

Instruction and operation manual

Service kit



Dear Customer,

Thank you for choosing our product.

The operating instructions must be read in full and carefully observed before you start up the device. The manufacturer cannot be held liable for any damage which occurs as a result of non-observance or non-compliance with this manual.

Should the device be tampered with in any manner other than a procedure which is described and specified in the manual, the warranty is void and the manufacturer is exempt from liability.

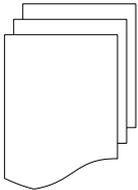
The device is designed exclusively for the described application.

SUTO offers no guarantee for the suitability for any other purpose. SUTO is also not liable for consequential damage resulting from the delivery, capability or use of this device.

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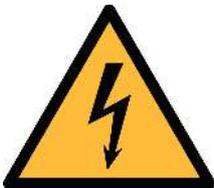
1 Safety instructions



Please check if this instruction manual accords with the product type.

Please observe all notes and instructions indicated in this manual. It contains essential information which have to be observed before and during installation, operation and maintenance. Therefore this instruction manual has to be read carefully by the technician as well as by the responsible user / qualified personnel.

This instruction manual has to be available at the operation site of the service kit at any time. In case of any obscurities or questions, regarding this manual or the product, please contact the manufacturer.



WARNING!

Voltage used for supply!

Any contact with energized parts of the product, may lead to a electrical shock which can lead to serious injuries or even death!

- Consider all regulations for electrical installations.
- The system must be disconnected from any power supply during maintenance work.
- Any electrical work on the system is only allowed by authorized qualified personal.



ATTENTION!

Permitted operating parameters!

Observe the permitted operating parameters, any operation exceeding this parameters can lead to malfunctions and may lead to damage on the instrument or the system.

- Do not exceed the permitted operating parameters.
- Make sure the product is operated in its permitted limitations.
- Do not exceed or undercut the permitted storage and operation temperature and pressure.

General safety instructions

- It is not allowed to use the product in explosive areas.
- Please observe the national regulations before/during installation and operation.

Remarks

- It is not allowed to disassemble the product.

Storage and transportation

- Make sure that the transportation temperature of the service kit between -30°C ... 70°C.
- For transportation it is recommended to use the packaging that comes with the service kit.
- Make sure that the storage temperature of the service kit is between -10°C ... 50°C.
- Avoid direct UV and solar radiation during storage.
- For the storage the humidity must be <90%, no condensation.

2 Registered trademarks

SUTO®	Registered trademark of SUTO iTEC
MODBUS®	Registered trademark of the Modbus Organization, Hopkinton, USA
HART®	Registered trademark of the HART Communication Foundation, Austin, USA
PROFIBUS®	Registered trademark of the PROFIBUS User Organization, Karlsruhe, Germany
Android™, Google Play	Trademarks of Google LLC

3 Application

The service kit is a tool designed to connect SUTO sensors with a computer so that you can manage and monitor sensors on a computer:

- Read, change, and verify operating parameters
- Monitor and record online measurement values

4 Features

Main features include:

- Digital communication with sensors through SDI (SUTO-specific) or through Modbus RTU
- Data conversion from Modbus or SDI to USB and vice versa
- 24 VDC power supply

5 Contents of package

Make sure that all components listed below are included in your package.



Description	Order no.	Qty
USB service interface box (IF 100)	A554 1000	1
M12 cable	A553 0114	1
USB cable	A554 0016	1
AC/DC adapter	A554 0001	1

6 Technical data

CE	
Operating temperature	-10 °C ... 50 °C
Housing material	Aluminum Alloy
Weight	300 g
Power supply	100 ... 240 VAC / 0.4 A
Power output	24 VDC / 0.4 A

7 Installation

The following diagram shows the connection of the service kit.

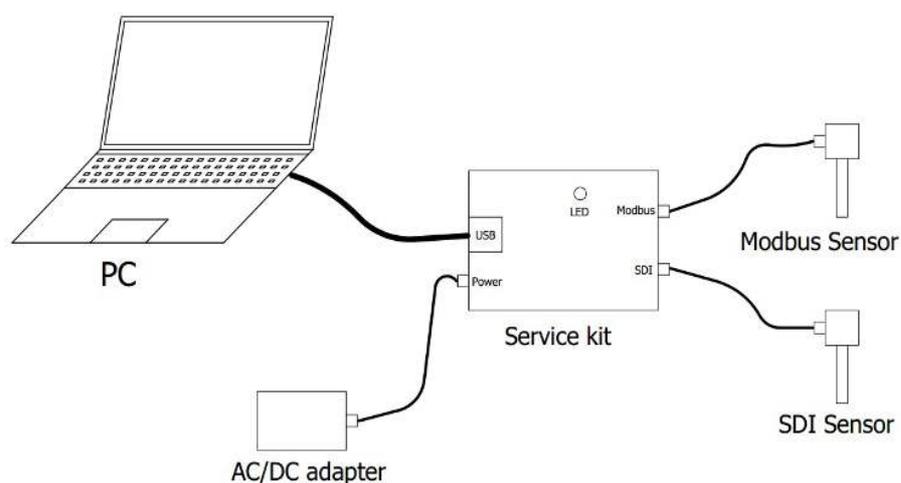


Figure 1 Connection diagram

Note: The service kit connects and communicates with one sensor at one time.

The following table lists all types of sensors supported by the service kit

and their connectivity information.

Sensor types	M12 port types	Service software name
S 220 ... S 225, S 212, S 210, S 215	SDI port	S 4XX/S 2XX Service software SFA 300
S 120, S 130		S 120/130 Service software
S 430, S 401, S 421, S 450, S 452		S 401/450/430 Service software
S 230, S 231	Modbus port	S 4XX/S 2XX Service software SFA 300

Table 1 Connectivity of sensors

7.1 Connecting the service kit

As shown in Figure 1, connect the desired sensor with your computer through the service kit:

1. Use the **USB cable** to connect your computer to IF 100.

The LED indicator turns green if the USB connection works normally.

Note: If the driver for the service kit is not installed on your computer, a pop-up message prompts for driver installation.

2. Use the **M12 cable** to connect the desired sensor to IF 100 through the corresponding Modbus or SDI connector.

Note: Look up in Table 1 for the correct connector type.

3. Connect the AC/DC adapter to IF 100.
4. Plug in the AC/DC adapter.



ATTENTION!

Do not screw the M12 connector using force. Otherwise, it may damage the connecting pins.

7.2 Installing software

Download and install the following software on your computer:

- Driver for the service kit
- Service software for the desired sensor

7.2.1 Installing the driver for the service kit

1. Download the “**Service Kit Driver**” drive from the **SUPPORT > Downloads** menu on <https://suto-itec.com>.

Tip: You can access the download URL directly by scanning the QR code on the back cover.

2. Run the driver.

7.2.2 Downloading the service software

1. Download the service software for the desired sensor from the **SUPPORT > Downloads** menu on <https://suto-itec.com>.

Note: Look up in Table 1 for the service software name corresponding to a sensor.

2. Uncompress the service software package.
3. To launch the service software, double click the .EXE file (*for example, SFA300EN V4.90.EXE*) in the uncompressed folder.

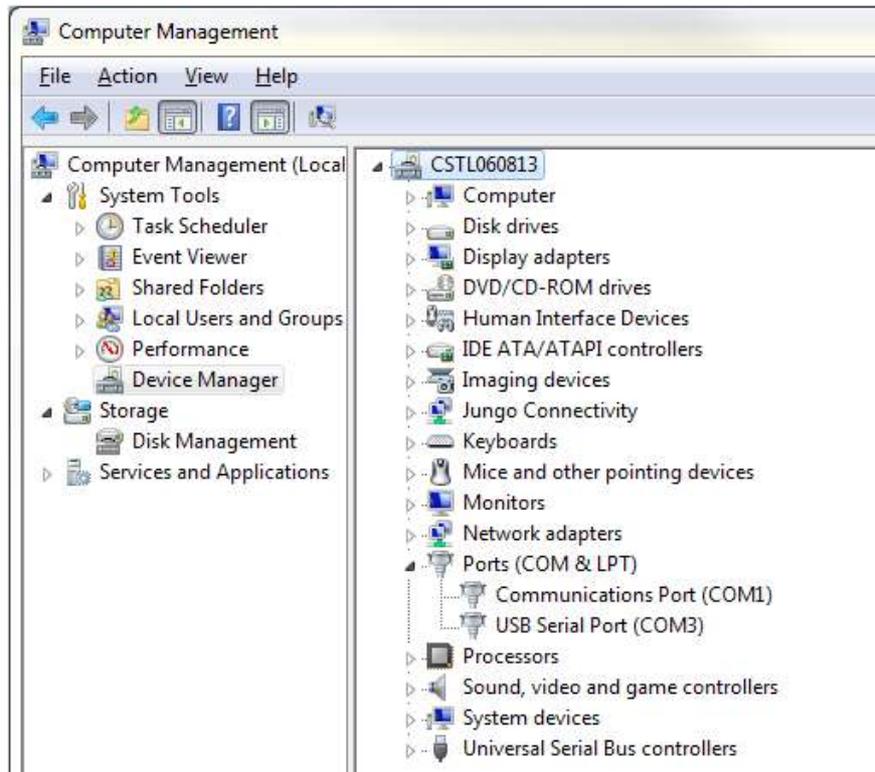
7.3 Configuring and connecting the sensor

After the driver is installed properly, the computer will assign a COM port to the service kit to enable communication between the computer and a sensor. Obtain the COM port number and configure it into the service software for the sensor.

7.3.1 Obtaining the COM port number

Detailed steps are as the follows:

1. Open the **Computer Management** window by right clicking **Computer** on the **Start Menu** and selecting **Manage**.

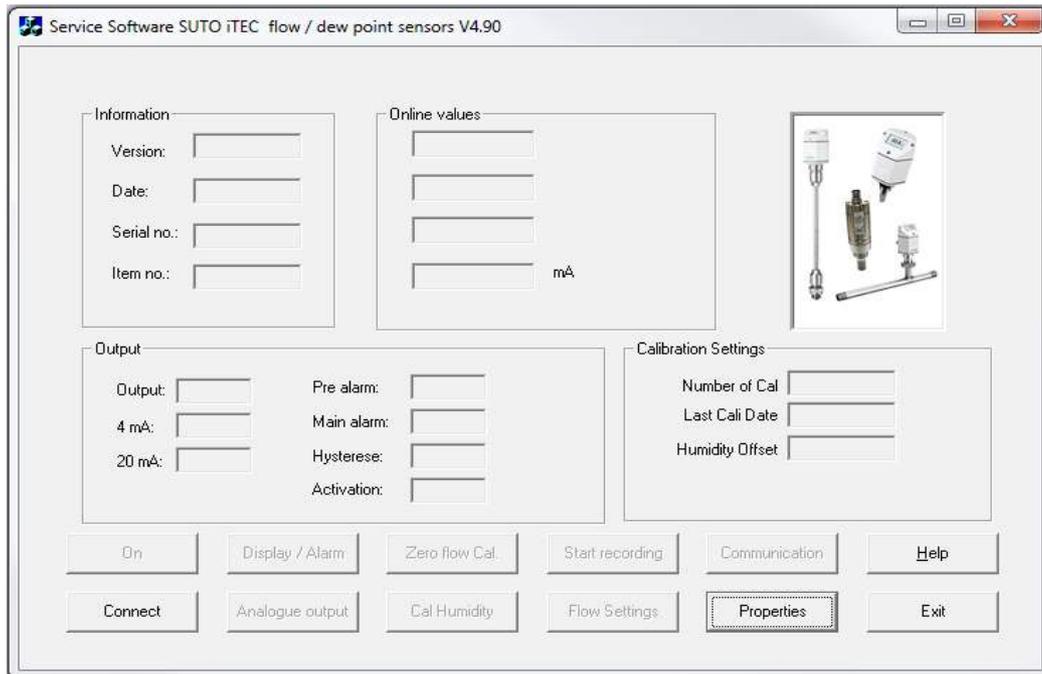


2. In the **Computer Management** window that appears, click **System Tools > Device Manager** in the navigation menu.
3. In the tree that appears on the right pane, expand the **Ports (COM & LPT)** node.
4. Obtain the COM port number for the **USB Serial Port** (for example, COM3) by pulling and plugging the USB cable.

7.3.2 Connecting through the COM port

After obtaining the COM port number, configure it into the service software, and establish the connection.

1. Launch the **service software** for the connected sensor.



2. In the window that appears, click the **Properties** button.
3. In the **Properties** window that appears, designate the COM port number that you obtained in 7.3.1 Obtaining the COM port number.
4. Click the **Connect** button to establish the connection.

A message is displayed indicating whether the connection is established successfully.

Tip: For more information about how to use the service software, click the **Help** button.

8 Maintenance

To clean the service kit, wipe the outer surface only with a wet cloth.



ATTENTION!

Do not use isopropyl alcohol to clean the service kit!

9 Disposal or waste



Electronic devices are recyclable material and do not belong in the household waste.

The sensor, the accessories and its packings must be disposed according to your local statutory requirements.

The dispose can also be carried by the manufacturer of the product, for this please contact the manufacturer.

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S/W Download