



MODEL E58-CIFIR USB-Infrared Conversion Cable

English INSTRUCTION MANUAL

Thank you for purchasing this E58-CIFIR. This INSTRUCTION MANUAL describes the information such as function, performance, and how to use the product required for using the E58-CIFIR.

For using this product, please follow keep the precautions as shown in the following:

- Please operate this product by the qualified specialist having the electrical know how.
- Read this instruction manual with enough, and use the product correctly with enough understanding.
- Keep this instruction manual close at hand and use it for reference during operation.

OMRON Corporation

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Rev.C

Safety Precautions

Key to Warning Symbols

CAUTION Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Warning Symbols

	CAUTION
Do not leave the cable connected to the Digital Controller. Malfunction may occur due to noise in the USB-Infrared Conversion Cable.	
Do not use any devices or cables that show signs of damage. Minor electric shock or fire may occasionally occur.	
Never disassemble, modify, or repair the product or touch any of the internal parts. Minor electric shock, fire, or malfunction may occasionally occur.	
Do not allow metal particles or wires to enter USB connector and Infrared port. Minor electric shock, fire, or malfunction may occasionally occur.	
Keep the USB connector pins free of dust and dirt. Fire may occasionally occur.	

Precautions for Safety Use

- 1) Be sure to check the orientation of the connector before connecting it. Do not force the connector if it cannot be inserted easily. Doing so may result in damage.
- 2) Do not place objects on top of the USB-Infrared Conversion Cables, pull on the USB-Infrared Conversion Cables, or bend the USB-Infrared Conversion Cables beyond their natural bending limit.
- 3) Do not connect or disconnect USB-Infrared Conversion Cables during communications. Doing so will cause malfunction or failure.
- 4) Allow as much space as possible between the controller and devices that generate a powerful high-frequency or surge.
- 5) Use this product within the rated load and power supply.
- 6) When connecting the infrared port, be sure the connector is in the right direction and insert it to the specified line. Communications may not be possible if the connector is not connected properly.
- 7) Confirm that the indicators on USB-Infrared Conversion Cable are operating properly. Operating conditions may cause the USB connector, infrared port, or cables to deteriorate faster than normal, preventing proper communications. Perform periodic inspections and replacements.

Precautions for Correct Use

- 1) Do not use this product in the following places.
 - Places directly subject to heat radiated from heating equipment.
 - Places subject to splashing liquid or oil atmosphere.
 - Places subject to strong light, such as direct sunlight, fluorescent light, or incandescent light.
 - Places subject to dust or corrosive gas (in particular, sulfide gas and ammonia gas).
 - Places subject to intense temperature change.
 - Places subject to icing and condensation.
 - Places subject to vibration and large shocks.
 - Places near devices that emit infrared light, such as remote controls or monitors.
- 2) Use/store within the rated temperature and humidity ranges.
- 3) Do not connect or disconnect the USB connectors repeatedly over a short period of time. The personal computer may malfunction.
- 4) After connecting the USB connector to the personal computer, check the COM port number before starting communications. The personal computer requires time to recognize the USB-Infrared Conversion Cable connection. This delay does not indicate failure.
- 5) Do not connect the USB cable through a USB hub. Doing so may damage USB-Infrared Conversion Cable.
- 6) Do not use an extension cord to extend the USB cable length when connecting to the personal computer. Doing so may damage USB-Infrared Conversion Cable.
- 7) Confirm that the surface of the infrared port is not dirty. If it is dirty, wipe it off with a soft dry cloth. Do not use thinners or other organic solvents.
- 8) When performing communications, properly connect the enclosed mounting adapter according to the instructions provided.

Note : Windows XP, Windows Vista, Windows 7, and Windows 8 are registered trademarks of Microsoft Corporation in the United States and other countries. Other company names and product names contained in this document are trademarks or registered trademarks of their respective companies.

Specifications

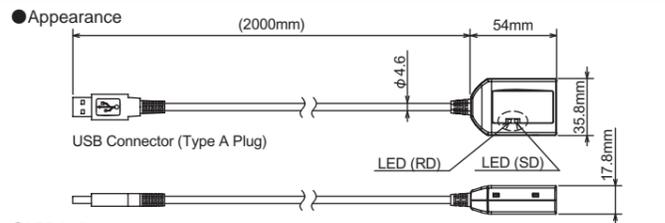
- Compatible Operating Systems Windows XP/Vista/7/8
 - Compatible Software Applications CX-Thermo Ver.4.00 or later
 - Compatible models The following OMRON Digital Controllers, which support the compatible software : E5AN/E5EN-H -series
- Conforms to USB Specification 2.0
38400 bps
Personal computer : USB (type A plug)
Temperature Controller : Serial
DC 5V
80 mA
0 to 55 °C (Avoid freezing or condensation)
RH10 to 80 %
-20 to 60 °C (Avoid freezing or condensation)
RH10 to 80 %
Max.2,000 m
Approx.130 g
- USB Interface rating
 - DTE speed
 - Connector specifications
 - Power supply
 - Power supply voltage
 - Current consumption
 - Ambient temperature
 - Ambient humidity
 - Storage temperature
 - Storage humidity
 - Altitude
 - Weight

System Requirements

The personal computer must have the following requirements.

- USB Port
- Windows XP/Vista/7/8

Appearance and Component Names



●LED Indicators

Indicators	Color	Status	Description
SD	Yellow	Flashing	The computer is sending data to the Digital Controller.
		OFF	The computer is not sending data to the Digital Controller.
RD	Yellow	Flashing	The computer is receiving data from the Digital Controller.
		OFF	The computer is not receiving data from the Digital Controller.

- In the pack.
 - Main unit
 - Instruction manual
 - Mounting adapter

Usage Methods

Use the following procedure to connect the Digital Controller to the personal computer using the E58-CIFIR USB-Infrared Conversion Cable. The E58-CIFIR is used for communications with the COM port of the personal computer. To perform communications using the E58-CIFIR, set the communications port (COM port) number used by the software to the communications port (COM port) number that has been assigned to the E58-CIFIR USB-Infrared Conversion Cable. The communications specifications of the infrared port are given below. These cannot be changed. Set the communications settings of the Setting Tool, such as the CX-Thermo, to the same values.

Settings	Details
Communication unit NO.	01
Boud Rate	38.4(kbit/s)
Data Length	7(bit)
Stop Bits	2(bit)
Parity	even

1. Connecting the Computer and USB-Infrared Conversion Cable

Connect the USB-Infrared Conversion Cable to the USB port on the computer.

2. Obtaining the Driver

When the CX-Thermo Support Software for the Temperature Controller is installed, the driver for the USB-Serial Conversion Cable will be copied to the following folder. C:\Program Files\OMRON\Drivers\USB\E58-CIF Note : CX-Thermo can also be downloaded from the following OMRON website. The driver is included in CX-Thermo. <http://www.omron-compo.com/tm2/>

3. Installing the Driver

Install the driver to enable using the E58-CIFIR USB-Infrared Conversion Cable with the personal computer.

●Installation

When the cable is connected to the personal computer, the operating system will detect the E58-CIFIR as a new device. Install the driver according to the prompts from the installation wizard.

Note1 : OMRON recommends installing the driver separately for each USB port when using the E58-CIFIR for the first time. The E58-CIFIR will be assigned a COM port number for each USB port of the personal computer. The same COM port number can be used even if a different cable is connected to the USB port.

Note2 : If installation is cancelled before it has been completed, the driver will not be completely installed, which will result in abnormal communications. If this occurs, uninstall the driver and then reinstall the driver correctly

Using Windows XP

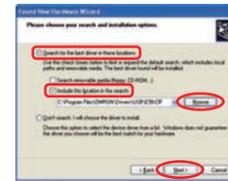
- 1) Insert the E58-CIFIR USB-Infrared Conversion Cable into the USB port of the personal computer. The "Welcome to the Found New Hardware Wizard" will start. Select **Install from a list or specific location (Advanced)** and click the **Next** Button.



If you are using Windows XP Service Pack 2 or Windows XP Service Pack 3, please select **No, not this time** and click the **Next** Button.



- 2) Select the **Search for the best driver in these locations** Option, select the **Include this location in the search** Check Box, and click the **Browse** Button. Select **C:\Program Files\OMRON\Drivers\USB\E58-CIF** and then click the **Next** Button.



- 3) If the message "The software you are installing for this hardware has not passed Windows Logo testing to verify its compatibility with Windows XP" is displayed, ignore it and click the **Continue Anyway** Button.



- 4) The "Completing the Found New Hardware Wizard" Dialog Box will be displayed. Click the **Finish** Button.



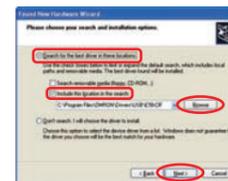
- 5) The "Welcome to the Found New Hardware Wizard" Dialog Box will be displayed. Select the **Install from a list or specific location (Advanced)** Option and then click the **Next** Button.



If you are using Windows XP Service Pack 2 or Windows XP Service Pack 3, please select **No, not this time** and click the **Next** Button.



- 6) Select the **Search for the best driver in these locations** Option, select the **Include this location in the search** Check Box, and click the **Browse** Button. Select **C:\Program Files\OMRON\Drivers\USB\E58-CIF** and click the **Next** Button.



- 7) If the message "The software you are installing for this hardware has not passed Windows Logo testing to verify its compatibility with Windows XP" is displayed, ignore it and click the **Continue Anyway** Button.



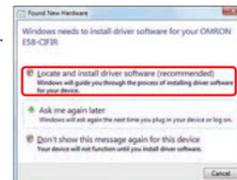
- 8) The "Completing the Found New Hardware Wizard" Dialog Box will be displayed. Click the **Finish** Button to complete installation.



- 9) When the installation is finished, a COM port number will be allocated automatically. To see that COM port number has been allocated, use **Confirming Automatically Assigned COM Port Number**.

Using Windows Vista

- 1) Insert the E58-CIFIR USB-Infrared Conversion Cable into the USB port of the personal computer. The "Found New Hardware" Dialog Box will be displayed. Select **Locate and install driver software (recommended)**.



- 2) In the "Found New Hardware" Dialog Box, select **I don't have the disc. Show me other options**.



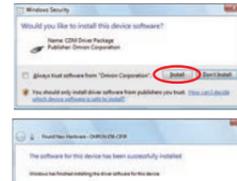
- 3) Select **Browse my computer for driver software (advanced)**.



- 4) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



- 5) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



- 6) When a message is displayed stating that "Windows has finished installing the driver software for this device" in the "Found New Hardware" Dialog Box, click the **Close** Button.



- 7) In the "Found New Hardware" Dialog Box, select **I don't have the disc. Show me other options**.



- 8) Select **Browse my computer for driver software (advanced)**.



- 9) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



- 10) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



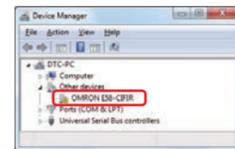
- 11) When a message is displayed stating that "Windows has finished installing the driver software for this device" in the "Found New Hardware" Dialog Box, click the **Close** Button to complete installation.



12) After installation has been completed, the COM port number will be automatically assigned. For details on checking the assigned COM port number, refer to **Confirming Automatically Assigned COM Port Number.**

Using Windows 7

- 1) Connect the USB-Infrared Conversion Cable to the USB port on the personal computer.
- 2) Select **Computer - System Properties - Device Manager.**
- 3) Right-click **E58-CIFIR** in Other Devices and select **Update Driver Software.**



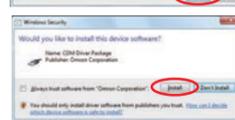
- 4) In the "Update Driver Software" Dialog Box, select **Browse my computer for driver software.**



- 5) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



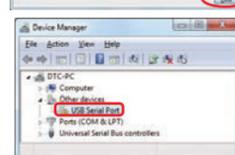
- 6) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



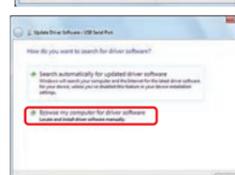
- 7) When a message in the "Update Driver Software" Dialog Box says "Windows has successfully updated your driver software", click the **Close** Button.



- 8) Right-click **USB Serial Port** in Other Devices in the "Device Manager" Dialog Box and select **Update Driver Software.**



- 9) In the "Update Driver Software" Dialog Box, select **Browse my computer for driver software.**



- 10) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



- 11) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



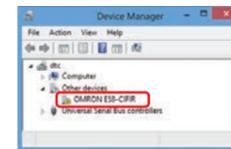
- 12) When a message in the "Update Driver Software" Dialog Box says "Windows has successfully updated your driver software", click the **Close** Button.



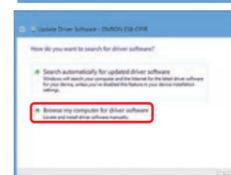
- 13) When the installation is finished, a COM port number will be allocated automatically. To see that COM port number has been allocated, use **Confirming Automatically Assigned COM Port Numbers.**

Using Windows 8

- 1) Connect the USB-Infrared Conversion Cable to the USB port on the personal computer.
- 2) Click the folder icon on the bottom left of screen under the all folders closed. Select **Computer - System Properties** to start up the **Device Manager.**
Note : If using keyboard, the menu is displayed by pressing **X** key while holding down **Windows** key.
- 3) Right-click **E58-CIFIR** in Other Devices and select **Update Driver Software.**



- 4) In the "Update Driver Software" Dialog Box, select **Browse my computer for driver software.**



- 5) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



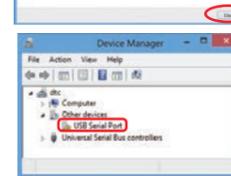
- 6) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



- 7) When a message in the "Update Driver Software" Dialog Box says "Windows has successfully updated your driver software", click the **Close** Button.



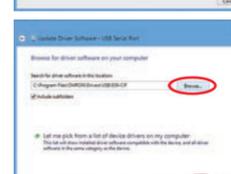
- 8) Right-click **USB Serial Port** in Other Devices in the "Device Manager" Dialog Box and select **Update Driver Software.**



- 9) In the "Update Driver Software" Dialog Box, select **Browse my computer for driver software.**



- 10) Click the **Browse** Button, select **C:\Program Files\OMRON\Drivers\USB\E58-CIF**, and then click the **Next** Button.



- 11) The "Windows Security" Dialog Box will be displayed. Click the **Install** Button.



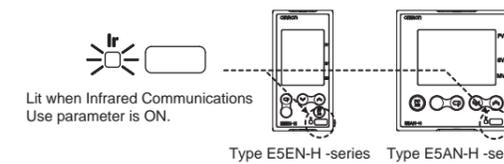
- 12) When a message in the "Update Driver Software" Dialog Box says "Windows has successfully updated your driver software", click the **Close** Button.



- 13) When the installation is finished, a COM port number will be allocated automatically. To see that COM port number has been allocated, use **Confirming Automatically Assigned COM Port Numbers.**

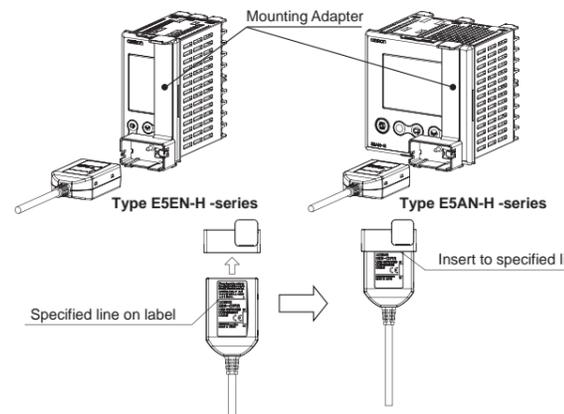
4. Installing the Digital Controller and Enabling Infrared Communications

Place the Digital Controller to the control panel and install each wiring. Turn on the power of the Digital Controller. Set the Infrared Communication Use parameter in the adjustment level to ON.



5. Connecting the Digital Controller and USB-Infrared Conversion Cable

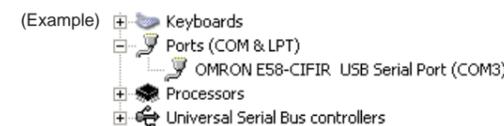
Mount the enclosed mounting adapter to the Digital Controller. Connect the USB-Infrared Conversion Cable with the label on the connector facing up to the mounting adapter and insert the connector to the specified line on the label.



6. Confirming Automatically Assigned COM Port Numbers

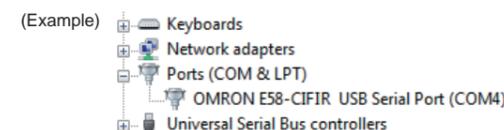
Using Windows XP

Select **My Computer - View System Information** to display the System Properties Window. Click the **Hardware** Tab and then click the **Device Manager** Button. Select **Devices by Type** from the View Menu. For example, if "OMRON E58-CIFIR USB Serial Port (COM3)" is displayed under the "Ports (COM & LPT)" heading in the directory tree, the device is assigned to COM port 3.



Using Windows Vista / 7

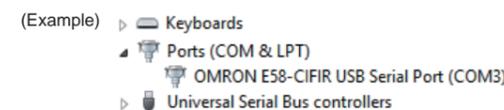
Select **Computer - System Properties** to display the **Device Manager.** For example, if "OMRON E58-CIFIR USB Serial Port (COM4)" is displayed under the "Ports (COM & LPT)" heading in the directory tree, the device is assigned to COM port 4.



Using Windows 8

Click the folder icon on the bottom left of screen under the all folders closed Select **Computer - System Properties** to start up the **Device Manager.**
Note : If using keyboard, the menu is displayed by pressing **X** key while holding down **Windows** key.

For example, if "OMRON E58-CIFIR USB Serial Port (COM3)" is displayed under the "Ports (COM & LPT)" heading in the directory tree, the device is assigned to COM port 3.



7. In the software communications settings, select the COM port number that was confirmed in the device manager and then start communications.

8. After completing the communications data, confirm a correct data setting. Disconnect the mounting adapter and USB-Infrared Conversion Cable from the Digital Controller, Set the Infrared Communication Use Parameter in the adjustment level to OFF and start the operation.

Uninstalling the Driver

Using Windows XP

- 1) Double-click **FTClean.exe** to start "FTDI Clean Utility V1.0". **FTClean.exe** is included in the E58-CIF driver.

- 2) "FTDI Clean Utility V1.0" has started, set the "VID (HEX)" Field to **Other** and enter **0590** in the field on the right, and **007C** in the "PID (HEX)" Field. Click the **Clean System** Button.



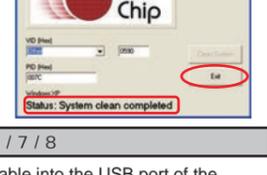
- 3) When the "Information" Dialog Box is displayed, disconnect the E58-CIFIR USB-Infrared Conversion Cable from the computer and click the **OK** Button.



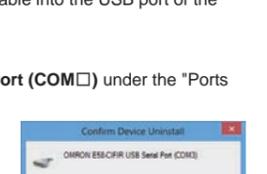
- 4) When the "Confirm" Dialog Box is displayed with a message "You are about to uninstall all FTDI drivers...", click the **Yes** Button.



- 5) When the "Confirm" Dialog Box is displayed with a message "Do you want to cancel driver uninstallation?", click the **No** Button.



- 6) Check that the "FTDI Clean Utility V1.0" displays "Status: System clean completed". Click the **Exit** Button to complete uninstallation.



Using Windows Vista / 7 / 8

- 1) Insert the E58-CIFIR USB-Infrared Conversion Cable into the USB port of the personal computer.
- 2) Start up **Device Manager.**
- 3) Right-click the **OMRON E58-CIFIR USB Serial Port (COM□)** under the "Ports (COM & LPT)", and select **Uninstall.**

- 4) The "Confirm Device Uninstall" Dialog Box will start. Select **Delete the driver software for this device**, and click the **OK** Button.



- 5) Right-click **OMRON E58-CIFIR** in the Universal Serial Bus Controllers, and select **Uninstall.**

- 6) The "Confirm Device Uninstall" Dialog Box will start. Select **Delete the driver software for this device**, and click the **OK** Button.



Suitability for Use

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of the products in the customer's application or use of the product.

Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used. Know and observe all prohibitions of use applicable to this product. NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM. See also Product catalog for Warranty and Limitation of Liability.

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