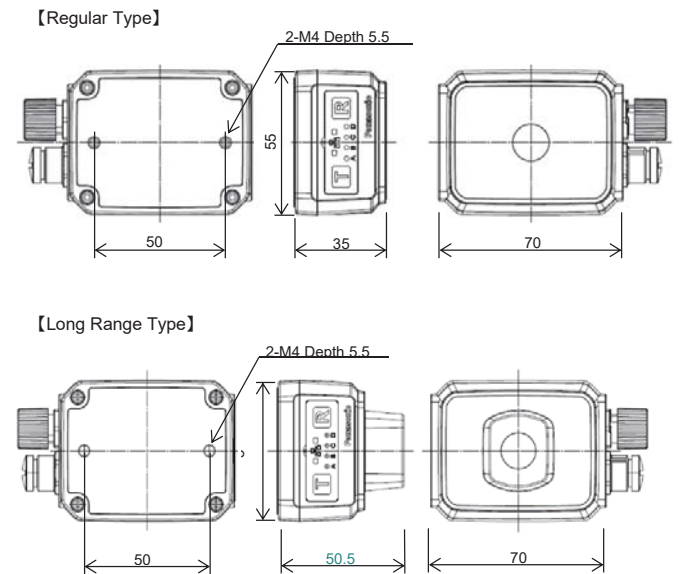
† Use "SGND" for RS-232C.

### 11. Reading Specifications

Regular Type		70	80	90	100	110	120	130	140	150
Field of View	Horizontal	38	44	49	54	59	64	69	74	79
	Vertical	29	33	36	40	44	48	52	56	60
Reading Range	DataMatrix 0.167	85-125		QR-Code 0.167		85-125				
	DataMatrix 0.25	70-150		QR-Code 0.25		70-150				

Long Range Type		150	160	170	180	200	220	230	240	250
Field of View	Horizontal	32	35	37	39	44	50	51	54	56
	Vertical	24	25	28	29	33	37	38	40	42
Reading Range	DataMatrix 0.167	185-220		QR-Code 0.167		190-215				
	DataMatrix 0.25	175-230		QR-Code 0.25		180-225				

### 8. Dimensions



Tightening torque of M4 mounting screw is for a maximum of 1.78N·m.  
To avoid damage to the screws or screw holes, do not screw the screws more than the screw depth of the mounting holes.

### 12. Specifications

Supported Symbols	2-D Codes Data Matrix (ECC200), QR Code	
Reading Angle	PITCH: ±35° SKEW: ±35° TILT: 360°	
Image Sensor	1/3 inches CMOS monochrome	
Effective Pixels	1280 (X) × 960 (Y) (approx. 1.2 million pixels)	
Internal Illumination Source	White LED	
Power rating	Power-supply voltage	DC24V±10%
	Consumption current	Command (SYNC) standby : approx. 140mA During reading operation : approx. 400mA
Digital Input	Photo-coupler isolation x1 Input resistance: 1kp OFF voltage: 0 to 0.8V, ON voltage : 6 to 28V	
Digital Output	Photo-coupler isolation x4 Maximum rating DC30V 50mA	
Interface	For host connection	Ethernet (10Base-T, 100Base-TX, 1000Base-T)
		RS-232C (1200bps to 115.2kbps)
Data Format	ASCII	
Environmental tolerance	Operating temperature	0 to +40°C
	Operating humidity	35 to 85%R.H. (non condensing)
	Storage temperature	-20 to +65°C
	Storage humidity	35 to 85%R.H. (non condensing)
	Vibration tolerance	10 to 55Hz amplitude 1.5mm (total width) / X, Y, Z 2hours for every direction
External Dimensions	Protective structure	IP65(IEC)
	Regular type	70(H) × 55(W) × 35(D)
Mass	Long Range type	70(H) × 55(W) × 50.5(D)
		Approx. 200g

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# Configurator LP-ABR Quick Reference Guide



Configurator LP-ABR (Configurator) is a software used to check the various settings and reading operation of our company's products (LP-ABR series). This manual describes how to operate the "Easy Setting Mode" of Configurator.

The features, specifications, and operation method of Configurator are described in the attached Instruction Manual. The software and documents of our company's products are downloadable from:

<http://industrial.panasonic.com/ac/e/fasvs/lasermarker/lasermarker/lp-abr10/index.jsp>

### 1 Install Configurator

1) Run "ConfiguratorLPABR-v\*\*\*.exe"

2) Install the Configurator following the steps in the setup wizard.  
\* To upgrade an installed Configurator, uninstall it in advance.

### 2 Start Configurator

1) Connect a LAN cable of LP-ABR series (= code reader) to the LAN port of your computer. (The initial value of the IP address of the code reader is "192.168.209.10".)

2) Double-click the same icon as shown below on the desktop or select. [Start] => [All Programs] => [Panasonic-ID SUNX Laser] => [2D Code Reader]=>[Configurator LP-ABR]

3) Mode Selector window is displayed.

### 3 Start Easy Setting Mode

1) Click "easy".

2) A dialog is displayed.

3) Click "Auto Search".

4) Select a scanner and click "OK".  
*\*If no scanner is displayed, check if the PC's IP address is in the same network with the image reader's.*

5) Select a symbol and click "Connect".

6) Easy Setting window is displayed.

### 4 Configuration with Auto-Tuning

1) Click ① "Live".

2) Adjust the reading distance to the focus position of the code reader. (Focus position varies depending on the model. Refer to the instruction manual of the code reader.)

3) If the symbol is unclear, adjust the brightness with ②.

4) Adjust the position and angle of the scanner watching ③ "Live View".

5) Make sure that the entire symbol is clearly visible and click ④ "Start auto-tuning".

6) The dialog as shown above is displayed when the auto-tuning is successful. Click ⑤ "Yes." is clicked, the reading parameter for which a reading result was best enters ⑥ "the designated table number". When designating it more than 2 tables, only a remaining number is preserved by the table number next to it in turn from the parameter to which a result was preferred in the next. (It can be preserved to at most 3 tables.) Click ⑦ "No" to discard the settings configured with the auto-tuning.

### 5 If Auto-Tuning is failed

To decode a symbol with large size/large number of digits, set the time of "Decode Timeout" long.

If the image is blurred, check if the reading distance is adjusted with the focus position of the code reader. For the focus position, refer to the instruction manual of the code reader.

If the decode is not successful in any way above, the setting may be set to not read the symbol. Close Easy Setting window and select a symbol to decode again.

### 6 Decode Symbols

1) To check the decode, Click "Continuous Read" on the bottom-left.

2) The data of the decoded symbol is displayed on the bottom-left on "Live View" screen.

### 7 Display Decode Result

1) Click ① to switch the display to "Decode Result". If your computer is connected to the model that supports Print Check function, ② "Symbol Print Quality" and "Print Quality Type" are displayed.

2) To check the print quality of symbols, check the "Symbol Print Quality" and select "Print Quality Type". To check the print quality of all items, select "ISO" or "AIM".

3) Click ③ "Continuous Read" to start reading.

4) Decode result is displayed in ④. The contents of decode result that are displayed are listed below.  
• Symbol Data (Data) • Contrast (Contrast)  
• Unused Error Correction (Quality) • Decode Time (Decode Time)  
• Print Quality (ISO/AIM)

5) Items to display in ④ and ⑥ are selectable from the list of ⑤.

6. Click ⑦ "Save" to save the log of decode result that is displayed in ④ to a text file.

### 8 Rescale the Image

The decoded image is displayed in the Image Viewer (new window opens) when the live view is double-clicked. You can rescale the image with Image Viewer.

The image is displayed in actual size (100%).

Rescale the image.

Click to save the image. (It is saved in actual size.)

### 9 Save Settings to Code Reader

Click "Save scanner" below "Decode Result" to save the settings to the code reader. The settings will be retained even after the code reader is powered OFF.