

# User's Manual

## 91030 USB Communication Adaptor

This manual describes the safety precautions for using the model 91030 USB Communication Adaptor. To ensure correct use, please read this manual thoroughly. After reading this manual, keep it in a safe place. This instrument is the USB communication adaptor for MY600. Please read this manual together with the user's manual of the MY600.

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**YOKOGAWA**

IM 91030-01EN  
1st Edition

### Checking the Contents of the Package

Unpack the box, and check the following before operating the instrument. If the wrong items have been delivered, if items are missing, or if there is a problem with the appearance of the items, contact your nearest YOKOGAWA dealer.

#### Instrument

Check that the product that you received is what you ordered.

MODEL	Suffix Code	Specifications
91030		USB Communication Adaptor

#### Standard Accessories

Item	Model/Part No.	Quantity	Notes
CD	-	1	USB driver is recorded.
Manuals	IM 91030-01EN	1	This manual.
	IM 91030-02Z2	1	Explains how to install the USB driver.
	PIM 113-01Z2	1	List of worldwide contacts

### List of Manuals

The following manuals are provided for the 91030.

Manual Title	Manual No.	Notes
M91030 USB Communication Adaptor User's Manual	IM 91030-01EN	This manual. The manual explains the handling precautions, features, specifications, how to operate the 91030, and so on.
USB Driver for 91030 USB Communication Adaptor Installation Manual	IM 91030-02Z2	Explains how to install the USB driver.

The "-EN" in the manual number is the language code.

Contact information of Yokogawa offices worldwide is provided on the following sheet.

Document No.	Description
PIM 113-01Z2	List of worldwide contacts

### Conventions Used in This Manual

The notes and cautions in this manual are categorized using the following symbols.



This symbol is used in conjunction with the word "WARNING" or "CAUTION."



Ce symbole est accompagné des termes "AVERTISSEMENT" et "ATTENTION."

**WARNING** Calls attention to actions or conditions that could cause serious or fatal injury to the user, and precautions that can be taken to prevent such occurrences.

**AVERTISSEMENT** Attire l'attention sur des gestes ou des conditions susceptibles de provoquer des blessures graves (voire mortelles), et sur les précautions de sécurité pouvant prévenir de tels accidents.

**CAUTION** Calls attention to actions or conditions that could cause light injury to the user or damage to the instrument or user's data, and precautions that can be taken to prevent such occurrences.

**ATTENTION** Attire l'attention sur des gestes ou des conditions susceptibles de provoquer des blessures légères ou d'endommager l'instrument ou les données de l'utilisateur, et sur les précautions de sécurité susceptibles de prévenir de tels accidents.

**Note** Calls attention to information that is important for the proper operation of the instrument.

### Safety Precautions

This product is designed to be used by a person with specialized knowledge. The general safety precautions described herein must be observed during all phases of operation. If the product is used in a manner not specified in this manual, the protection provided by the product may be impaired. YOKOGAWA assumes no liability for the customer's failure to comply with these requirements. This manual is part of the product and contains important information. Store this manual in a safe place close to the instrument so that you can refer to it immediately. Keep this manual until you dispose of the instrument.

#### The following symbols are used on this instrument.



Handle with care. Refer to the user's manual or service manual. This symbol appears on dangerous locations on the instrument which require special instructions for proper handling or use. The same symbol appears in the corresponding place in the manual to identify those instructions.

Failure to comply with the precautions below could lead to injury or death or damage to the instrument.



#### WARNING

##### Use the Instrument Only for Its Intended Purpose

The 91030 is a USB communication adaptor. Use it only for USB communication adaptor.

##### Check the Physical Appearance

Do not use the instrument if there is a problem with its physical appearance.

##### Do Not Remove Covers or Disassemble or Alter the Instrument

Only qualified YOKOGAWA personnel may remove the covers and disassemble or alter the instrument.

### French



#### AVERTISSEMENT

**Utiliser l'instrument aux seules fins pour lesquelles il est prévu**  
91030 est un adaptateur de communication USB. Utiliser cet instrument uniquement pour adaptateur de communication USB.

#### Inspecter l'apparence physique

Ne pas utiliser l'instrument si son intégrité physique semble être compromise.

#### Ne pas retirer le capot, ni démonter ou modifier l'instrument

Seul le personnel YOKOGAWA qualifié est habilité à retirer le capot et à démonter ou modifier l'instrument.



Waste Electrical and Electronic Equipment  
(This directive is valid only in the EU.)

This product complies with the WEEE directive marking requirement. This marking indicates that you must not discard this electrical/electronic product in domestic household waste.

Product Category

With reference to the equipment types in the WEEE directive, this product is classified as a "Monitoring and control instruments" product.

When disposing of products in the EU, contact your local Yokogawa Europe B.V. office. Do not dispose in domestic household waste.

### Authorized Representative in the EEA

Yokogawa Europe B.V. is the authorized representative of Yokogawa Test & Measurement Corporation for this product in the EEA. To contact Yokogawa Europe B.V., see the separate list of worldwide contacts, PIM 113-01Z2.

### 产品中有毒有害物质或元素的名称及含量

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)
91030	×	○	×	○	○	○

○ : 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 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/T 26572 规定的限量要求。

环保使用期限 : 该标识适用于 SJ/T 11364 中所述, 在中华人民共和国销售的电子电气产品的环保使用期限。只要您遵守该产品相关的安全及使用注意事项, 在自制造日起算的年限内, 则不会因产品中有毒物质泄漏或突发变异, 而造成对环境的污染或对人体及财产产生恶劣影响。  
注) 该年数为 "环保使用期限", 并非产品的质量保质期。零件更换的推荐周期, 请参照使用说明书



### Handling Precautions

#### Storage Location

Avoid the following kinds of places for storing the instrument:

- Where the temperature falls outside the storage temperature and humidity ranges
- In direct sunlight or near heat sources
- Outdoors or locations subject to rain or water
- In an environment with excessive amounts of soot, steam, dust, or corrosive gas
- In an environment subject to large levels of mechanical vibration
- On an unstable surface
- Where an excessive amount of soot, dust, salt, or iron is present

#### Operating Altitude and Ambient Temperature and Humidity

Use the instrument in the following environment.

Ambient temperature: -10°C to 50°C

Ambient humidity: 20% RH to 80% RH, no condensation

Operating altitude: Up to 2000 m

#### Note

- Condensation may occur if the instrument is moved to another place where the ambient temperature or humidity is higher, or if the temperature changes rapidly. In such cases, before you use the instrument, allow it to adjust to the surrounding temperature for at least an hour.

### Specifications

#### Operating System

Microsoft Windows 7(32 bits/64bits), Windows 8(32 bits/64bits), Windows 8.1(32 bits/64bits), or Windows 10(32 bits/64bits)

#### USB Standard

USB 1.1

#### Communication Method

Baud rate	9600 bps
Data length	8 bits
Parity	None
Stop bit	1 bit
X control	None

### Connection

1. Connect this instrument to the USB port of the PC.
2. Remove the probe from the instrument's terminals.
3. Open the communication port cover of the MY600, and insert this instrument to the communication port.
4. Turn the MY600 on.

## Commands

### Start communication: 10

Starts communication with the MY600.

Command format (reception and transmission)

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "07" : 7 BYTES	2
4		2	'7'		
5	CMD	1	'1'	Communication start command "10"	2
6		2	'0'		
7	CSUM	1	'F'	Checksum "F8"	2
8		2	'8'		
9	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

### End communication: 11

Ends communication with the MY600.

Command format (reception and transmission)

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "07" : 7 BYTES	2
4		2	'7'		
5	CMD	1	'1'	Communication end command "11"	2
6		2	'1'		
7	CSUM	1	'F'	Checksum "F9"	2
8		2	'9'		
9	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

### Start continuous data transmission: B1

Retrieves measurement data in real-time until sending the continuous data transmission end command (B2).

Command format (reception and transmission)

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "07" : 7 BYTES	2
4		2	'7'		
5	CMD	1	'B'	Data connection start command "B1"	2
6		2	'1'		
7	CSUM	1	'0'	Checksum "0A"	2
8		2	'A'		
9	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

Receive data in the following format

- Voltage measurement:  
<model name>,VOLT,<site number 1>,<site number 2>,<voltage>,<voltage unit>,<DC±/AC/--><CRLF>  
If the voltage is less than 2 V, "--" is returned for <DC±/AC/-->.  
Example MY600,VOLT,00,00,100,V,AC<CRLF>  
If the voltage is less than 2 V, "--" is returned for <DC±/AC/-->.
- Insulation resistance measurement:  
<model name>,<range>,<site number 1>,<site number 2>,<insulation resistance>,<insulation resistance unit>,<elapsed time>,<1-minute value>,<1-minute value unit>,<DAR value>,<PI value>,<comparator><CRLF>  
Example MY600,1000V,00,00,100.0,MΩ,00:10,----,--,----,----,PASS<CRLF>  
\* The available six range are 50V, 100V, 125V, 250V, 500V, 1000V.
- Low-resistance measurement  
<model name>,<CONT>,<site number 1>,<site number 2>,<resistance>,<resistance unit>  
Example MY600,CONT,00,00,100.0,Ω<CRLF>

### End continuous data transmission: B2

Ends the continuous retrieval of measurement data.

Command format (reception and transmission)

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "07" : 7 BYTES	2
4		2	'7'		
5	CMD	1	'B'	Data connection end command "B2"	2
6		2	'2'		
7	CSUM	1	'0'	Checksum "0B"	2
8		2	'B'		
9	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

### Retrieve measurement data count in internal memory: BN

Retrieves the number of measurement data entries stored in the MY600 internal memory.

Transmission format

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "07" : 7 BYTES	2
4		2	'7'		
5	CMD	1	'B'	Data connection start command "BN"	2
6		2	'N'		
7	CSUM	1	'2'	Checksum "27"	2
8		2	'7'		
9	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

## Reception format

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "0B" : 11 BYTES	2
4		2	'B'		
5	CMD	1	'B'	Data connection start command "BN"	2
6		2	'N'		
7	DATA	1	--	Data count "0000" to "1000"	4
8		2	--		
9		3	--		
10		4	--		
11	CSUM	1	--	Checksum	2
12		2	--		
13	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

### Retrieve measurement data from internal memory: BM

Retrieves the measurement data stored in the MY600 internal memory.

Transmission format

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	'0'	Packet size "0A" : 10 BYTES	2
4		2	'A'		
5	CMD	1	'B'	Data connection start command "BM"	2
6		2	'M'		
7	No.	1	--	Data number "000" to "999"	3
8		2	--		
9		3	--		
10	CSUM	1	--	Checksum	2
11		2	--		
12	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

## Reception format

Order	Command	ASCII	Binary	Description	Size
1	STX	1	02H	Packet start (fixed value) Write 02 in binary.	1
2	TYPE	1	'0'	Data packet type: small	1
3	SIZE	1	--	Packet size Variable	2
4		2	--		
5	CMD	1	'B'	Data connection start command "BM"	2
6		2	'M'		
7	No.	1	--	Data number "000" to "999"	3
8		2	--		
9		3	--		
--	DATA	--	--	Target internal memory data (variable)	N
--	CSUM	1	--	Checksum	2
--		2	--		
--	ETX	1	03H	Packet terminator (fixed value) Write 03 in binary.	1

## Data format

- Voltage measurement:  
<model name>,<data number>,<save date>,<save time>,<range>,<site number 1>,<site number 2>,<voltage>,<voltage unit>,<DC±/AC/-->  
Example MY600,0000,2018/03/13,10:33:45,VOLT,00,00,100.0,V,AC
- Insulation resistance measurement:  
<model name>,<data number>,<save date>,<save time>,<range>,<site number 1>,<site number 2>,<insulation resistance>,<insulation resistance unit>,<elapsed time>,<1-minute value>,<1-minute value unit>,<DAR value>,<PI value>  
Example MY600,0000,2018/03/13,10:33:45,1000V,00,00,100.0MΩ,00:10,----,MΩ,--,----,----  
\* The available six range are 50V, 100V, 125V, 250V, 500V, 1000V.
- Low-resistance measurement  
<model name>,<data number>,<save date>,<save time>,<range>,<site number 1>,<site number 2>,<resistance>,<resistance unit>  
Example MY600,0000,2018/03/13,10:33:45,CONT,100.0,Ω

## Checksum (CSUM)

The checksum is the value of the last byte obtained by adding each byte from TYPE to the last DATA or number byte in each command format.

Because the transmission/reception format of 10, 11, B1, B2 and the transmission format of BN are fixed, their checksums are also fixed.