

# Setup Guide

## Application Software

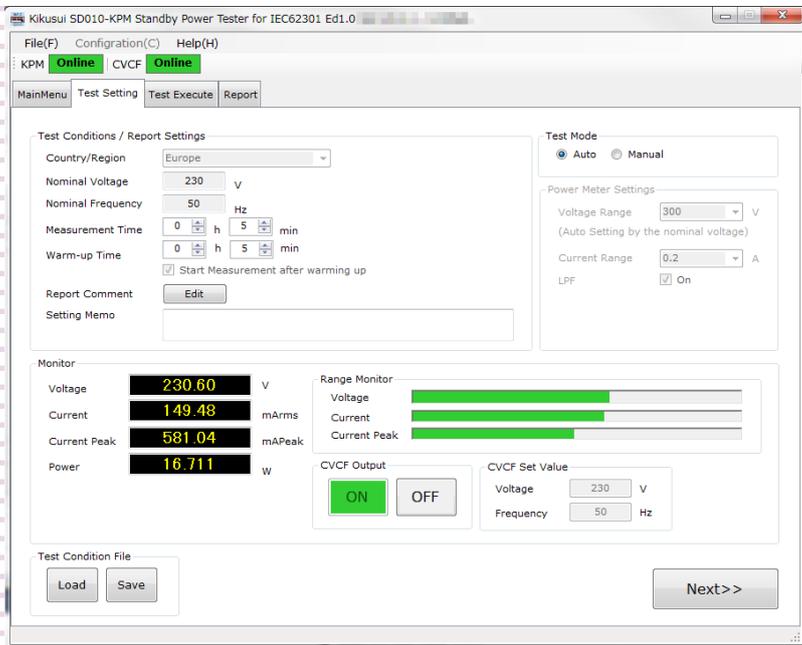
# SD010-KPM Standby Power Tester for IEC62301 Ed1.0 Ver. 1.1x

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Thank you for purchasing the SD010-KPM Standby Power Tester for IEC62301 Ed1.0.

## About This Guide

This guide is intended for first-time users of Standby Power Tester. It gives an overview of the product, explains how to install the software, provides notes on the usage, explains how to start the software, and so on.

After reading this guide, keep it in a safe place for quick reference. If you find any misplaced or missing pages in this guide, it will be replaced.

If you lose or damage this guide, you can purchase a new copy. In either case, please contact your Kikusui agent or distributor. At that time, inform your agent or distributor of the "Part No." written on the front cover of this guide.

Every effort has been made to ensure the accuracy of this guide. However, if you have any questions, or find any errors or omissions, contact your Kikusui agent or distributor.

### ■ Product versions that this guide covers

This guide applies to version 1.1x of Standby Power Tester.

### ■ Related equipment versions

The supported firmware versions are listed below.

The firmware version is displayed in the display section (for the KPM1000) or in the control panel display section (for AC power supplies) when the device is turned on.

- KPM1000 Digital Power Meter: All versions
- PCR-LE (AC power supply): Version 1.00 and later
- PCR-LA (AC power supply): Version 3.40 and later
- PCR-L (AC power supply): Version 2.09 and later
- PCR-M (AC power supply): Version 1.21 and later
- PCR-W (AC power supply): Version 1.03 and later

### ■ How to read this guide

This guide is designed to be read from beginning to end. We recommend that you read it thoroughly before using this product for the first time.

### ■ Who should read this guide?

This guide is intended for users who will use the KPM1000 to measure standby power supplies. It is also intended for instructors who will teach these users.

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## For Safe Use

Before you use Standby Power Tester to perform tests, thoroughly read the operation manuals of the following hardware products, and be sure to connect and operate the product correctly.

Improper connections or handling can lead to serious accidents, injury, and fire.

- KPM1000 Digital Power Meter
- AC power supplies  
(The PCR-LE, PCR-LA, PCR-L, PCR-M, and PCR-W series)

## Notations Used in This Guide

- In this guide, the KPM1000 Digital Power Meter is also called "KPM1000."
- SD010-KPM Standby Power Tester for IEC62301 Ed1.0 (the application that this guide covers) is also called "Standby Power Tester."
- The PCR-LE Series, PCR-LA Series, PCR-L Series, PCR-M Series, and PCR-W Series are also called "PCR Series."
- The term "PC" is used to refer generally to both personal computers and workstations.
- The following markings are used in this guide.



**CAUTION** Indicates a potentially hazardous situation which, if ignored, may result in damage to the product and other property.



**NOTE** Indicates information that you should know.



**See** Indicates a reference to detailed information.

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# General Description

Standby Power Tester is a software application for using the KPM1000 Digital Power Meter to perform standby power measurement tests that comply with an IEC standard (IEC 62301 Ed1.0). You can control the KPM1000 remotely from a computer to set test conditions, execute tests, and create test reports. Test conditions, test results, and test reports can be saved to files. Test reports can be saved in PDF, Microsoft Excel, and Microsoft Word formats.

You can also use Standby Power Tester to remotely control a Kikusui AC power supply (applicable products are listed below).

- PCR-LE Series
- PCR-LA Series
- PCR-L Series
- PCR-W Series
- PCR-M Series

Measured values are displayed in various ways in real time. Standby Power Tester can make power variation judgments based on standard compliance tests.

## Applicable standard

Standby Power Tester complies with the IEC 62301 Ed1.0 standard.

## Main features

Standby Power Tester can be used to:

- Remotely control the KPM1000 and an AC power supply (PCR-LE, PCR-LA, PCR-L, PCR-W, and PCR-M Series) from a PC.
- Configure and save test conditions.
- Start and stop tests.
- Display test results (stable/unstable judgment of power variation).
- Save test result files.
- Monitor measured values (rms current and voltage, active power, apparent power, power factor, and frequency).
- Save test reports.

## System requirements



To use Standby Power Tester, you require the following hardware and software.

- A PC with Microsoft Windows XP (x86) Service Pack 3 or later, Windows Vista (x86 or x64), Windows 7 (x86 or x64) or Windows 10 (x86 or x64)
- Microsoft .NET Framework Client Profile and Microsoft Report Viewer 2010 Runtime 4.0
- RAM  
Windows XP: 256 MB or more (we recommend 512 MB or more)  
Windows Vista, Windows 7 or Windows 10: 2 GB or more
- 1024×768 dots or higher resolution
- 100 MB or more of free hard disk space (additional space is required to save data)
- CD-ROM drive
- Mouse or other pointing device
- VISA library  
NI-VISA 4.1 or later, Agilent IO Libraries Suite 14.1 or later, or KI-VISA 4.2.2 or later
- USB cable (only when using the USB interface)
- GPIB card and IEEE488 cable (only when using the GPIB interface)
- Crossover serial cable (only when using the RS232C interface)



## About the VISA Library

To use Standby Power Tester, you must install a VISA library.

**CAUTION** Do not install multiple different VISA libraries. Doing so may cause the various VISA libraries to malfunction.

### NOTE

- VISA  
VISA (Virtual Instrument Software Architecture) is a standard developed by the IVI foundation that defines software specifications for communicating with instruments from a PC.
- VISA library  
VISA-compliant library software.
- KI-VISA  
Kikusui original VISA library compatible with VXIplug&play VISA.

The required VISA library varies depending on the I/O interface that you want to use. Refer to the table below to select the VISA library that you require.

VISA library	Version and where to obtain the library
KI-VISA	KI-VISA version 4.2.2 or later From the software CD-ROM or from the KIKUSUI Website
NI-VISA	Version 4.1 or later From the CD-ROM provided with the GPIB card or from the National Instruments Website
Agilent IO Libraries	Suite 14.1 or later From the CD-ROM provided with the GPIB card or from the Agilent Technologies Website

- To use the RS232C or USB interface, you can use any of the VISA libraries. However, you have to check the license conditions of each VISA library.
- Standby Power Tester supports standard RS232C ports on PCs and virtual serial communication ports through devices such as USB-RS232C converters. However, in the case of virtual communication ports, the RS232C interface may not operate correctly depending on the provided device driver.
- If you want to use the GPIB interface, you have to use the correct VISA library. Otherwise, you will not be able to use the GPIB interface at all.
- KI-VISA supports the following GPIB models.

CONTEC CO.	GP-IB(PCI)L, GP-IB(PM), GP-IB(PCI)F, GP-IB(CB)F (we recommend API-GPIB driver version 4.01 or later) If you are using a GPIB card manufactured by CONTEC CO., use the normal API-GPIB driver, not the API-GPLV driver (which is compatible with LabVIEW and the NI-488.2M API).
Interface Corporation	A PCI-4301 LabVIEW compatible version (we recommend GPC-4301 N driver version 1.21 or later) If you are using a GPIB card manufactured by Interface Corporation, use the GPC-4301N (which is compatible with LabVIEW and the NI-488.2M API), not the normal GPC-4301 driver.

## Package contents

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The Standby Power Tester package contains the following items.

Item	Quantity
Program CD-ROM	1
Standby Power Tester Setup Guide	1

## Other manuals

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In addition to the Setup Guide (this guide), Standby Power Tester also includes the following manual.

 p. 15

- Operation Guide (electronic manual)  
This guide explains how to operate the software application. There are two versions of this guide: an HTML help file and a PDF. For details on how to display the operation guides, see [“Viewing the operation guides.”](#)

## Notes on use

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You can use Standby Power Tester to transfer KPM1000 test data to a PC. To ensure that test data is read correctly, disable the following features on your PC during testing.

- Windows power-saving mode
- Screen saver
- Memory-resident programs

During testing, avoid operating other software applications.

# Setup

## Before installation

- You need to log in as an administrator to install the software.
- Exit all software applications that are running. If antivirus software is running, the installation may not be performed correctly. Turn off antivirus software while the installation is being performed. After the installation is complete, turn the antivirus software on.

## Inserting the CD-ROM

Insert the program CD-ROM in the drive. The menu program window will appear momentarily. If the menu program window does not appear, open the CD-ROM folder in Windows Explorer, and then double-click index.htm to start the menu program.



Then, install the KI-VISA library (only if no other VISA libraries have already been installed) and Standby Power Tester. Install the software according to the instructions; otherwise, the software may not start.

## Installation

Before installing Standby Power Tester, you need to install the KI-VISA library.

If either NI-VISA or Agilent VISA library is installed on your PC, you do not have to install the KI-VISA library.

### ■ To proceed without installing KI-VISA

See p. 9

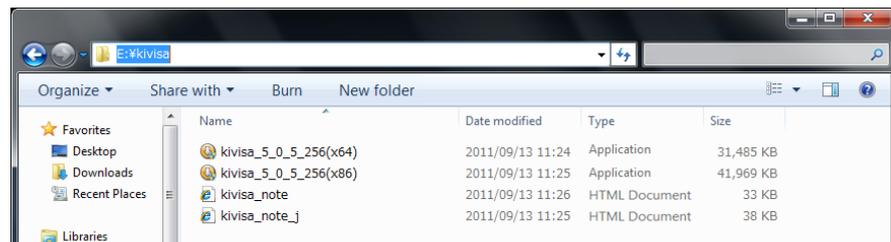
If you are using NI-VISA or a VISA driver made by Agilent, see the manual for the corresponding product. To proceed without installing KI-VISA, go to [step 5](#).

**CAUTION** Do not install multiple different VISA libraries. Doing so may cause the various VISA libraries to malfunction.

### 1 On the menu program window, click KI-VISA x.x.x.

The “kivisa \_x\_x\_x.exe” file on the CD-ROM will be displayed on the screen. The string “x\_x\_x” indicates the version.

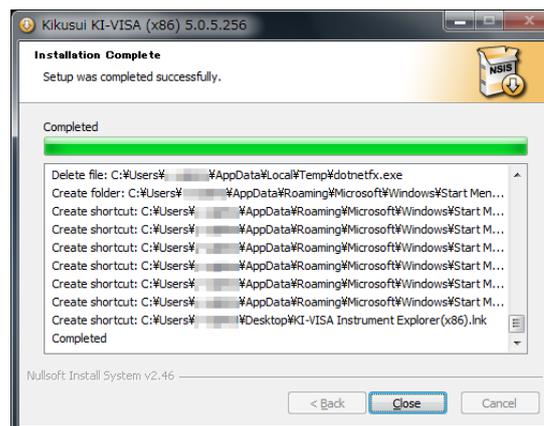
On a 32-bit OS, install KI-VISA\_x\_x\_x\_(x86). On a 64-bit OS, install KI-VISA\_x\_x\_x\_(x64).



### 2 Double-click kivisa\_x\_x\_x\_.exe to run the installer.

Follow the instructions on the screen to install the software.

When the installation is complete, the following dialog box appears.



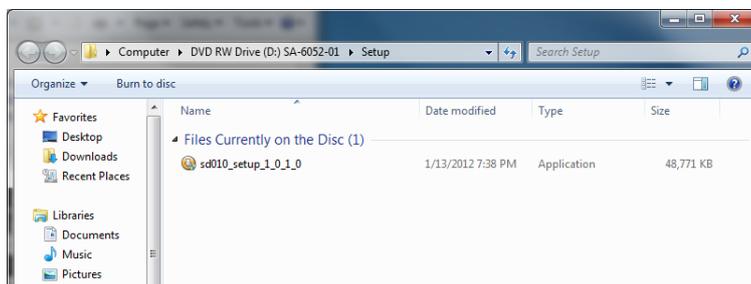
### 3 Click Close.

### 4 Click Back in your browser to return to the menu program window.

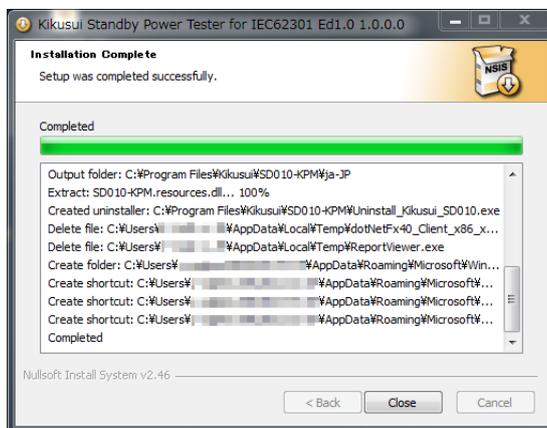
Proceed to the installation of SD010-KPM Standby Power Tester for IEC62301 Ed1.0.

**5 On the menu program window, click SD010-KPM/ Standby Power Tester for IEC62301 Ed1.0 (Ver1.x.x.x).**

The “sd010\_setup\_1\_x\_x\_x.exe” file on the CD-ROM will be displayed on the screen. The string “1\_x\_x\_x” indicates the version.



**6 Double-click sd010\_setup\_1\_x\_x\_x.exe to run the installer. Follow the instructions on the screen to install the software. When the installation is complete, the following dialog box appears.**



**7 Click Close.**

## Configuring the interface

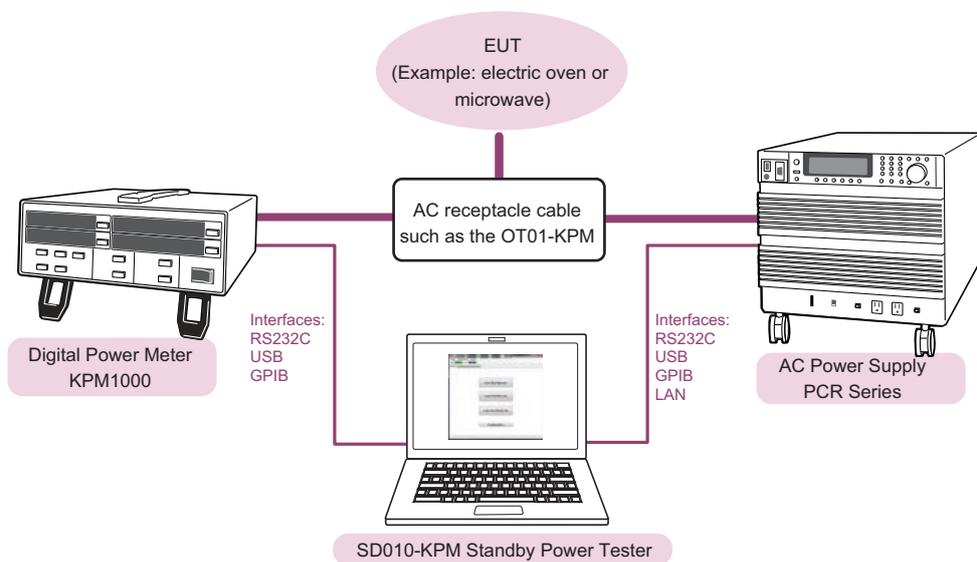
### System configuration

The system configuration of standby power measurement tests is shown in the following diagram. Before you configure the settings, connect the devices.

Standby Power Tester uses the RS232C, USB, GPIB, or LAN (only for use with some PCR Series) interface to communicate with the KPM1000 and the AC power supply (PCR-LE, PCR-LA, PCR-L, PCR-W, and PCR-M Series).

#### NOTE

Options may be required depending on the interface that you use. Also, for some AC power supplies (PCR Series), there are interfaces that you cannot use. For details, see the operation manuals of the corresponding device.



### Configuring KPM1000 panel settings

On the KPM1000 system setup screen, configure the settings as shown below.

- 1 Press I/F (SHIFT+CONFIG) on the panel.**
- 2 Select iF.1 on display C. Select SELECT on display B.**  
To change the item that is shown on display C or display B, press DSPL C or DSPL B, respectively.
- 3 Select the communication interface (RS232C, USB, or GPIB) on display D.**  
To change the item that is shown on display D, press DSPL D.
  - rs-232C Select this option when you are using an RS232C cable to connect the KPM1000 to the PC.  
Set the baud rate to 38400 bps and flow control to ON.
  - GPIb Select this option when the KPM1000 is connected to the PC with a GPIB cable.  
In this situation, set the GPIB address to the appropriate value between 1 and 30.
  - uSb Select this option when you are using a USB cable to connect the KPM1000 to the PC.

- 4 Turn the KPM1000 POWER switch off and on.**

## Configuring PCR-LE panel settings

- 1** Turn the PCR-LE POWER switch on.
- 2** While holding down SHIFT, press OPR MODE to select COM-I/F.
- 3** Press the ▲▼ keys to select TYPE, and then select the communication interface (RS232C, USB, or GPIB).
- 4** Press the ▲▼ keys to move the border to the item that you want to set, and then use the function keys to select the item's value.

If you want to use the RS232C interface, configure the settings as shown below.

Item	Value
BAUDRATE	19200
DATA BITS	8
STOP BIT	1
PARITY	NONE (fixed to this value)
FLOW CTRL	XON/XOFF

- 5** Turn the PCR-LE POWER switch off and on.

## Configuring PCR-M panel settings

- 1** Turn the PCR-M POWER switch on.
- 2** Press CONFIG a number of times to select intF.
- 3** Turn the rotary knob to select the communication interface (RS232C, USB, or GPIB).

If you want to use the RS232C interface, configure the settings as shown below.

Item	Value
BAUDRATE	19200
Flow (X-Flow control)	XFLOW

- 4** Turn the PCR-M POWER switch off and on.

## Configuring PCR-LA, PCR-L, and PCR-W panel settings

- 1** Turn the PCR-LA, PCR-L, or PCR-W POWER switch on.
- 2** Press ESC to return to the Home Position.
- 3** Press GP-IB (SHIFT+F).  
The GPIB address or RS232C communication parameter number is displayed in the frequency display area on the control panel.

**4 Set the GPIB address or RS232C communication parameter number with the numeric keypad.**

If you are using the GPIB interface, set the GPIB address to the appropriate value between 1 and 30.

If you are using the RS232C interface with the PCR-LA, set the communication parameter number to "0812."



indicates the set value.

If you are using the RS232C interface with the PCR-L or PCR-W, set the communication parameter number to "0814."



indicates the set value.

**5 Press ENT to confirm the value. Then, press ESC.**

**6 Turn the PCR-LA, PCR-L, or PCR-W POWER switch off and on.**

**NOTE**

For details about the KPM1000 and the AC power supplies (PCR-LE, PCR-LA, PCR-L, PCR-W, and PCR-M Series), see the corresponding operation manual.

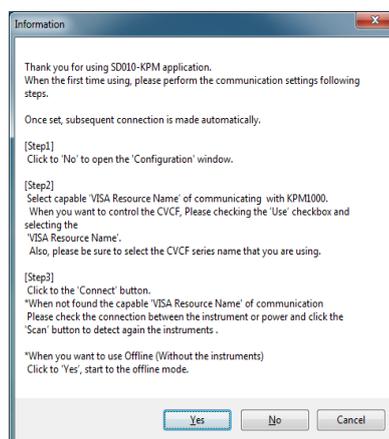
Note that the shape of the RS232C communication connector varies depending on the PCR Series that you are using. The PCR-L and PCR-W use a D-sub 25-pin connector. All other Series use a D-sub 9-pin connector.

## Starting the application software

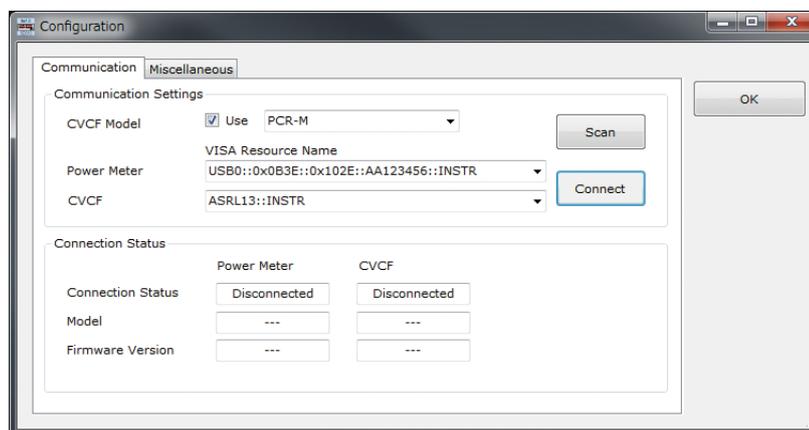
### Starting Standby Power Tester

- 1 To start Standby Power Tester, on the taskbar, click Start, All Programs, Kikusui, Kikusui Standby Power Tester for IEC62301 Ed1.0, and then Standby Power Tester.**

When you start Standby Power Tester for the first time, a dialog box appears prompting you to configure the communication settings. Once you have completed the communication settings, the communication is automatically established. From the second time on, the Main window opens immediately when you start the software.



- 2 Click No in the dialog box.  
The Configuration window is displayed.**



#### ■ If the device's ID string could be read

Select the ID from the list.

For USB and GPIB, the string "USB" or "GPIB" is displayed together with the read strings. For RS232C, the port number is displayed.

Example 1: GPIB0::1::INSTR

This indicates that the KPM1000 and the PC are connected with a GPIB cable and that the GPIB address is 1. You can set the GPIB address to a number from 1 to 30.

Example 2: ASRL1

This indicates that the KPM1000 and the PC are connected with an RS232C cable and that the port number is 1. "ASRL2" indicates port number 2.

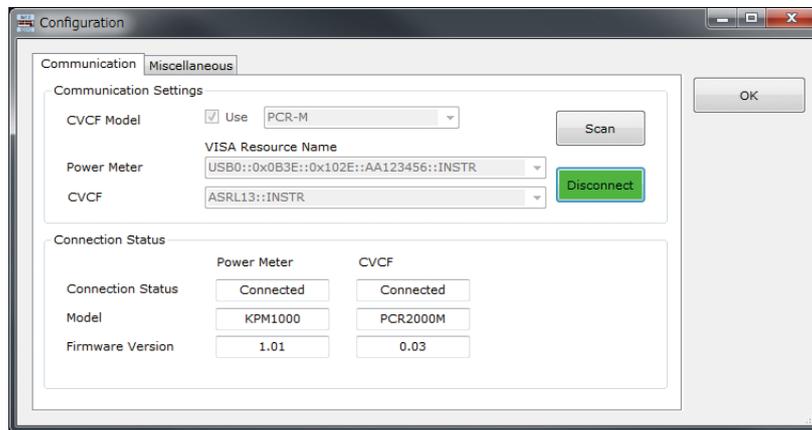
If you are using an AC power supply, select the Use check box next to CVCF Model and then select the ID from the list.

■ If the device's ID string could not be read

Check the interface cable, VISA setup, and KPM1000 system settings. Then, click Scan to detect the device again. After the device has been detected, perform the steps described in "If the device's ID string could be read."

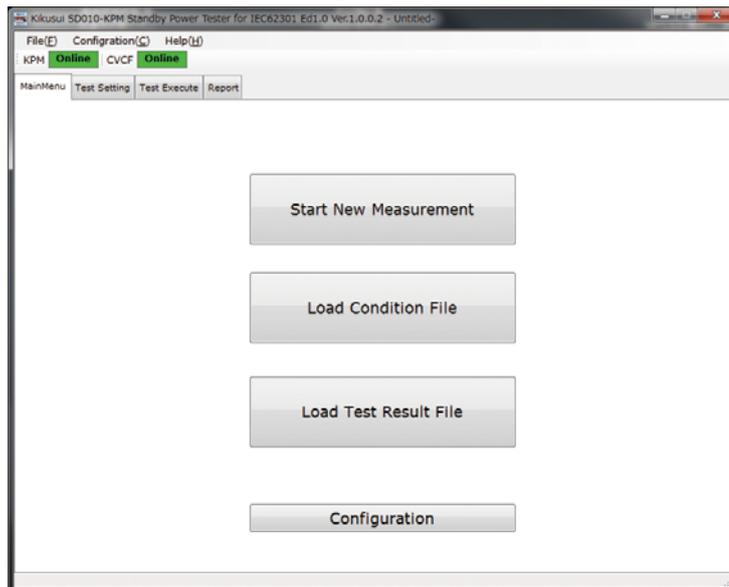
3 Click Connect.

If the connections are successful, the Connection Status boxes will display "Connected."



4 Click OK.

Standby Power Tester starts with the MainMenu tab of the main window displayed as shown in the following figure.



## Viewing the operation guides

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The operation guides contain information on how to operate the software application.

- **HTML help**

In the software application, click Help and then Online Manual (E).

- **PDF version of the operation guide**

The PDF version is suitable for printing.

In the menu program (index.htm) window, click SD010-KPM Operation Manual (E). Alternatively, on the taskbar, click Start, All Programs, Kikusui, Kikusui Standby Power Tester for IEC 62301 Ed1.0, and then Operation Manual (E).

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